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NOTES ON PAGINATION

Due to alterations to the manuscript the page sequences are somewhat altered.

Chapter I pp. 6-32

Appendices Chapter I pp. 44-49

Chapter VII pp. 288-291 has been rewritten as pp. 288-290

Conclusions pp. 499-507 overlap with the bibliography pp. 502-522

Introduction and conclusions to Chapters II, IV, VI, VII, IX and X has not been numbered.
DEREK VERRALL
THE DEVELOPMENT OF THE SOVIET NAVY
SINCE WORLD WAR II

Thesis re-submitted for the Degree of Doctor of Philosophy
at the Australian National University
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THIS THESIS IS MY OWN ORIGINAL WORK.

D.O. VERRALL.

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PREFACE

This thesis is a study of the Soviet Navy since World War II. The fact that the Soviet Navy has, in the past thirty years, been transformed from a position of comparative naval insignificance to a naval power second only to that of the United States of America is, clearly, the most important naval development of the post war world and as such deserves description, explanation and evaluation.

The account which follows seeks to describe this development and to show to what extent it has -

(a) been brought about by changes in Soviet strategic assessments of the importance of sea power;
(b) altered the role of the Navy in Soviet military doctrine as enunciated by Soviet political, military and naval leaders;
(c) provided the Soviet Navy with the means to carry out the roles assigned to it at various periods in the post war era.

It also indicates the extent to which the geographical position of the Fleet areas and the limitations imposed on any branch of the armed services by the priorities of the political leadership have influenced the Navy's development and its capabilities.

Chapters 1 and 2 establish the significance of the geographic handicaps imposed on the Soviet Navy and provide an appreciation of the role of the navy in Soviet military doctrine prior to and in the immediate post World War II period. This is essential background for what follows. No sensible evaluation of the strength of the Soviet Navy can be attempted without appreciating the fact that its total strength is allocated to four widely dispersed fleet areas each of which has its point of egress to the high seas flanked by foreign powers belonging to adverse alliance systems. Equally no account of the changing roles of the Soviet Navy or explanation of its growth in terms of numbers or types of
vessels available is complete without the realisation that, historically, primacy has been afforded the ground forces, with the navy playing the subordinate role of "loyal assistant". The extent to which this perception of the navy, as essentially a subordinate arm of service, has changed, both within the navy, within other branches of the armed services and within the political leadership of the Soviet Union, is a major concern of this thesis.

The description of the growth of the Soviet Navy is most apparent in those chapters (3, 5 and 8) which are primarily concerned with ship construction and those (6 and 10) where the forward deployment of Soviet naval vessels is discussed. The reasonably clear cut facts of actual construction, armament and deployment constitute the hard evidence of Soviet naval development. These facts, which together with geography, provide the basis for evaluating the significance of naval development, require explanation. Here the explanation is offered in terms of a complex of inter-related factors: changing strategic assessments arising from the developing capabilities of the Soviet Union's adversaries, especially the United States, evolving military doctrine, changes in the broad national priorities of the political leadership, inter-and intra-service debate and industrial and technological capabilities.

Unfortunately the information available about many of these factors is limited, especially in open sources. In some areas it is unavailable for significant periods of time and in all cases the amount of information has varied as political power has passed from Stalin - Khrushchev - Brezhnev and Kosygin. However there is sufficient information in the open sources to enable a researcher to speculate with a high degree of confidence. The variable amounts of information also impose a certain unevenness on the narrative. For example although one may suspect the immanence of intra-naval debate there is only one period, during the 1960's, when evidence of it spilt into the pages of Morskoy Sbornik. Similarly only fragmentary first hand accounts of the intervention of the political leadership into the details of ship armament have been recorded; no leading political figure has been as open in his critical
comments on certain aspects of the navy as Khrushchev, and only Gorshkov has provided us with an insight into his broad understanding of the potential uses of sea power in war and peace. Where these invaluable insights into the broad processes of decision making are of assistance in understanding the development of the Soviet Navy, and where they provide information on the debate on the changing role of the navy and the force structures necessary to carry out that role, they have been incorporated into the discussion.

Two distinct but complementary techniques have been employed in the course of the thesis:

(1) Analysis of ship building programmes.

Initial research established the broad patterns of Soviet ship construction since the war. Once the dates of entry into service for the various classes of vessels had been established, and their broad capabilities assessed, it was possible to determine the time of original decision to construct any particular class. This was done by assuming, on professional naval advice, a lead time of ten years. This means that a new class of ship appearing in 1974 is a response to a requirement which was identified some ten years previously, in roughly 1963/1964. During this ten year period the hull, armament, machinery and electronic systems are designed and developed and brought together resulting in the new vessel.

It was possible to group classes of vessels into broad construction programmes. The initial classification of building programmes was supported by the quite dramatic evidence of cut backs and cancellations of some classes, often resulting in programmes being dropped at a time when they had just entered full production or, in the case of the Sverdlov class cruiser, requiring the dismantling of vessels on the slipways. Moreover there was evidence of conversions which so altered the armament of some submarines and surface vessels as to change their primary roles. This suggests that the Soviets felt it necessary to have an interim capability for certain missions while specific purpose designed vessels were being constructed.

It is possible to be quite confident about the primary
war time role intended for a vessel, despite the fact that any particular warship may be utilised for other purposes in peace or even war. A vessel's mix of weapons systems, its eventual deployment patterns and the mix of units constructed under the same programme are all strongly suggestive of its primary role.

Confirmation of the building programmes, the requirements which lead to their initiation, and the specific purpose of vessels constructed was provided by the other major source of evidence:-

(2) Analysis of public statements and written material.

An analysis of the public statements and writings of Soviet political, military and naval spokesman, particularly in those periods which previous analysis of construction programmes suggested to be particularly important, established the major pre-occupations and concerns of those figures with respect to the Soviet Navy, and its major adversary, the United States Navy. They provide evidence of Soviet strategic assessments, military doctrine and naval requirements. On occasions, most noticeably during the Khrushchev period, they indicate wide and sometimes bitter debate. The location of original construction programmes within the context of these statements provides additional confirmation for the location of initial decisions for ship construction and for the estimate of the specific purpose of any class of vessel.

The chapters which follow, while being broadly chronological, are structured to lead the reader from an account of evolving Soviet military doctrine and naval requirement to the Soviet response as manifested in the construction of new vessels and their eventual deployment. There is also an attempt to analyse the actual capability of the Soviet Navy to fulfil its assigned role within military doctrine. So that specific responses to evolving requirements can be better understood the broad directions of total national resource allocation and the debate between various branches of the armed service and within the navy are also discussed.

It is perhaps necessary to indicate why Soviet naval
deployment to the Indian Ocean has been singled out for more
detailed examination. In part this is because the writer is
located in Australia and is naturally concerned about develop-
ments in his own region. More important, however, there is a
great deal of evidence concerning actual ship movements which
facilitates discussion of the peace time uses to which the
Soviets put their newly acquired naval power. It is also a
deployment which illustrates the difficulties faced by the
Soviet Navy operating at a great distance from its home bases
and suggests that in many important respects the Navy was
unprepared for such an operation.

The body of the thesis ends with an analysis of Admiral
Gorshkov's series of articles "Navies in War and Peace". The
series is seen as playing a dual role, education and advocacy,
at a time when the Soviet Navy is deficient in the resources
necessary to match Gorshkov's claims, and faces a serious
problem of block obsolescence. The analysis highlights the
Admiral's views on the changing role of the navy in the armed
forces, the roles of the navy in war and peace, and his
attitude towards arms control. These constitute broadly the
educative aspects of the series and lead to the advocacy of
a firm political decision to implement a naval policy which
will enable the Soviet Union to reap the benefits which a
strong navy can provide.
CHAPTER I

The Impact of Geography and Subordination on
the Navy Prior to World War II

Introduction

Historically the Tsarist Empire and its Soviet successor have not been dependent on the maintenance of sea lines of communication for their trading relationships. Consequently sea power has developed in the context of defending the Russian/Soviet land mass from sea based attack and protecting the army's coastal flanks. This has meant that for much of its history Russian/Soviet sea power was primarily a coastal defence force. Moreover, the development and subsequent use of sea power has been influenced by geographical factors, limited access to enclosed seas whose egress points were controlled by foreign powers, and the wide dispersion of the fleet areas themselves.

The development of sea power has taken place within a context of naval subordination to the land forces. There have also been continuous disputes within the armed services as a whole and within the Navy over the actual role and importance of the Navy.

The following discussion seeks to develop the implications of these facts. Further, it seeks to test the proposition that since 1917 the Soviet Government has attached very great importance to naval development. The concern is firstly, to indicate the impact of geography and subordination on the Navy and, secondly, to indicate the impact of the Soviet regime on the Navy prior to World War II. This will provide a starting point from which to assess the degree of continuity and change in the post war era.

Four general points emerge from a reading of histories of the Russian/Soviet Navy from the time of Peter the Great
until 1945.¹ Briefly these are:

A. The limitations which geographical factors have imposed on the navy.

B. The basically continental nature of the wars involving the Russian and Soviet states.

C. The dominant role of the army in the armed forces which resulted in an atmosphere of official indifference towards the navy relieved from time to time by the policy of individual autocrats.

D. The capacity for innovation and improvisation.

A. Geographical Limitations:

The Soviet Union, like its predecessor the Russian Empire, is geographically a continental landmass, (approximately 8.65 million square miles in 1956) with long coastlines but limited access to the high seas. (See map p. 7a) Historically its concerns have been continental. Hence Russia did not need to construct and maintain a naval fleet to develop and safeguard sea lines of communication. The Russian fleet was developed by

1. The following works give an outline of the major events of the Russian/Soviet naval history. Confining themselves in the main to a chronology of events they do not offer many useful generalisations.


Since this chapter was completed an additional work has appeared:


It has in no way altered the original draft.
The USSR and its outlets to the open sea.

The area normally covered by winter pack ice.

N North Pole
1 Northern Fleet. 2 Baltic Fleet. 3 Black Sea Fleet. 4 Far Eastern (Pacific) Fleet.
those Tsars who recognised the importance of naval forces to defend the Russian Empire from sea based attacks or who sought to provide protection for the army's coastal flanks. It was a tool developed and used by those who understood the importance of sea power in defending and extending a continental empire but allowed to grow blunt and virtually useless by less perceptive or ambitious successors.

Those seas to which the Russian Empire eventually gained access, the Baltic, the Arctic, the Black Sea and the Sea of Japan, are all to some extent restricted both by ice and by narrow egress points to the wider seas. Moreover, these seas are separated by considerable distances. Thus, because trade routes were concentrated upon the Eurasian land mass, and because the seas to which the Russians eventually gained access were icebound during the winter months, the Russians never developed specific maritime-related industries. There was no steady supply of sailors nor an indigenous shipbuilding industry. In short, Russia lacked a maritime tradition.

1) Egress Points

The fact that the exits from the various seas to which the Russians had access were controlled by foreign powers had two important effects on the navy: it faced great difficulties in getting to the high seas and it was quite unable to control the access of non-riparian naval powers into those seas of major defensive concern to it, namely, the Baltic and Black Seas with their separate fleets and, to a lesser extent, the Pacific and Northern areas which drew on units from the established fleet areas.

Under the terms of the Montreux Convention of 1936, which governs use of the Black Sea Straits, warships of all powers are allowed transit rights in time of peace, provided they notify the Turkish authorities and accept restrictions on certain categories of vessel. During war-time the Straits are

1. For a similar point see Gorshkov, S.G. 'Navies in war and peace', Morskoy Sbornik No. 2 (1972), U.S. Navy trans p.9. Gorshkov does not, however, draw the same conclusion.
to be closed unless Turkey herself is involved in the war or is in imminent danger of attack.\textsuperscript{1} The Soviet Union signed the Montreux Convention. Although they preferred their traditional position, transit rights to be granted to littoral powers only,\textsuperscript{2} the terms of the Convention did prohibit entrance of warships to the Black Sea during hostilities not involving Turkey. The question of exit from the Straits could scarcely have arisen at that time, given the weakness of the Black Sea Fleet and its role as assistant to the ground forces.

2) Distance

The problem of distance between the major areas of concentration of the Russian fleet is difficult to illustrate because history offers so few examples of major unit movement between one area and another. Gorshkov has noted that the factor of distance implied that each area ought to have sufficient naval force to carry out the missions assigned to it, or else forces would have to be concentrated before an engagement.\textsuperscript{3}

3) Internal Communications

A final difficulty imposed by geography arose from the inadequacy of the internal communications system throughout the vast land mass; a deficiency which sea links were unable to make good.

During the period of the second Five Year Plan, the Soviet

\textsuperscript{1} Váli, Ferenc A., \textit{The Turkish Straits and NATO}, (Stanford, California, 1972). Appendix 12, p. 200-233, has the full text of the agreement. Chapter 3 contains a detailed discussion of the Convention.

\textsuperscript{2} The Soviet delegate at Montreux called for the prohibition of transit rights for all non-riparian powers. Váli, \textit{op. cit.}, p. 37-38.

government attempted to improve internal water transport by linking the major river systems with canals connecting the White Sea, the Caspian and the Baltic. The opening of the Volga-Don Canal in 1952 and the Volga-Baltic Canal in 1964 completed the project. The design of the locks and waterways and the vulnerability of the system to air attack suggest that naval requirements were not considered in the project.¹

The Soviet Union has made a considerable effort to open the Northern Sea Route, linking the Northern and Pacific Fleets during the period (July-September) in which navigation is possible. The route was developed primarily for the movement of domestic trade along stretches of the arctic coast, and although it has been used for the transfer of surface warships only nuclear powered submarines can transit all year round.² Vessels using this route have to pass close to Alaska and gain access to the Pacific Fleet area through the straits separating the Japanese islands from the mainland.

B. Continental Wars

Despite the important contribution of the navy in various wars against littoral powers which had access to the same seas as the Russian fleets the navy was strategically subordinate to the army, for the majority of wars fought by the Russian state were against other continental land powers. Japan was the only littoral power which was a sea power, dependent on the control of the sea to land and supply its forces on the Asian mainland.³ The fact that the Russian military establishment was so unprepared in 1904 to deal with a situation which

1. A discussion of the significance and limitations of the Soviet canal system can be found in:
   Hibbs, R.S. 'Significance of the Volga-Don Canal' USNIP, Vol. 82, No. 6, 1956.


it belatedly realised required the navy to play a leading role indicates the impact of a primarily continent-orientated military tradition.

Throughout its history the fleet has been used, with a greater or lesser degree of success, as 'the faithful assistant of the ... Army', a tradition it maintained until after World War II. This role was appropriate when the major threats arose from the continent and when non-continental powers had to enter the restricted seas to reach the Russian/Soviet navy.

C. The Position of the Navy vis-a-vis the other Armed Forces

The present Commander-in-Chief of the Soviet Navy, Admiral of the Fleet of the Soviet Union, S.G. Gorshkov, has recently noted,

The development and employment of the Russian Fleet undoubtedly was greatly determined by the fact that Russia was the largest continental country in the world. The defence of its borders in wars with contiguous land enemies took place mainly with the aid of armies, which created the prerequisites for underestimates of the Fleet by Tsarist high officials. As a result of this and a series of other reasons (among these not the least of which was the economy) our country's fleet developed rather unevenly.

1) The role of the Navy

The strategic role of the Navy in wars primarily continental in character has already been indicated. The dominance of the Army, even in naval thinking, is reflected in the inability of the Tsarist Navy to perceive a clear strategic role for itself. In the aftermath of the Russo-Japanese War N. Klado, then a Professor of the St. Petersburg Academy, claimed,

During more than two centuries of the history

of our much suffering fleet we have not shown ourselves capable of deciding ... what kind of fleet we need, or absolutely whether we need one or not. 1

Kaldo's comments were echoed by Victor Novitskii, who in 1911 lamented that five years after the Russo-Japanese War the debate on the Russian Navy had still not come to any conclusion. 2

Admiral Gorshkov in his reflections on the history of the Tsarist navy notes that War Minister Kuropatkin advised the Tsar

> the lessons of history have taught us to follow the same path which our forefathers took, and see Russia's main force to be its land army. 3

To the extent that Russia needed a navy it was to be one capable of 'handling modest coastal defence missions'. 4 The difficulty for the advocates of a large offensive navy was that history indicated that Russia's 'main force' was indeed its army. If the navy had performed a more vital than coastal defence it was as 'assistant to the army'. The only occasions on which this overall assessment proved disastrous was when Russia was attacked by strong naval powers.

The initial Soviet view of the relative primacy of the Army was made apparent during the Civil War. Naval units played little or no role as such, and most of the Black Sea fleet was scuttled. Consideration was given to destroying the Baltic Fleet after the Kronstadt Mutiny. Lenin held that

> the sailors ... were unreliable: the navy was useless, it consumed coal, food

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4. Ibid., p. 9.
and clothing, of which the country was desperately short: and so its disbandment would be pure gain.

It was only due to Trotsky's intervention that the Navy was saved. 1

Sokolovsky states, in a summary of Soviet naval activity during World War II,

In strategic operations, the Navy ordinarily did not operate independently, ... The Navy's principal efforts were directed at cooperating with the Ground Forces ... 2

and Admiral Isakov claims that the Soviet Navy's most important task ... in all Soviet waters has been to protect the strategic flanks of the Red Army, extending to the coasts, against enemy landing parties and naval operations, and to direct its own blows against the enemy's flanks and rear. 3

2) Lines of command

Further evidence of the dominant position of the Army is to be seen in the lines of command established in actual combat situations. During the Crimean War, Menshikov, as commander in chief of the Russian Army, had authority over the naval leaders, Admirals Nakhimov and Kornilov, in the Black Sea. 4

During the Russo-Japanese War there was no formulation of a coordinated plan for activities at sea but rather a series of sporadic directives. The General Staff under Kuropatkin concentrated on winning a victory on the Manchurian battlefield

and treated the naval staff as a low level committee.¹

During the two World Wars naval subordination to the
Army continued.

The Russian navy during the First World War
was not only under orders of the Supreme
Command of the military forces and could
not order the disposition of the naval units
in the Baltic without authority from army
headquarters but the Baltic fleet was even
subordinated to an intermediate army commander
responsible for the defence of Petrograd.²

The Revolution, the ensuing Civil War and the rising at
Kronstadt were to diminish even further the significance of
the navy. The navy presented two difficulties: the absence
of the technical and industrial prerequisites for a naval
force, and the political unreliability of the sailors. The
officers in the main were ex-Tsarist officers who had been
kept on and protected by Trotsky because of their expertise,
while the men had demonstrated their unreliability in the
Kronstadt Mutiny.

Despite the creation of an independent Navy Commissariat
in late 1937 Admiral Kuznetsov, who was Commissar for the Navy
from April 1939 to January 1947, found himself powerless to
effect major decisions. During the Finnish Campaign decisions
involving coordination of the Army and Navy were taken by
Stalin and the two most senior soldiers, the People's Commissar
for Defence and the Chief of the General Staff, and consequently
'decisions concerning our fleet were adopted without (naval)
participation'.³ Stalin's dominance ensured that

In practice the People's Commissar for
Defence was not the Supreme Commander, nor
was the People's Commissar for the Navy
the Commander-in-Chief of the Fleets. Stalin
took all the decisions and others had to act
on them.⁴

² Hucul, op.cit., p. 354 and also p. 298. Mitchell, op.
cit., pp. 323-324.
³ Kuznetsov, N.G. 'Before the War', part 7, International
Affairs, (Moscow, November 1966), p. 97.
⁴ Kuznetsov, N.G. 'Before the War', part 9, International
Kuznetsov realised that in any future war the Navy would inevitably be subordinate to land forces, 'and we had no intention of isolating our problems from theirs'. 1 Yet 'because the organization at the centre was not clear, it was impossible to decide many questions in the field'. In particular, the question of which Front (Army Group) the Baltic Fleet should be subordinated to, and how the Fleet units and Front organizations were to coordinate their operations were major areas of uncertainty. 2

Kutnetsov complains that he was denied access to the decision-making areas of greatest importance and also complains of the attitude of leading armed forces personalities. He states that Marshal Timoshenko, as People's Commissar for Defence, was too busy to inform the Navy of decisions which affected it, and the Chief of General Staff, Army General Zhukov, 'made no effort at all to go into naval matters'. 3

4) Resource allocation to the fleet

The Army had prior claim on the limited resources of an industrially backward state.

Klado summarised the position of naval forces in the pre-revolution period, 'All questions regarding the importance of naval forces ... appear to revolve around the capabilities of the army'. 4 Klado charged that financial strictures on the

1. Ibid., p. 101.
2. Kuznetsov, N.G., 'Before the War' part 9, p.101. Zhukov, G., The Memoirs of Marshal Zhukov, translated by A.P.N. (London, 1971) pp. 204-205 replied to these charges. Given the urgency of matters to do with the Red Army, 'I could not familiarize myself thoroughly with the state of naval forces'. Zhukov dismissed the question of a personality clash thus 'I do not remember now whether it was a case of two comrades (Kuznetsov and I.S. Isakov, Chief of the Main Naval Headquarters) not being able to get along with me or whether I was unable to work with them, but it makes absolutely no difference'.
navy hampered its training programme and made it unlikely that those forces which the state had provided would be used effectively.¹

The Revolution of October 1917 and the period of the civil war did little to enhance the prospects of the Navy. Added to the problem of political unreliability already discussed was the fact that the destruction or internment of most of the major fleet units for the second time in under twenty years deprived the Red Navy of a Tsarist legacy.²

Although the 10th Party Congress determined 'to take measures toward the revival and strengthening of the Red Navy' it noted that this could only be done 'in accordance with the general condition and material resources of the Soviet Union',³ which were severely limited at that time due to the destruction and decay of industry resulting from the World War and the Civil War. Meister notes that no work was undertaken to complete any partially constructed ex-Tsarist vessel until 1923.⁴ It was not until the third five year plan that the construction of major warships, including battleships and possibly aircraft carriers, was undertaken.

An interesting insight into the views of the Red Army on naval expenditure is provided by Marshal Tukhachevsky's analysis of German military preparations prior to World War I. He claimed that while preparing for war to be fought initially with France the Germans had constructed a navy for the subsequent conflict with Britain. This diversion of resources to the navy left the German ground forces ill-equipped and hence unable to achieve success in the initial conflict with France.

¹ Klado, The Battle of the Sea of Japan, p. 280.
² See appendix 1 for the fate of vessels which had been completed or were under construction at the outbreak of World War I.
It is completely indisputable that the German ground army was not strong enough to accomplish the mission set it by strategy. But what was the navy, on which more than four billion marks had been spent in the period since the start of the century, doing during this time? If we exclude isolated conflicts and battles the German navy was in general idle through the course of the entire war. It did not exert even the shadow of a decisive influence on the outcome of the conflict.¹

Whatever doubts may be raised in relation to the Marshal's analysis it is not difficult to see the implications it contained for the Soviet fleet: money spent on the fleet was money wasted. In a final pre-war illustration of the necessary priority given to the Army, construction of naval vessels laid down in 1938-9 was halted in 1940 and the steel and manpower saved was diverted to the production of ground armament.²

D. Innovations

Despite its low status in the armed forces the Russian navy and its Soviet successor achieved a number of notable firsts. Gorshkov cites the Mediterranean squadron under Admiral Spiridov as 'an outstanding example of autonomous operations by a large naval formation completely cut off from its home ports'.³ Although he omits to mention the squadron's dependence on British facilities, the presence of a squadron

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3. Gorshkov, S.G. 'Russia's difficult road to the sea', U.S. Navy trans. p. 18. It should be noted that Gorshkov is probably making a great deal of this historical point in an effort to claim a historical precedent for present day operations by the Soviet Navy. Other navies had operated at greater distances yet perhaps for not so great a time. The Mediterranean squadron was cut off from the Baltic only in the sense that it was a long way from its home ports but this was a unique experience only for the Russians. Moreover, the requirements of provisions, ammunition and sailors were much simpler to meet in the days of sail before fuels had to be bought and specialist sailors were required to maintain elaborate propulsion and electronic equipment.
operating at such a distance from its home port, in the Baltic, for a period of some five years, was undoubtedly a major achievement.

Less controversial are the Russian fleet's innovations in the use of weapons. At Sinope the Turkish fleet was routed by the Russian use of artillery. The exploding shell had been known for some time but it had always been considered too dangerous for use at sea.¹ Moreover, during the Crimean War the Russians were able to protect their Baltic Fleet against the superior British and French forces by mine-fields around the major naval bases of Kronstadt and Sveaborg.² This was the first major utilisation of the mine.

It is one of the ironies of Russian naval history that their use of artillery at Sinope and mines in the Baltic were in no small measure responsible for the rapid adoption by the other major fleets of armour plating. Russian industrial backwardness precluded her from keeping pace with these developments in quantitative as well as qualitative terms. Moreover, the very success of the mining operations in the Baltic led to the acceptance of a defensive policy in this region which dominated Russian thinking to the outbreak of World War I.³

During the Russo-Turkish War of 1877-78 the Russian fleet used the torpedo weapon for the first time in a major naval combat and routed the superior Turkish fleet.⁴

The most spectacular of all the Russian navy's innovations was the use of mid-ocean replenishment by the Second Pacific

3. Ibid., p. 179 and 182.
4. Woodward, D. op.cit., pp. 111-117. Woodward cites F.T. Jane, The Imperial Russian Navy (London, 1904), p. 200. 'The credit due to the Russians is immense. They had no fleet to start with, and they used an almost unknown weapon. We cannot judge Makarov's exploits by the light of present day knowledge. He had to invent his tactics'.
Squadron as it crossed the Indian Ocean en route to Tsushima. During the 3,500 mile passage from Madagascar to the Indonesian archipelago the squadron was entirely dependent on German colliers of the Hamburg-Amerika line.¹

During the First World War the Russians, like the British and Americans, made considerable use of naval aviation, especially in the Black Sea area, where naval aviation helped offset enemy superiority. The Russians used aircraft transports fitted with cranes which could lift hydroplanes in and out of the water.²

Submarine construction was the most dramatic field of Soviet naval innovation. The Soviets built a larger submarine fleet than any other power and used these vessels primarily for defensive purposes. In undertaking this programme they made a series of innovations in construction techniques. The small 'M-VI' type coastal submarines were the first to have all-welded pressure hulls and to use prefabrication.³

Construction, Doctrinal Debates and the Development of the Navy from 1917 to 1941

It was the lot of the Navy to sustain particularly severe blows in the overall course of the Revolution and in the events of the Civil War. As a result of them we lost the largest and best part of its material, lost a vast number of experienced and knowledgeable officers who played an even greater role in the life and work of the Navy than all the other forms of weapons; we lost a whole series of naval bases, and finally, we lost the main nucleus of the other ranks of Red Navy personnel. In short, all this meant we had no fleet.⁴

The Black Sea Fleet had been scuttled, or removed to internment abroad by the White Russians,¹ and the fleet personnel were subject to considerable political suspicion. Not only was there an unavoidable dependence on ex-Tsarist naval officers who, because of the specialist expertise necessary to maintain the remnants of the fleet, were less easily replaced than Army officers, but the crews 'the shock troops of the revolution', had threatened the new regime during the Kronstadt uprising.

To ensure the political reliability of the fleet, some 8,000 Komsomols were recruited direct to the fleet while 1,000 others went to the naval training institutes in 1922.²

The 5th Komsomol Congress on the 16th October, 1922, adopted a resolution to sponsor the navy and by 1923 70% of the sailors aboard ships and 50% of the cadets enrolled in schools training naval commanders were Komsomol members. In 1925-26 the first of the Komsomol candidates graduated and joined the fleet.³ Frunze visited the Baltic Fleet in 1925 and claimed,

Thousands of Komsomol replacements, forming the nucleus of the new navy laid the foundation on which further creative activity becomes possible.⁴

The early twenties were notable for the vast effort put

1. On November 15 and 16, 1920, Wrangel took to Bizerta the following vessels:
   1 pre-1900 battleship
   1 (-2?) cruiser
   9 destroyers including 6 new vessels of 1912 programme and 4 submarines

Hucul, op.cit., p. 321. Keesings Contemporary Archives, 16th Feb. 1932, p. 185 R. cites a document lodged by the Soviet Government to the League of Nations giving the strength of Soviet naval forces which includes these vessels under a separate heading. The Soviets pressed their claim to these vessels at the Rome Naval Conference of 1924.


into training officers and men. 'The Navy was actually transformed into a vast training detachment'. According to Gorshkov, 20,000 qualified naval specialists were produced as a result of the training programme, and in the period 1923-28 some 1,200 naval officers graduated from training institutes. In 1924 a political re-attestation of the naval command staff was carried out resulting in the dismissal of 750 officers, who could be replaced with recently qualified men.

As a result of foreign interventions during the Civil War period the Soviet coastlines in the Baltic had been reduced to a bare 100 mile strip. Bases in the now independent Baltic states were lost, depriving the new regime of facilities necessary for deployment in the Baltic. Confinement to the Gulf of Finland made it a relatively simple matter for a hostile force to blockade the Baltic Fleet. Even though Latvia, Lithuania and Estonia were incorporated into the Soviet Union by 1940 efforts to re-establish forward bases there were too late to alter the position. Fortification of the naval bases at Tallin, Riga and Porkkala in Finland was incomplete at the time of the German onslaught, which quickly overran them.

The restoration of ports and the shipbuilding industry and the overhaul of vessels was begun in the early 1920s. By 1924, the Baltic Fleet had, in varying states of operational effectiveness, two battleships, one cruiser, eight destroyers and nine submarines as well as other smaller vessels, while the Black Sea Fleet, which had to be started anew, consisted of one cruiser, two destroyers, two submarines and twelve other vessels, all of which had been the legacy of the Tsarist navy.

The Soviet Navy at this time was involved in a major debate over the fundamentals of naval strategy. The instructors at the major naval academies were wedded to a belief in a navy capable of winning command of the sea. To men such as

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Professors Gervais and Petrov the threat of further British intervention in the Baltic could be countered.

Our position would not be so hopeless if the (Soviet) Navy were to have a correct composition, that is, were to have the right share of battleships and cruisers, of destroyers and submarines. 1

But Zof, who had been appointed senior commissar of the Soviet Navy in 1924, pointed out the irrelevance of such solutions to what was regarded as a pressing threat:

You speak of aircraft carriers and of the construction of new types of ships ... at the same time completely ignoring the economic situation of our country and corresponding conditions of our technical means, completely ignoring the fact that perhaps tomorrow or the day after we will be called on to fight. And with what shall we fight? We will fight with those ships and personnel that we have already. 2

The training of reliable naval cadres having been set in hand, the Soviet Union could now think of rebuilding its naval forces. Lacking in technical competence the Soviet Navy, like the Russian Navy before it, sought assistance from outside.

Germany was the most obvious source of naval assistance during the mid-1920s because of the covert collaboration which existed between the armed forces of Germany and the Soviet Union. The Weimar Republic sought to evade the limitations imposed by the Versailles Treaty on weapons systems, their development, and troop training, and the Soviet Union to overcome its isolation from the world of military technology. 3

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3. For a full account of Soviet collaboration with Germany at this time, see Erickson, op.cit., Chapters 6 and 11. Erickson points out in the naval field these exchanges were extremely one-sided. Unlike the situation in the purely military field the Germans had little need of Soviet facilities, and of course it did not suit German interests to create a potentially powerful naval rival in the Baltic.
From Erickson's account it is clear that first and foremost the Soviets were concerned with submarines - their construction, operation, administration and tactical use - and the training of their crews. They asked the Germans for submarine experts to instruct them on command, construction, and engine development and maintenance. Germany supplied the Soviet Union with the plans and documents it had already turned over to the victors of World War I and offered to help the Soviets interpret the designs.

The Soviets, although dependent on German expertise in this field, preferred to build in the Soviet Union so that they could assimilate and develop the designs.

These initial contacts with the Marineleitung heralded the first stage of new Soviet naval construction. The requests forwarded indicated the dominance of those who, like Zof, accepted the need to fit naval planning to the existing industrial and technical capabilities.

In May 1928 the Revolutionary Military Council defined the missions and laid down guidelines which served as a basis for developing a naval ship construction programme under the first Five Year Plan.

In developing the Navy we shall strive toward uniting the surface and submarine fleets, coastal and mined positional defences and naval aviation appropriate to the character of the combat operations to be conducted in our naval theatres in the situation of probable war.\(^1\)

R. A. Muklevich, who had been associated with the approach to the German Marineleitung, was called in to replace Zof in 1926 or 1927,\(^2\) a signal that a naval construction programme was about to begin; a programme that was confined by the requirements of a defensive naval strategy. Gorshkov claims this period as one of creative military theoretical work in which the technical and economic realities of the day.

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2. Erickson, J.E., op.cit., p.841 and 848, for brief biographies of Muklevich and Zof.
demanded that ways be sought to carry out the tasks of defending our borders by forces of a 'small' Navy in concert with ground troops ... (a) 'small war' theory was born which, proceeding from the actual conditions, singled out rational methods and forms of combating a stronger maritime enemy.¹

The opinions of these theorists - Herrick's 'Young School,'² based on the 'material-technical base of the Fleet'³ were reflected in the naval construction programmes which roughly span the period of the first and second five year plans. They were also reflected in approaches to the Germans at this time.

Gorshkov dates the initial construction plan as 1926. The intention was to build twelve submarines, eighteen escort ships and thirty six torpedo boats.⁴ More significant than this however was the fact that during the initial five year plan defence industries were created and new

2. Herrick, R.W., op. cit., pp.9-27, groups the participants of the naval debates into two schools of thought. Petrov and Gervais belong to a stream of naval thinkers which in the West would be identified with Mahan. Their doctrine was one of taking the offensive against the strength of the enemy, his fleet. Zof and Muklevich however represent an innovation in naval thought. The new 'small war' or Young School doctrine cited above is a purely defensive strategy calling for the protection of the coastal borders by short ranged coordinated attacks within range of shore based aviation and artillery.

My impression is that Herrick over-states the coherence of these schools of thought, and the coherence of the 'Young School' during the 1920s and early 1930s. Thus the modifications/conversions of the heavy units of the ex-Tsarist Fleet, which appear to be deviations from 'Young School' thinking, need an explanation which Herrick does not provide. If we accept Gorshkov at face value these developments would be expected to come about as 'economic capabilities' of the Soviet State improved. On this interpretation the 'small war' theory was a stop gap measure, born of economic and technical necessity, to provide a solution to the challenge clearly spelt out by Zof. 'Perhaps tomorrow or the day after we will be called on to fight. And with what shall we fight?'

ship-building yards were redesigned and built, thereby providing the material base for the construction of a new fleet.¹

During the first two Five Year Plans

Initial stress was put on P.T. boats, escort ships and destroyers and later on light cruisers ...²

In 1936 Tukhachevsky announced to the Central Executive Committee 'We are creating a powerful navy. We are concentrating our forces primarily upon the development of a submarine fleet'.³ By this time the Soviets had produced the Dekabrist, Leninets, Shchuka, S and M class submarines.⁴

During this period two additional fleet areas were created, one in the Far East, the other in the North. The Far Eastern Fleet, created in 1932 in response to the Japanese occupation of the south bank of the Amur River, is an example of the 'small war' theory in practice. Set up under the command of Viktorov, a submarine specialist and reputedly one of the most able of the senior Soviet Naval Staff, the fleet originally consisted of a handful of submarines and a mosquito fleet of torpedo boats.⁵ The submarine force of the Far Eastern Fleet numbered at least sixty nine vessels by 1937.⁶ This force of submarines and torpedo boats was intended to keep Japanese major surface vessels, including aircraft carriers, at a distance from the coast.

Besides the new construction, which had been undertaken during the early five year plans, some ex-Tsarist ships were

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² Ibid., p. 6.
⁴ For a reconstruction of the Soviet Navy's interwar building programme see Appendices II-V at the end of this chapter.
⁵ Erickson, J., op.cit., p. 361.
Three Gangut class battleships were modified and refitted and work on the Svetlana class cruisers, incomplete in 1917, recommenced in 1924. Even if it was necessary to limit new construction to small vessels in the late 1920s and early 1930s the need for larger ships was appreciated.

It is difficult to pin-point exactly when the decision was taken to construct a navy which would be capable of operating beyond home waters. As early as 1934-1935 the Naval Staff noted that the capacity of Soviet heavy industry made it impossible to construct capital ships. The Soviet Union made approaches to American firms to tender for the construction of a vessel of 62,000 tons during the mid 1930s and eventually conducted direct negotiations with the United States government.

During May 1936 the Soviet Union engaged in bilateral discussions with Britain over the terms of the London Naval Treaty. The Soviet Union's naval interests were linked to developments in Japan and Germany, and she sought terms at London which would leave her free to take steps to offset Japanese expansion in the Pacific while remaining tied to German expansion in the Baltic. This applied in particular to the

3. Meister, J., op.cit., p. 34. Erickson, op.cit., p. 409, suggests Stalin had personally intervened in naval affairs in 1935 when the question of an ocean going navy was debated at a Moscow conference attended by officers of the Pacific Fleet, together with Molotov, Voroshilov and Ordzhonikidze. Kuznetsov's 'Before the War Part 8', International Affairs (Moscow) No. 12, 1966, p.94 mentions meetings in the mid-1930s on the role of the Navy and types of ships necessary for carrying out that role.
4. Davies, J.E. Mission to Moscow (London, 1943), p.223-4 records a conversation he had with Stalin while U.S. Ambassador to Moscow on the question of purchasing a battleship from the United States. In a letter to Stalin on September 10, 1938, Davies writes 'It was a matter of much gratification to me that that battleship matter had been satisfactorily worked out', p.276.
5. Davies, op.cit., p. 81, records a conversation with Litvinov in March 1937 in which he was given details of the Anglo-Soviet agreement. See Keesing's Contemporary Archives p.2115E, 2205C, 2472D, and 2675A for details of the negotiations.
increase in cruiser strength. The agreement reached was that the Soviet Union should have the right to increase to ten its A class cruisers (8,000 tons and with 7.1" guns).

During the Spanish Civil War, Kuznetsov, who was the Soviet Naval Attache to Spain at the time and later became Commissar of the Navy, realised the weakness of a naval force based primarily on the submarine. Not only were Soviet merchant vessels subject to attacks in the Mediterranean, from which the Soviet Navy could offer no protection, but the Soviet Union was unable to participate in the non-intervention patrol.

The strong navy which Kuznetsov advocated was to include a substantial increase in naval aviation for

In that naval war (Spanish Civil War), however small its scale, it became quite clear that the air force had a part to play in any naval operations and had to provide cover for naval forces at their bases. We were convinced that it was highly important that the naval air force operating with the navy should be an organic part of it, under a single command and trained to operate at sea.

At the meeting of the Central Executive Committee in 1936, where Tukhachevsky had announced the creation of a powerful navy based on the submarine fleet, he also mentioned the need to pay attention to the creation of a more powerful surface fleet. Orlov, Muklevich and Chief of Staff Ludri, had concentrated on raising the technical capacity and efficiency of a defensive force based on the submarine, the minefield, coastal batteries and shore based aviation. Although these measures were realistic given the material-technical realities more was to be required.

Orlov, Chief of the Navy, claimed in 1936

We had to create, and we have created a powerful defensive navy ... the number

4. Erickson, J.E., op.cit., p. 410.
of small surface craft, the defence of
the shores, has grown threefold in that
period.

and announced a sevenfold increase in submarine strength since
1933. He continued "We must build and we are building a really
big navy, which includes vessels of all classes of the highest
technical standing". 1 If this new fleet were to be built then
the 1938-42 Five Year Plan period would see its implementation.

On December 31, 1937, the Central Executive Committee of
the U.S.S.R. ordered the creation of the Commissariat of the
Navy with M. Smirnov to be the First Naval Deputy Commissar.
Created at the same time was the Commissariat of Shipbuilding. 2

These steps permitted concentrating the
leadership of all the measures connected
with the construction of a large ocean
going fleet in a few hands. 3

Orlov, who had been at the head of the Soviet Navy during its
previous period of expansion, was replaced by Smirnov a
civilian. 4 He, in turn, was replaced in November 1938 by
Frinovski, a former high official in the G.P.U. It was not
until April 1939 when Kuznetsov became Commissar that the
leadership reverted to a naval officer. 5

Meanwhile, Molotov announced to the Supreme Soviet that
'the mighty Soviet Power must possess a sea and ocean navy
adequate for its interests and worthy of our great cause', 6
while Morskoy Sbornik claimed

The U.S.S.R., a mighty Socialist power, must
have the strongest sea and ocean navy in the

1. Dallin, D.J., The Big Three (New Haven, 1945), p. 88, and
Erickson, J.E., op.cit., p. 445.
2. Keesing's Contemporary Archives, p. 2891G, and Hucul, W.C.,
op.cit., p. 390.
4. Keesing's Contemporary Archives, p. 2891G.
5. Ibid., p. 3579B.
p. 91.
world; such is the will of the party and of the government, such is the will of the genius Stalin.¹

In a clear repudiation of Orlov, Muklevich and Ludri, Partiynoye Stroitels'tvo, the official party organ, claimed

For our country it is not sufficient to have a navy which is able to beat the enemy near the Soviet shores. We must possess enough big warships together with plentiful light craft to annihilate the enemy, if he dares to attack us in any sea, and in any ocean.²

The emphasis on sea and ocean capability in these statements represented a turnabout in Soviet naval thinking. Not since Zof had ridiculed the 'big navy' advocates in the early 1920s had anything like it been mentioned.

During the summer of 1938 the purge, which had already eliminated much of the Red Army Command, fell on the Navy. The major victims of the purge included Orlov, formerly Naval Commander-in-Chief, Ludri, his assistant, Muklevich, the former Director of Naval Construction, Sivkov, Kozhenov and Viktorov, commanders of the Baltic, Black Sea and Pacific Fleets respectively and Stasevich, Director of the Naval Academy.³ Of the Fleet Commanders only Kuznetsov survived to become Naval Commissar.

At the 18th Party Congress Orlov and Muklevich were denounced as accomplices of the former Army Marshal Tukhachevsky. Unlike the Army victims the denunciation of the naval leaders contained a specific criticism of their policies. Tevosyan, Peoples Commissar for Shipbuilding, announced to the 1939 Congress that Orlov and Muklevich had opposed the idea of a powerful

3. For an account of the purges as they affected the Navy see Erickson, J.E., op.cit., p. 470, and Conquest, Robert The Great Terror (London, 1968), pp. 231-233.
surface fleet and their removal made possible the building of a 'mighty attacking force'.

The purge extended into the construction units and to the personnel of the fleets. As a result Stalin eliminated the officers whose doctrine their successors would have no option but to follow during World War II.

The new construction programme mentioned by Tevosyan at the 18th Party Congress was to centre on battleships, heavy cruisers, and other classes of surface warships: that is, a big surface navy. A large number of submarines was also to be built. Not excluded either was the construction of aircraft carriers: rather they were only postponed to last year of the third (1938-42) Five Year Plan. This was explained ... by the complexities of construction of warships of this class and the aircraft designed especially for them.

From Kuznetsov's account of the pre-war shipbuilding programme the Navy was subject to considerable direction by Stalin. Whereas the Navy's spokesmen Admirals Isakov and Galler advocated plans including aircraft carriers, Stalin, who usually took into consideration the opinion of specialists, for some reason underestimated the role of aircraft carriers.

A request to increase the means of anti-aircraft defence on ships met with Stalin's 'We will not be fighting near the shores of America ...'

1. Tevosyan, speech to the 18th Party Congress quoted in Conquest, op.cit., p. 231.

2. Kuznetsov, N.G., Nakanune (On the Eve) cited in Herrick, op.cit., p. 31. This passage does not occur in full in the extracts from Nakanune which were translated into English and published in International Affairs (Moscow). The English language version omits any reference to aircraft carriers. See Herrick, R.W., ibid., for an explanation of the varying versions.


4. Ibid., p. 13.
Besides illustrating Stalin's deep involvement in questions of fleet development, Kuznetsov's comments offer an interesting insight into the way naval strategy for the ensuing conflict was determined. The naval leaders of the day were unaware of Stalin's thoughts on the role of the navy in the most probable future war. Strong anti-aircraft defence could be dispensed with, as Stalin suggested, only if the fleet was not expected to range outside the limits of ground based naval aviation. Kuznetsov therefore appears incorrect in suggesting that Stalin underestimated the role of aircraft carriers. It is far more likely that Stalin did not envisage an ocean-going navy and that his object was to build a navy capable of dominating the Baltic Sea.

Under the impact of a disastrous Finnish Campaign (in which the Red Army took 100 days to achieve what had been expected to take a few days) and the increasing fear of Germany, the construction of capital ships was slowed down, and production priority was given instead to armaments for the ground forces.

A radical reconsideration of the programme took place in October 1940 after which only submarines and small surface ships - destroyers, minesweepers, etc. - were constructed.¹

The large vessels remained on the slips, either to be cannibalised during the course of the war or destroyed by German forces.

CONCLUSION

Prior to World War II the Soviet Union had found no answer to the problems of geography which had beset its Tsarist predecessor. Each fleet area had to be relatively autonomous in the event of war although transit of vessels from one fleet area to another could be undertaken in peacetime. It would require a considerable naval force to gain access to the high seas in time of war, given the nature of the egress points. To sustain a naval force at sea would require aircraft carriers which, despite the arguments of the post purge naval leadership, Stalin was not willing to provide.

The Navy received a great deal of attention from the new regime after a period of enforced austerity immediately following the revolution, but it remained strategically subordinate to the ground forces and its command structure was virtually ignored by the leading military planners prior to World War II, reflecting its low strategic significance.

During the 1920s and the first half of the 1930s the Soviet Navy adopted a 'small war' strategy which called for the protection of the coast by short ranged coordinated attacks undertaken by coastal range submarines and small surface vessels within range of shore based aviation and artillery. At the same time ex-Tsarist battleships and cruisers were refitted and during the latter half of the 1930s Soviet yards began construction of longer ranged submarines and large surface vessels. However, despite the proposed entry of these ships into the Soviet order of battle Stalin's rejection of the carrier programme and his views on anti-aircraft weaponry suggest that he did not envisage a high seas role for the fleet. The vessels of the immediate pre-war construction programme signified a change from a sea denial strategy within the enclosed seas to a strategy of control to be exercised within these restricted waters.
APPENDICES. The Tsarist Legacy and Soviet Construction to 1945

I Twentieth Century Tsarist Naval Construction and its post-October 1917 Fate.

II Battleships and Plans 1917-45.

III Cruisers 1917-1945.

IV Destroyers and Flotilla Leaders 1917-1945.

V Submarines 1927-1945.
<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Place of Construction</th>
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<th>Laid</th>
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<td>12</td>
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<td>Of the 30 completed by the Revolution:</td>
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<td>3 war losses, 12 lost, scuttled or</td>
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<td>Torpedo Boats</td>
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<td>Submarines</td>
<td>18</td>
<td>12 in Baltic</td>
<td>1912</td>
<td></td>
<td>1917</td>
<td>12 lost during WWI, 47 lost during</td>
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<td>6 in Black Sea</td>
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<td>Civil War, 36 in service with Soviet</td>
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As of August 1914 only the Novik, prototype of the destroyer programme, had been fully completed and was ready for service. Apart from this the ships ready for service at the outbreak of war consisted of obsolescent ships. The completion of the Dreadnought in 1907 and the development of similar vessels by other major naval powers had outmoded even the best of the pre-1905 ships.
### Soviet Battleships and Plans 1917-45

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<td>6 3&quot; A.A. (6x1)</td>
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<td>4 17.7&quot; torpedo tubes</td>
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<td><strong>SOVIET NAVY</strong></td>
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<tr>
<td>Sovietsky Soyuz*</td>
<td>2 59,000 tons</td>
<td>9 16&quot; guns (3x3)</td>
<td>Laid down in 1938. Design said to be influenced by Italian plans. Major difficulties in producing 16&quot; gun. Work stopped on project as a result of: a) technical difficulties b) and more importantly the need to direct scarce steel to tank building. The vessels were laid at the Ordzhonikidze Yard Leningrad and the Marti South Yard Nikolaiev. The vessel at Leningrad was stripped and scrapped during the war while that at Nikolaiev was wrecked by the Germans as they evacuated the area in 1944.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>12 7.1&quot; guns (4x3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24 3.9&quot; A.A. (12x2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>72 guns in all 4 aircraft and 1 catapult</td>
<td></td>
</tr>
</tbody>
</table>

**Negotiations with other powers post 1935. None successful.**

(1) U.S.A. 1 62,000 tons 9 16" guns Naval Staff advised that construction of capital ships beyond capability of Soviet heavy industry. Tenders sought abroad for complete battleships, machinery, armour plate and heavy guns for hulls to be built in the Soviet Union. American companies refused to accept tender. Negotiations with U.S. government direct, agreement June 1938, Soviet Union subsequently withdrew. Soviet Union still keen to purchase 16" guns, turrets, fire control equipment and heavy shells for ships building in the Soviet Union.

(2) Italy 1 47,000 tons 9 16" guns (3x3) Italy had rendered aid in construction of a variety of other classes. Soviet enquiries for battleships. 1936 firm Ansaldo proposed vessel.

(3) Germany 1 50,000 tons 9 16" guns (3x3) Soviet-German treaty 1939. Germany asked to submit plans of 'Bismarck' class battleship - rejected. 1940 some information made available. Orders for 16", 15", 11" and 6.1" guns in turrets, manufacture of 16 15" guns in twin turrets undertaken but never delivered.


The table results from a composite averaging. Data from the first four sources has been given greater weight than that from Janes Fighting Ships. Meister's figures have been accepted except where Soviet sources offer contradictory evidence.
## Soviet Cruisers 1917-1945

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displ. Standard</th>
<th>Main Arm</th>
<th>Plan Date</th>
<th>Construction Dates</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsarist Navy</td>
<td>1</td>
<td></td>
<td></td>
<td>1900-1905</td>
<td>Although repaired, naval developments had made vessel obsolete.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td>1896-1902</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Svetlana&quot;</td>
<td>3</td>
<td>7,000 tons</td>
<td>15 5.1&quot; guns (15x1)</td>
<td>1912</td>
<td>1913-27</td>
<td>All vessels were begun under pre-WWI Tsarist naval programme. Construction delayed from 1917-1924 because of Revolution and civil strife. Outdated by time of completion which had been further retarded by withdrawal of British advisors in 1917. Charwona Ukraina - commissioned 1927. Krasny Krim - commissioned 1928. Both completed with 10&quot; L/40 turrets of original design, radius 1,700 miles at 18 knots. Krasny Kavak - commissioned 1932 instead of guns being mounted in Centre line turrets, main battery four 7.1&quot; guns, 9 more modern AA guns. Displacement increased to 6,000 tons, radius 7,800 miles at 15 knots. This vessel is considered the first born of the great Soviet naval shipbuilding (industry).</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>11,300 tons</td>
<td>12 5.0&quot; guns (4x3) 8 8.9&quot; AA (4x2) 24 37mm AA (12x2) 200 mines</td>
<td>1938(?)begun complete</td>
<td></td>
<td>Three vessels had been laid down in Nikolayev and all but one of these was towed incomplete to Petri. They were completed after the war. The 2 vessels laid in Leningrad yards were completed after the war. Compared to the Kirows they had lighter armament but an additional turret had been added. They were also better seakeeping vessels. Radius 7,000 miles at 20 knots.</td>
</tr>
<tr>
<td>&quot;Kirov&quot;</td>
<td>2</td>
<td>8,900 tons</td>
<td>9 7.1&quot; (3x3)</td>
<td>1932 begun complete</td>
<td></td>
<td>Italian technical assistance for Kiroy a greater number of guns carried than for comparable cruisers of other Nations. Aircraft and catapult removed in 1941 and A.A. armament increased during the war. Thought to have exhibited poor seakeeping qualities. Radius 850/3,000 miles at 4/18 knots.</td>
</tr>
<tr>
<td>Makar Gorki</td>
<td>4</td>
<td></td>
<td></td>
<td>1033 to 1944 in Pacific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapayev</td>
<td>6</td>
<td>11,300 tons</td>
<td>12 5.0&quot; guns (4x3) 8 8.9&quot; AA (4x2) 24 37mm AA (12 x2) 200 mines</td>
<td>1939(?)begun complete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kronstadt</td>
<td>2</td>
<td>35,240 tons</td>
<td>12&quot; guns (3x3) 8 8.9&quot; guns 9 3.0&quot; AA 24 37mm AA 8 12.7mm AA 1 catapult 4 aircraft</td>
<td>1936</td>
<td>1938</td>
<td>Probably laid down at Marti Yard Leningrad and Marti North Yard Nikolayev. Construction suspended in 1940 and both scrapped on the slip.</td>
</tr>
</tbody>
</table>

### Soviet-German collaboration

As a result of the Soviet-German pact the Soviet Union requested:
1. machinery and armour plate for the construction of heavy cruisers.
2. plans and assistance to construct Admiral Hipper class cruisers.
3. purchase of two Admiral Hipper class cruisers.

German government supplied one incomplete unit the cruiser Jutrow which was incomplete by time of attack in 1941.


The table results from a composite averaging. Data from the first few sources has been given greater weight than that from Jane's Fighting Ships. Meister's figures have been accepted except where Soviet sources offer contradictory evidence.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Disp.</th>
<th>Standard</th>
<th>Main Arm</th>
<th>Plan Date</th>
<th>Const. Dates</th>
<th>Range</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex-Tsarist</td>
<td>17</td>
<td>1,300 tons</td>
<td>5 4&quot; guns (5x1)</td>
<td>probably decision to build a series from the original</td>
<td>Novik prototype</td>
<td>laid complete</td>
<td>470/1,800 miles at 30/16 knots</td>
<td>The Novik was at the beginning of World War I the most powerful vessel of its class in the world. See Table Twentieth Century Tsarist Naval Construction for further details.</td>
</tr>
<tr>
<td>Novik</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leningrad</td>
<td>6</td>
<td>2,200 tons</td>
<td>5 5.1&quot; guns (5x1)</td>
<td>probably 1928 for prototype</td>
<td>Leningrad</td>
<td>laid complete</td>
<td>873/2,100 miles at 36/30 knots</td>
<td>Elements of French and Italian design. Possibly an attempt to create a modern 'Novik'. Initial design unsatisfactory to suit conditions in the Arctic and North Pacific as the original Italian influenced vessels displayed poor seakeeping qualities. Anti-aircraft armament inadequate, had to be augmented during the war. Not all units completed due to war.</td>
</tr>
<tr>
<td>Gavryly</td>
<td>54-60</td>
<td>1,700 planned tons</td>
<td>4 5.1&quot; guns (4x1)</td>
<td>1932</td>
<td>laid complete</td>
<td>800/2,000 miles at 36/10 knots</td>
<td>Italian cooperation in early units. The design modified to suit conditions in the Arctic and North Pacific as the original Italian influenced vessels displayed poor seakeeping qualities. Anti-aircraft armament inadequate, had to be augmented during the war. Not all units completed due to war.</td>
<td></td>
</tr>
<tr>
<td>Tashkent</td>
<td>1</td>
<td>2,900 tons</td>
<td>6 5.1&quot; guns (3x2)</td>
<td>1936(?)</td>
<td>launched Nov. 1937</td>
<td>completed at 20 knots</td>
<td>4,000 miles</td>
<td>Ordered from the Italians in 1937. Delivered early 1939 and armed by Soviets before being placed in commission in mid-1939.</td>
</tr>
<tr>
<td>'O' Class</td>
<td>307</td>
<td>1,800 tons</td>
<td>4 5.1&quot; (2x2)</td>
<td>1936</td>
<td>laid complete</td>
<td>not known</td>
<td></td>
<td>Completion of this class considerably delayed by the war. Approx. 10 vessels completed in post war era. Torpedo tubes were increased from six in previous classes to eight.</td>
</tr>
<tr>
<td>Kiev</td>
<td>107</td>
<td>2,600 tons</td>
<td>6 5.1&quot; guns (3x2)</td>
<td>1939-40</td>
<td>laid complete</td>
<td>not known</td>
<td></td>
<td>A replacement for the Leningrad class. Only four vessels under construction in 1941. 2 towed to Port and scrapped after war, others scrapped by German Army during war.</td>
</tr>
</tbody>
</table>

Sources: Meister, J., op.cit., p.46-77; A.A. Savin and I.V. Orlov, op.cit.; Kuznetsov, N.G., ibid.; Gorshkov, S.G., 'The Building of the Navy 1908-41' and 'The Second World War', Janes Fighting Ships 1918-1940; S. Breyer, Guide to the Soviet Navy. The table results from a composite averaging. Data from the first four sources has been given greater weight than that from Janes Fighting Ships. Meister's figures have been accepted except where Soviet sources offer contradictory evidence.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displ. Surf/Sub</th>
<th>Armament</th>
<th>Plan Date</th>
<th>Const. dates</th>
<th>Radius/Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dekabrist</td>
<td>6</td>
<td>920/1,000 tons</td>
<td>1 4&quot; gun 1 45mm AA 8 21&quot; torpedo tubes</td>
<td>1926</td>
<td>1927-1929</td>
<td>medium ocean going range 13 knots surface speed</td>
<td>Based on contemporary Italian design.</td>
</tr>
<tr>
<td>Leninets</td>
<td>25</td>
<td>900/1,900 tons</td>
<td>1 4&quot; AA gun 1 37mm AA 6 21&quot; torpedo tubes 12 torpedoes carried mine laying capability, 20 mines</td>
<td>1928</td>
<td>1929-1934</td>
<td>7,000 miles at 9 knots surface, speed 9 knots submerged.</td>
<td>Thought to be based on the British L class submarine which was raised by the Soviets in 1928 off Kronstadt. A successful class. Two torpedo tubes removed and replaced with installation for mine laying.</td>
</tr>
<tr>
<td>Pravda</td>
<td>3</td>
<td>1,200/1,800 tons</td>
<td>6 Torpedo tubes 1 45mm AA gun</td>
<td>1932</td>
<td>1935</td>
<td>medium ocean going range surface 14 knots submerged 8 knots</td>
<td>A failure as a class. Boats spent most of their time as transports. A successful class perhaps 100 boats of this type and its modifications built.</td>
</tr>
<tr>
<td>Shch</td>
<td></td>
<td>650/750 tons</td>
<td>6 Torpedo tubes 1 45mm AA gun</td>
<td>1932</td>
<td>1935-1940</td>
<td>medium ocean going range surface 14 knots submerged 8 knots</td>
<td>A successful class perhaps 100 boats of this type and its modifications built.</td>
</tr>
<tr>
<td>W</td>
<td>100</td>
<td>150-250 tons</td>
<td>2 torpedo tubes 4 21&quot; 1 45mm AA</td>
<td>1932</td>
<td>1933</td>
<td>3,400 miles 8 knots surface, 90 miles 3 knots submerged max speeds 13 knots surface 8 knots submerged.</td>
<td>Several variants on design built. Limited endurance and habitability. Prefabricated and shipped to the yards on the seas. Intended for coastal usage. The later models were successful during WWI operating against enemy's close in lines of communication. It is possible that this class did not reach the numbers planned for it due to priority claims on steel.</td>
</tr>
<tr>
<td>S</td>
<td>50</td>
<td>780 tons</td>
<td>6 torpedo tubes 1 3.8&quot; gun 1 45mm AA</td>
<td>1936</td>
<td>1937-1940</td>
<td>surface speed 17 knots submerged speed 8.5 knots</td>
<td>Range and seakeeping qualities made it possible to operate in the open sea at such greater distance from base than for the Shch types. Design probably German in origin. Hulls electric welded.</td>
</tr>
<tr>
<td>X</td>
<td>10+</td>
<td>1,300/2,000 tons</td>
<td>10 torpedo tubes 21&quot; 20 torpedoes carried 2 3.9&quot; guns 2 45mm AA 20 mines</td>
<td>1936</td>
<td>1939-1943</td>
<td>surface 29 knots submerged 10 knots</td>
<td>Although the only truly long range submarine the Soviet Navy built few in the pre-war era. Those that were built were not used to their fullest capabilities. Diving time of 90 seconds a tremendous advance on other boats.</td>
</tr>
</tbody>
</table>

Despite the increased security of the Soviet fleet areas following the Second World War the gains were not such as to deny non-littoral naval powers access to the enclosed seas. The Soviet Union embarked on a diplomatic campaign which sought to keep the islands and states flanking the egress points out of the alliance systems being constructed by its major post-war rival, the United States. There was a degree of urgency in these diplomatic attempts brought about by the weakened state of the navy.

The immediate post-war period was also a time for assessment of the recent experience of the various arms of service. Soviet naval planners, and others with an interest in post-war naval development, had before them their own experience, which had been limited to coastal operations, and the experience of their war time allies and opponents, who had fought on the high seas. The assessment noted the role of the various navies in the recent war, the strengths and weaknesses of particular types of vessels, and provided a basis from which to draw conclusions relevant to the future development of the Soviet Navy in the post war period.

The concern for the security of the fleet areas and the enclosed seas, and the assessment of the navy's role in the recent war indicate continuity in Soviet thought about the navy. Moreover they are essential factors in an appreciation of the immediate post-war construction programme.
THE STALIN POST WAR ERA

CHAPTER II

Soviet Doctrine and the Security of the
Fleet Area in the Post War Period

A. Post War Military Doctrine

In 1945 the Soviet Union possessed a number of
military assets, the main one being its very large army,
which, as a result of its major role in eliminating
Germany from the strategic balance had secured commanding
positions in central, eastern and south east Europe.
The size of the army was reduced significantly from
11,365,000 in 1945 to 2,865,000 men in 1948,¹ but the
decrease in numbers was to some extent offset by the
re-equipment of the armed forces. The ground forces
were motorised and the fire power of rifle divisions
increased significantly.²

The Soviet Union by late 1948 had established a
buffer zone of 'socialist states' several hundred miles
wide and its armed forces in East Germany occupied
advanced positions at considerable distance from the
Soviet borders. This was a considerable advantage not
only in the context of a land war. It was relevant in
a situation where the United States and Britain
possessed long range bomber forces, an as yet under­
developed branch of the Soviet Air Force which had
placed emphasis on ground-attack aircraft and light
bombers for tactical support for the army.³

¹ Men'shov, M. 'The U.S.S.R. Armed Forces in the Post War
Period', K.V.S., No. 14, July 1972. JPRS Translations in
U.S.S.R. Military Affairs No. 852, p.31-32.
² Ibid, p.33-34, for technical details. See also
T.W. Wolfe, Soviet Power and Europe 1945-1970 (Baltimore
and London, 1970), and Mackintosh, M. Juggernaut (London,
³ Yakovlev, A.S., Fifty Years of Soviet Aircraft
Construction (Moscow, 1968), translated Israel Program
Offsetting these advantages was the fact of American possession of a small, but growing, stockpile of atomic bombs, a developing system of air force bases in continental Europe and a strategic bomber force capable of delivering these weapons. Stalin, while encouraging the development of nuclear weapons and delivery vehicles, long ranged bombers and rockets, stated that in his view the impact of the atomic bomb had been overrated:

Atomic bombs are intended for intimidating the weak-nerved, but they cannot decide the outcome of war, since they are by no means sufficient for this purpose.

Soviet military doctrine in the post-war period was subordinated to the requirements of Stalin's autocracy and the need to attribute its fundamental soundness to his overriding genius, despite the setbacks of the early phases of the 'Great Patriotic War'. Thus the wartime distinction between the decisive permanently operating factors and the transitory factors, for example, surprise,

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1 The Soviet nuclear fission research had been halted due to the outbreak of war in 1941 but research was resumed in June 1942 probably under the spur of reports reaching Moscow that America and Germany were working 'urgently' on the creation of a 'new and super powerful weapon'. From 1944 at the latest the programme was receiving the support of the Soviet Ministry of Defence. Golovin, Igor, Dr. 'The man behind the Soviet A-Bomb'. Soviet Weekly, 24 Sept., 1 Oct. and 8 Oct. 1966, and 'Igor Kur'chatov 1903-1960: An Introduction', Bulletin of the Atomic Scientist (Dec. 1967), p.8-18.

2 Yakovlev, op.cit., p.104-5, for post-war aircraft production, which included the Il-28 tactical jet bomber and the Tu-16 with ranges of 2,400 km (1,500 miles) and 5,760 km (3,600 miles) respectively. Neither could reach the United States from Soviet territory.

3 Stalin's comment was made during an interview with Alexander Werth in September 1946 and was reported in the Sunday Times, 17 September, 1946.

was maintained in the post-war period,\textsuperscript{1} and discussion of the impact of the atomic bomb was conducted within its terms of reference.

Stalin may have been correct in minimising the impact of the atomic bomb in 1946 given the size of the American stockpile. What he apparently ignored, even in the early 1950s when the stockpile had grown in significance, was the lower level questions relating to the impact of the new weapon on actual combat conditions. These questions were not raised during Stalin's lifetime and no ground force exercises under conditions simulating an atomic battlefield occurred until September 1954.\textsuperscript{2}

The doctrine of the permanently operating factors assumed a war of attrition. While appropriate for continental Europe such a war would have little impact on the United States, for the Atlantic Ocean was dominated by the major sea-powers of the Second World War, the United States and Great Britain. Moreover, the United States remained inaccessible to Soviet air power.

In any major war in the immediate future the Soviet Union could attempt to overrun continental Europe as quickly as possible, in the process capturing United States strategic bomber bases. What could not be achieved was any direct damage to the United States.

The assigned role of the Soviet Navy in such a war appears obvious. In the enclosed waters of the Baltic

\textsuperscript{1} Stalin, J.V. 'On the Great Patriotic War of the Soviet Union' (Moscow 1946) p.45, for the permanently operating factors. The permanently operating factors did not constitute the basis of a strategy because they said nothing about how the desireable ends, stability of the rear, quality of leadership, number of troops and efficient supply were to be attained.

\textsuperscript{2} Men'shov, op.cit., p.71. Men'shov claims that the army and navy already possessed nuclear weapons and scientific data on their effects prior to this date.
and Black Sea it could provide sea-based flank-protection and artillery support, it could overcome enemy coastal strongholds by offshore artillery fire, and assist by providing cover for short ranged amphibious landings. Enemy attacks from aircraft carriers could be held at bay by the submarine and surface forces. The role of the army was still 'decisive': the Navy and Air Force were required for support operations.

B. Post-War Naval Doctrine.

The details of the Soviet Navy's combat achievements during the war need not concern us here.¹ What is of interest is the impact of the conflict on Soviet naval leaders and others who thought about the role of the navy in the future.

On Navy Day, 22 July 1945, Stalin's 'Order to the Red Army and Navy' praised the Soviet Navy as 'the loyal helper of the Red Army in the war against Germany'.² Soviet naval leaders reaffirmed Stalin's assessment in Navy Day speeches throughout the 1940s.³ Given the continental nature of the war as experienced by the Soviet Union such an assessment was perfectly sensible. However as Gorshkov was later to point out, the utility of this

³ For example, Yumashev, I.S. (Admiral, Commander in Chief of the Navy 1947-1951) 'During the course of the war, the fleet was the faithful assistant of the Red Army', Pravda, 27 July, 1947, cited in Hucul, op.cit.; and Yumashev again on Navy Day 1949 'Lenin and Stalin have considered the Navy an important branch of the armed forces always stressing the need for the closest unity of action between the Army and the Navy ... The Navy, like the Air Force, plays its role in war, not in isolation from the Army, but in a single purposeful unit with it, the role of the Army being the decisive one'. Pravda, July 1949.
assessment for the emerging international situation was negligible.¹

Immediate post-war writings reaffirmed the doctrine of 'combined action' which it was claimed had been confirmed by the experience of all the Powers involved in the recent war.

War on the sea has historically never been an independent phenomenon, but always a part of a war as a whole.

From the experience of the Soviet and foreign armed forces in the recent war it is necessary to consider it completely confirmed that the combined action of land troops with air and sea forces is a foundation of the contemporary conduct of war.²

In the Soviet context the dominant role of the Army in the armed forces, (brought about by the fact that in the past wars had been fought primarily on land), suggested that the doctrine of 'combined action' would reinforce the notion of naval subordination. To the extent that the experience and contributions of the wartime allies, the major naval powers, was ignored and denigrated by the officially inspired historiography of the war,³ there was no corrective to this bias borne of Soviet and Russian experience.

Admiral Alafuzov, reflecting on the experience of the Great Patriotic War, compiled an eight point summary of the missions of the Navy:

The Fleet is called upon to fulfil the following basic missions:

(1) defence of our own sea communications. (The Soviet Navy had performed this task in the Black Sea during the siege of Odessa and Sevastopol, in the Baltic during the withdrawal from naval bases in Finland and the Baltic States, across Lake Ladoga during the siege of Leningrad and in the North helping to keep open the supply links to the allied forces. In this latter case however their assistance was limited to the last hundred miles or so of the convoy route).

(2) interruption of the enemy's sea communications. (As had occurred in the Southern Baltic after the break out of Soviet submarines from the Gulf of Finland, in the Western part of the Black Sea and in the waters surrounding the Crimean Peninsula after it had been cut off by land in 1944 and in the waters north of Scandinavia.)

(3) defence of our territory against enemy invasion from the sea. (The Germans only attempted two unsuccessful landings in the Baltic.)

(4) invasion of the enemy's territory from the sea. (The Soviet naval infantry spearheaded a number of small landings in all the naval theatres. These were mainly of a diversionary nature although there were large amphibious assaults at Kerch, into the Kurile Islands and Sakhalin as well as along the Korean coastline.)

(5) defence of our shore installations. (During the opening years of the war this was the major task of the Soviet fleet in the Baltic, at Leningrad and Kronstadt, in the Black Sea, at Odessa and Sevastopol, until these centres fell, and in the North, where sailors joined ground forces in protecting the Murmansk base.)

(6) the destruction of the enemy's shore installations. (Naval aviation and landing parties of naval infantry accomplished this task in all the naval theatres.)
(7) support of the Army's sea flanks

and some pages later:

(8) evacuation of an isolated sector.
(This had occurred at Hango and Tallin in the Baltic Sea and at Odessa and Sevastopol in the Black Sea.)

While Alafuzov's listing of missions would be familiar to an American or British naval audience reviewing World War II, the essential difference arises from the fact that the Soviet Navy was limited to coastal operations, carried out in restricted waters under the protection of land based aircraft and shore artillery. In cases where missions called for operations outside these limits, most obviously in keeping open the supply links with the allies in the North, the Soviet Navy was unable to meet the requirement.

The naval power allies conducted operations on the high seas. As a preliminary condition for their success the naval powers sought to gain control of the sea by either destroying enemy fleet concentrations, blockading the enemy fleets in base or by establishing a local preponderance of seapower estimated to be sufficient to carry out an operation with success. The Soviet Navy would not achieve this control except in its own

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1 For the listing of missions see Alafuzov, V. (Admiral) 'On the nature of naval operations', Voennaia Mysl, No. 8, 1946, p.17 and 18, as cited in Garthoff, op.cit., p.363.

The illustrative examples are drawn from Isakov, op.cit., passim, Gorshkov, op.cit., passim, and Gorshkov 'The Soviet Navy in the Great Patriotic War', passim.

For a recent and almost identical listing to that of Alafuzov see Ivanov, S.G. (Rear Admiral Reserves) 'Supporting the coastal flanks of the Army', Morskoy Sbornik, No. 1, 1971, U.S. Navy trans. p.46-52.
coastal waters.¹

In Gorshkov's assessment World War II had a significant, if stultifying, impact on Soviet Naval thought and doctrine. It 'strengthened the dominant position of the defensive tendencies in views on the strategic use of the fleet' which during the first post war years ... to an even greater extent than before, bound it (the fleet) to the coastal zone controlled by the ground forces ... (T)he fleet's role of simply being an assistant to the ground forces was strengthened.

This view did not take into account 'the changes which have occurred in the arrangement of forces in the international arena', in particular the formation and consolidation of the 'great camp of socialism' and the emergence of 'aggressive military blocs, headed by the traditional naval powers'.

This oversight is attributed by Gorshkov to the military historical research which sought to 'generalise the experience of the Soviet Armed Forces in the Great

¹ The Soviets were not unaware of the concept 'command of the sea'. During a pre-war lecture course at the Naval Academy attended by Gorshkov, it was stated: 'To achieve superiority of forces over the enemy in the main sector and to pin him down in the secondary sectors at the time of operation means to achieve control of the sea in a theatre or a sector of a theatre, i.e., to create such a situation that the enemy will be paralyzed or constrained in his operations, or weakened and thereby hampered from interfering with our execution of a given operation or in our execution of our own operations mission.


The definition is remarkable for its breadth; the control of coastal waters exercised by submarines, land based aviation and small surface vessels is subsumed as well as control of the high seas being exercised by the projected battleships, cruisers and aircraft carriers of the 1938 Soviet building programme.
Primary attention was focused on the great land battles where the fleet played at the most a minimal role. Moreover, the combat experience of the fleets of the great naval powers was considered to be of minor importance in determining the outcome of the war, so it received scant attention.

The upshot of the post war discussion was a 'stagnation and formalism in naval theory' based not only on the immediate past, but on the continental tradition of Tsarist and Soviet military experience.

In the three articles of the series 'Navies in War and Peace' dealing with naval activities during the Second World War, Gorshkov does not repeat this aggressive and partially undeserved attack on the post war naval theorists. The period 'stagnation and formalism' did not set in immediately after the war. Alafuzov, Isakov, Schner and others had contributed books and articles analysing the World War II experience which contained elements far from stagnant, formal or defensive in implication. 'Stagnation and formalism' probably did not dominate Soviet writings on the war until early 1947, by which time the main post war

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2 Ibid., p.15.
4 Alafuzov, 'Nature of Naval Operations'.
   Isakov, The Red Fleet.
   Schner, I., 'Aircraft Carriers and their role in the operation of a navy', Veonnaia Mysl, June, 1946.
   See also Garthoff, R.L., How Russia Makes War, Chapter 21 for a discussion of the Soviet Navy's World War II operations based on Soviet post-war articles.
propaganda line had been established.¹

As the uneasy alliance of convenience between the United Nations gave way to the tensions of the Cold War, the Soviet High Command found itself faced with the task of preparing for a possible future war against a new antagonist, the United States. Unlike the historical continental antagonists, Sweden, Turkey and Germany, the United States was not accessible by land.

After World War II the socialist camp was faced by the armed forces of the aggressive military blocs, headed by the traditional naval powers, special importance in the armed forces of which had, for a long time attached to the Navy.²

Moreover, the 'traditional naval powers', the United States and Great Britain, had, during the course of the war, given a vivid illustration in the Atlantic of the ability of seapower to project force over seas and oceans onto the continental land mass of Europe. In the Pacific U.S. seapower had destroyed the Japanese fleet, rolled back the Japanese from their island conquests, cut Japanese sea lines of communication and finally brought the American forces to a position from which they could destroy Hiroshima and Nagasaki by atomic bombs.

The naval powers, Britain and the United States, had shown an ability to contain the submarine threat by the use of surface forces, and shore and later carrier-based

¹ Gallagher, P., op.cit., Chapter 1-3 described the process by which this propaganda line was established.

Gorshkov himself, in his 1972 articles, gives undue credit to the Army for he not only asserts that the war was won on the Eastern Front, a standard Soviet claim since 1946-1947, but lends his name to the highly dubious assertion that the Soviet success at Stalingrad was the turning point in the Pacific War. See Gorshkov 'The Second World War', U.S. Navy trans. p.9-11.

naval aviation equipped with radar. Radar was extremely effective in operations against diesel electric submarines, which spent only a small part of their total time at sea submerged. Attacks on enemy submarine bases further disrupted their operations.

The appearance of the snorkel submarine had come too late to upset the predominance that allied anti-submarine warfare techniques had gradually established over the German U-boats. With the refinement of radar systems, the initial advantage which the introduction of the snorkel had conferred on the submarine was lost.

The Germans had been unable to interrupt the flow of food and raw materials by dislocating the sea lines of communication, the maintenance of which had enabled Britain to continue the war. Later these sea lanes brought the men and material which were essential for the amphibious invasion of Europe.

When the invasion came German coastal defences had not been sufficiently strong to hold back the invasion fleet or the troops which successfully landed.

Finally, the United States had demonstrated, in the final stages of the war, that it had mastered the technology of the atomic bomb and had provided an illustration of the devastation it could cause.

Soviet military planners, ordered by 1947 at the latest, to prepare for a possible future war, with the United States as principal antagonist, could not have overlooked any of these factors. While they could suggest plausible plans for the removal of hostile American forces from Europe there remained no way in which the Soviet Union could inflict direct damage on the continental United States. Nor could the Soviet Union prevent the United States from utilising its sea power to intervene in the affairs of Europe, except, possibly, by taking up where the Germans had left off, and attempting to sever the Atlantic lines of communication by the use
of submarines, and reinforcing coastal defence systems around its own shores. The alternative solution, to set about the construction of a massive surface fleet, capable of wresting control of the sea from the major naval powers, would have required a major economic and technological investment in the immediate postwar period and even then would take several decades to produce.

If the war had shown the importance of sea power it had also confirmed the United States as the primary power in this field. Whereas the industrial base of the United States shipbuilding industry had been untouched by the war enabling it to turn out huge numbers of all classes of vessel incorporating the new technologies of radar and sonar, that of the Soviet Union had been overrun and destroyed. Unlike the United States the Soviet Union had been virtually incapable of launching any warships of size or significance during the course of the war.

The replacement of losses in ship inventory was very difficult because we had lost a number of shipyards and had changed over much of the capacity of the shipbuilding industry to construction of tanks and other weapons for the Army. Therefore in the course of the war we built mostly small warships and patrol boats. Despite these difficulties the Navy received from industry two light cruisers, 25 destroyers, escort ships and minesweepers, 52 submarines 15 large submarine chasers and 873 patrol boats of various types during the Great Patriotic War.¹

The ships laid down prior to the war, under the 1938-42 programme were, in the main, left uncompleted. They either fell into German hands, were wrecked on the slipways, or if near completion, were transferred to safer ports in the Black Sea, to await completion following the end of the war.

The course of the war had an impact on naval assessments of the utility of certain weapons systems.

The experience of the Fatherland War ... shows that submarines can be extremely effectively used in the struggle against sea communications, and under certain conditions and relations of forces in the theatre, is the type of naval force fulfilling the main role in the mission of interdicting enemy supply by sea.¹

Naval aviation emerged in Soviet thinking as 'the most universal type of force of the fleet',² and Admiral Isakov noted that

successful naval operations can be conducted close to the shore or in narrow areas only if air supremacy has been secured over the zone of operations.³

Whereas prior to the war 'aviation was relegated to the role of one of the main means of reconnaissance and support'⁴ the experience of the war extended this range of missions to include not only reconnaissance but also anti-submarine warfare, convoy protection, destruction of the enemy's air and surface forces, aerial mining,

attacks on enemy naval bases and support of ground forces.¹

The war indicated the inadequacy of the prewar doctrine 'Bomber aircraft are the basic offensive nucleus of the air forces of the RKVMF (Soviet Navy)'². During the war specialised torpedo planes were added to the fleets. The disadvantages of low speed, short flight range and small load capacity, which had limited the employment of naval aviation at a time when it was equipped with aircraft designed for other branches of the armed services was thus to some extent overcome.

The war also indicated that aircraft carriers had displaced the battleship from its position of primacy. Kuznetsov claims

in 1942, after the battle for Midway Island in the Pacific Ocean, it became clear to all how much the character of naval battles had changed and what striking force had appeared at sea in the form of aircraft .... This only only decided the outcome of the fighting, but also became the turning point in the Japanese-American war. The Japanese Admiral Yamamoto was forced to retreat although his battleships had not lost their ability to fight. Thus history executed its sentence on the battleships.³

In an article published in June 1946 I. Schner wrote

The conditions of modern war at sea made it mandatory for powerful carrier forces to take part in naval warfare, using them to strike devastating blows against the enemy naval forces and to battle with his air force. Both at sea and near one's bases these tasks can only be carried out by carrier aviation.⁴

¹ Isakov, op.cit., passim and Shuginin, op.cit., passim.
The war also had an impact on tactical doctrine. As a result of combat experience a major reassessment of the use of submarines in groups, combined action by aircraft and submarines, use of torpedo boats and aircraft in mass against lines of communication was undertaken. Soviet authors claim that such problems were 'resolved creatively'.

C. The Fleet Areas in the Post-War Period.

By the late 1940s the Soviet Union had under its control, or the control of its satellites, the southern coast of the Baltic to the border of what has now become the German Federal Republic. The Finnish-Soviet border had been pushed back from Leningrad across the Karelian Peninsula and the important base of Porkkala, inside the mouth of the Gulf of Finland, had been leased to the Soviet Union for a period of fifty years. Soviet influence was established along the western coast of the Black Sea.

These changes undeniably strengthened the Soviet Union's position within these historically important seas, but they did nothing to improve the fleet's strategic offensive capabilities against the non-riparian powers.

In the Arctic region the Soviet Union gained the Petsamo region of Finland. This denied Finland a northern coastline and gave the Soviet Union control of an important nickel mining area. As the acquisition of the Karelian Peninsula...

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3 Herrick, R.W. Soviet Naval Strategy, p.55-56, for the same point.
Peninsula added to the post war security of Leningrad so the territorial gains in the north provided a buffer between the Northern Fleet base of Murmansk and foreign controlled territory. The Sea of Okhotsk in the east became a virtual Soviet lake following the acquisition of Southern Sakhalin and the Kurile Islands. But the major access points from all the Soviet Navy's fleet areas were still dominated by foreign powers. As in the past this presented the post war Soviet Union with a dual problem. Not only was the Soviet Navy unlikely to gain access to the high seas in any future conflict but more importantly, given its post war force strength, it was unable to prevent the intrusion of hostile naval forces.

1) The Baltic Fleet Area

Despite its strategic vulnerability the Baltic fleet area was, and is, a vital centre for the Soviet Navy. Not only are the Soviet Union's biggest and most efficient dockyards for the construction of merchant and naval vessels situated at Leningrad and Kronstadt but so too are major administrative, logistic and training installations. It is not surprising therefore that the status of the Baltic Sea was a matter of concern to the Soviet Union, during and in the period immediately after the war.

1 The warm Gulf Stream waters which flow to the Arctic keeps the ice at its maximum extension on average distance of 180 miles from the coast until Mys Syvatoy Nos. Thus the northern port of Murmansk remains ice free throughout the year while Archangel, the longer established northern port, is frozen for approximately half the year.

In 1943, at Tehran, Stalin associated himself with the views expressed by Roosevelt on the post war partition of Germany, in which was included the proposal that the Kiel Canal be placed under international authority. It was also agreed that there be free navigation of the Baltic.\(^1\) Churchill gave Stalin assurances that he accepted Soviet claims to ice free ports, and felt that the Soviet Union was destined to have a large merchant and naval fleet, which he, at any rate was willing to accept as a feature of the post war maritime scene.\(^2\)

During December 1944 V.I. Semenov of the Soviet Foreign Ministry told Th. Døssing, the Danish Ambassador to Moscow, that Denmark was a Soviet sphere of interest and a post war Danish foreign policy independent of the Soviet Union would be considered an unfriendly stance.\(^3\)

However, apart from this expression of concern, it appears as though the Soviet Union made no attempt to initiate actions to alter the status of the Danish Straits.

The Soviet forces which had landed on the Danish island of Bornholm, situated inside the mouth of the Baltic Sea, in May 1945, completed their evacuation by April 1946 and were replaced by a Danish garrison.\(^4\)

Following Danish adherence to the Atlantic Treaty in 1949 there was some dispute over the actual conditions of Danish return to the island. The Soviet Union insisted that the Danish government had agreed to re-establish

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4 Keesing's Contemporary Archives, p.7791A and 7823D.
itself on Bornholm with Danish forces only and hence any attempt to establish NATO bases there was a violation of the agreement. ¹

Soviet jurists were at pains to establish the legitimacy of the Soviet claim to a twelve mile territorial waters limit within the Baltic Sea. ² Soviet patrol vessels seized a number of Swedish and Danish fishing vessels for alleged violations of Soviet waters or for infringing on coastal defence zones. ³ In the case of American reconnaissance aircraft which were shot down over the Baltic the Soviet government alleged violations of Soviet air space. ⁴

Of greater significance was the Soviet attempt to have the Baltic declared a 'closed sea'. This legalistic argument was combined with a political/propaganda campaign in support of the notion of a 'sea of peace'. ⁵ In this vein the Soviet press and government protested against intrusion into the Baltic by warships of the NATO powers while on exercises. ⁶

¹ Òrvik, N. and Haagerup, N.J. 'The Scandinavian members of NATO' Adelphi Paper No. 23, December, 1965, p.3.
³ Keesing's Contemporary Archives, p.10768D and p.10913E.
⁵ Ibid, p.124.
   'Mariner' New Times, No. 41, October 10, 1953, p.18.
2) The Northern Fleet Area.

The Soviet forces which had occupied northern Norway withdrew to Soviet territory at the end of the war.\(^1\) If Soviet withdrawal from Bornholm removed the possibility of controlling the mouth of the Baltic the withdrawal from Norway similarly removed the possibility of controlling one side of the North Cape - Bear Island - Spitzbergen channels between the White Sea and the Norwegian Sea.

Soviet naval officers and politicians were aware of the importance of the Northern Fleet area which had been convincingly demonstrated during the war.\(^2\) The major disadvantage of the area from a Soviet perspective was the fact of foreign possession of the islands to the north of Norway which could be used to mount operations cutting the lines of communication between the Northern Fleet area and the seas beyond.

During 1944 the Soviet Union requested that the Norwegian Government in exile cede Bear Island in the Norwegian Arctic to the U.S.S.R. and agree to a condominium arrangement for the Svalbard (Spitzbergen) island group.\(^3\) The Norwegian Government postponed discussion of the issue which Molotov sought to revive again in 1946 although this time discussion was limited

\(^1\) It should be noted that in the immediate post war period, prior to the onset of the cold war, when it appeared as though the United States would withdraw its troops from Europe by 1947, the Soviet Union did differentiate between wartime allies and enemies. Soviet forces were removed from northern Norway, Bornholm (Denmark), Yugoslavia, Poland, (except for those required to maintain lines of communication to Soviet forces in Germany), Czechoslovakia and Iran by late 1946. Soviet forces of occupation remained in former enemy Roumania, Hungary, Bulgaria, East Germany and Finland.

\(^2\) The wartime commander of the Northern Fleet was of the opinion 'Without the Kola inlet the Northern Fleet cannot exist ... the Kola inlet is necessary to the state'.


to the Spitzbergen question. While these measures provide an indication of Soviet concern the Soviets were careful not to alarm Norwegians or their wartime allies by pressing their approaches.

The Soviet Union continued to make its concern felt, hoping to appeal to Norwegian restraint in the area while warning the Norwegians of the Soviet attitude.

Molotov, the Soviet Foreign Minister, told his Norwegian counterpart Trygve Lie:

"the Dardanelles ... here we are locked in ... Oresund ... here we are locked in. Only in the North is there an opening, but this war has shown that the supply line to Northern Russia can be cut or interfered with. This shall not be repeated in the future. We have invested much in this part of the Soviet Union, and it is so important for the entire Union's existence that we shall in future ensure that Northern Russia is permitted to live in security and peace."

Subsequent statements by the Soviet Government and reports in the Soviet press in 1947 indicated that in the developing Cold War climate the Soviet Government was particularly concerned with the strategic importance of the Spitzbergen Islands. Although concern about rapid American expansion in the Arctic region was directed primarily at the maintenance of air bases in Greenland, Iceland and Britain and the establishment of

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1 Ibid, p.721.

2 For an account of the delicacy of the Soviet's moves in this region see Riste, O. 'The Great Powers and the Northern Gap 1940-45' Cooperation and Conflict, Vol. 7 especially p.11-12.


additional facilities in Alaska and the Aleutian Islands, it did have a naval dimension.¹

Soviet efforts to raise the issue of Spitzbergen bilaterally in 1947 were rejected by the Norwegian Storting on 15 February, 1947.² The Soviet Union apparently continued its basic approach of cautiously reminding the Norwegian government of its concern and the matter was not formally raised again until 1949, in the context of Norway's decision to enter the North Atlantic Alliance.

On 9 January, 1949, the Soviet Ambassador handed the Norwegian Government a note which drew attention to the Soviet Union's views on the proposed alliance; 'a group of Powers pursuing aggressive aims' seeking to establish 'air and naval bases ... particularly on the territory of Powers situated close to the frontiers of the Soviet Union'³ and requested that the Soviet Union be informed of Norway's intentions especially with respect to the establishment of bases in Norwegian territory. In a subsequent note of 6 February, 1949, the Soviet Union rejected any suggestion that the Soviet Union posed a threat to Norway. After reminding the Norwegians that 'Soviet troops were withdrawn from Norwegian territory voluntarily and even earlier than the Norwegian Government itself desired' the note proposed 'a pact of non-aggression, and thus put an end to all doubts'.⁴

² Keesing's Contemporary Archives, p.8529D. The Norwegian rejection reaffirmed Article 9 of a treaty of neutralisation which in 1920 had neutralised the Spitzbergen Islands. As the treaty was an international one the Norwegians opposed the Soviet approach on the grounds that it could not be altered by a bilateral act.
³ Keesing's Contemporary Archives, p.9794A contains the text of the Soviet Note.
⁴ Ibid, for the text of the note of 6 February, 1949.
The Norwegian Government rejected the offer of a non-aggression pact\textsuperscript{1} and stated its intention to join the Atlantic Alliance but in its reply to the first of the Soviet notes it undertook

\begin{quote}
not (to) join in any agreement with other States involving obligations to open bases for the military forces of foreign Powers on Norwegian territory as long as Norway is not attacked or exposed to threats of attack.\textsuperscript{2}
\end{quote}

This undertaking was reaffirmed in the note rejecting the proposed non-aggression pact.

The Soviet government did not raise the Spitzbergen issue again until 1951. Some idea of Soviet thinking can be gleaned from a \textit{Pravda} article published on 30 August, 1951, which attacked the 'polar strategy' of the United States. Spitzbergen and northern Norway was specifically mentioned as part of the NATO alliance's 'eastern flank'. The article objected to the establishment of air and naval bases in the region and drew attention to the establishment of communications centres which could serve American surface vessels and submarine forces.\textsuperscript{3}

The immediate cause of Soviet concern was the establishment of the North Atlantic Command which \textit{inter alia} assumed responsibility for the defence of the Svalbard group of islands, Jan Mayen Island and Bear Island. This was seen by the Soviet Union as contravening Article 9 of the 1920 Treaty on Svalbard, which prohibited the establishment of military bases there,

\textsuperscript{1} Keesing's Contemporary Archives, p.9842.
\textsuperscript{2} Keesing's p.9794 for the text of Norwegian reply of 1 February, 1949, to the initial Soviet note.
\textsuperscript{3} Kuranen, I. 'Under cover of "defence" talks' \textit{Pravda} 30 August, 1951, p.3.
and the assurances which Norway had given in 1949 on the question of foreign military bases.

In a note to the Norwegian ambassador in Moscow of 15 October, 1951, the Soviet Government pointed out:

the Soviet Union has special interests in this area (Spitzbergen). The U.S.S.R. owns part of the coal deposits on Spitzbergen and is the only country, besides Norway, carrying on industrial mining of coal on Spitzbergen, which supplies the northern areas of the U.S.S.R. and the Soviet northern fleet ... The outlet to the ocean in the west beyond Spitzbergen and Bear Islands also has exceptional significance for the Soviet Union and its security in the north.1

The importance of the ocean outlet for Soviet security was further elaborated in a Pravda article on 28 October, 1951.

By their geographical location the Spitzbergen islands are, so to say, one of the banks of the canal which links the Soviet Union with the ocean in the North. With the development of aviation Spitzbergen's importance to Soviet security has increased still further.2

The Soviet Government and press strongly condemned the manoeuvres conducted by the Alliance powers in the North, Norwegian and Baltic Seas. The part played in the operations by aircraft carriers, whose aircraft were reported to be carrying bombs and ammunition, was noted as was the fact that the opposition's naval forces consisted of submarines, cruisers and aircraft, the

1 The text of the note to the Norwegian Ambassador appeared in Izvestia and Pravda 16 October, 1951, p.2.
2 Rassadin, G. Pravda 28 October, p.4. See also Mikhailov, S. 'Spitzbergen and Medvezh Island' New Times No. 44, 31 October 1951, p.28-31 for a more explicit charge of American attempts to integrate the islands as well as the northern regions of Norway into a system of Arctic military bases stretching from Alaska through Greenland and Iceland.
the precise items which the Soviet Navy had been acquiring in its post war completion and construction programmes. The fact that these exercises involved countering a hypothetical invasion of Norway from the east was also criticised.1

3) The Black Sea Fleet Area

Soviet efforts to alter the Montreux Conventions on the Turkish Straits before 1941 have already been discussed. In responding to Ribbentrop's original Axis proposals the Soviet Union had asked for a base for its land and naval forces within range of but not on the Bosporus. The Soviet's major pre-war concern was to prevent the entrance of hostile naval forces to the Black Sea.

As a result of a war time agreement between Stalin and Churchill, on which the United States reserved its position, the Soviet Union was assured of preponderance in the Black Sea while Britain obtained predominance in Greece.2 This ensured that the British could dominate the Aegean Sea while the Turkish Straits remained in Turkish hands under the terms of the Montreux Convention. At Yalta Stalin stated that the Convention was out of date and that 'it was impossible to accept a situation in which Turkey had a hand on Russia's throat'.3 In June


2 This agreement was reached on 9 October, 1944, and resulted in the Soviet Union being given 90% predominance in Roumania, a 75% predominance in Bulgaria, a 50-50 share with Britain and others in Yugoslavia and Hungary while Britain retained a 90% predominance in Greece. Winston S. Churchill, The Second World War, Vol. VI (Boston, 1950) p.227.

1945 the Soviet Government made it known that if the Turco-Soviet Treaty of Neutrality and Non-aggression were to be renewed, certain conditions would have to be met. The Soviet Union demanded firstly the granting of a base on the Dardanelles, secondly, a return of the Turkish provinces of Kars and Ardahan and, thirdly, that the Turkish Straits be closed to warships of all countries except Turkey and the Soviet Union. ¹

It is of interest in this connection that the first post war Soviet ambassador to Greece was an Admiral, ² indicating the Soviet interest in Greece as a Mediterranean power. The Soviet Union also showed interest in some of the Greek islands in the Aegean Sea. Some control over these islands was essential for Soviet attempts to control communications between the Mediterranean and Black Seas should negotiations with the Turks succeed. These claims were advanced by Yugoslavia and Bulgaria on the Soviet Union's behalf. ³

The problem of the Turkish Straits was brought into the open in August 1946 when the Soviet Government presented a note on the Montreux Convention to the Turkish Government. The note protested against Turkish violations of the Conventions during the war ⁴ and set out the basic revisions that the Soviets wished to see. The most contentious of these were points 4 and 5 of a five point plan.

² The Soviet Ambassador was Admiral Rodionov. See Keesing's Contemporary Archives, p.8114B for his appointment.
⁴ Chief among these violations was the allowance of Axis powers' vessels to pass through the Straits in contravention of the provisions of the Convention. See Kirk, op.cit., p.31 for protest and details of the Soviet publication of captured wartime documents dealing with Turco-German relations.
4. The establishment of a regime for the Straits as the sole sea passage leading from the Black Sea should come under the competence of Turkey and other Black Sea Powers and

5. Turkey and the Soviet Union, as the powers most interested and capable of guaranteeing freedom to commercial navigation and security in the Straits should organise joint means of defense of the Straits for the prevention of the utilisation of the Straits by other countries for aims hostile to the Black Sea Powers.¹

In a *New Times* article Vice Admiral Belli indicated Soviet concern in his rhetorical question.

Can a situation on which there is no protection for the legitimate interests of the Black Sea powers for their rights to refuse uninvited visitors to enter their homes be tolerated anymore? Yet the Soviet Government's proposals for a revision of the terms of the Montreux Convention has met with fierce opposition.²

In a note to Turkey dated 24 September, 1946, the Soviet Union clarified the intentions of its fourth point. It saw the Black Sea as a closed sea and provided a Soviet definition of the term.

The Soviet Government desires before all to invite the attention of the Turkish Government to the special situation of the Black Sea as a closed sea. Such a situation means that the Straits of the Black Sea represent a seaway leading only to the shores of a limited number of powers, namely the shores of the several Black Sea powers. Therefore it is entirely natural that the Soviet Union and the other Black Sea powers are the most interested in the regulation of the regime of the Straits of the Black Sea and accordingly their situation in this matter

¹ Howard, Harry N. *The Problem of the Turkish Straits*, Department of State Publication No. 2752, Near Eastern Series, No.5, 1947, p.47-49.
cannot be compared with that of other powers.... With regard to the Straits of the Black Sea leading into the Black Sea, which is a closed sea, it seems proper in this case to establish such a regime of the Straits which above all would meet the special situation and the security of Turkey, the U.S.S.R., and the other Black Sea Powers.¹

A Soviet success on these points would firstly deny the United States and Great Britain, among others, the right to take part in the revision of the treaty which was scheduled to take place before 9 August 1946.² Secondly, acceptance of the doctrine of the closed sea which justified excluding non-riparian powers from the revision of the Convention would also exclude the warships of non-riparian powers from the Black Sea. Finally acceptance of point 5 of the Soviet proposals with or without success over the Greek Aegean Islands would deny Black Sea access to hostile naval powers. The American, British and Turkish position prevailed and Soviet moves for a renegotiation of the Conventions lapsed.³

¹ Howard, op.cit., p.56-57.
² In the event the treaty was automatically renewed on 9 November, 1946, without revision.
³ On 30 May, 1953, the Soviet Government issued the following declaration - 'In the name of preserving good neighbourly relations and strengthening peace and security the Governments of Georgia and Armenia have found it possible to renounce their territorial claims on Turkey. As for the Straits question the Soviet Government has revised its opinion on this issue and considers it possible to protect the U.S.S.R.'s security in connection with the Straits on terms equally acceptable to both the U.S.S.R. and Turkey'.

Documents on International Affairs, 1953, (London, 1956) p.277-78. This formal withdrawal from the posture of a dissatisfied power vis a vis Turkey came almost seven years after the November 1946 renewal of the Conventions.
Soviet reactions to United States naval visits to the Mediterranean in 1946, were similar to those expressed on United States activity in the north. In the case of the visit of the battleship Missouri Soviet reactions had been aimed primarily at the Turkish state and the Turkish media. The visit of the aircraft carrier Roosevelt brought a much stronger reaction. It was seen as part of an attempt to form an anti-Soviet Mediterranean bloc extending from Spain to Turkey. This visit was linked with 'various Arctic expeditions of the United States Navy' as demonstrating United States desire to decide international questions by displays of armed might. The pre-war situation 'when the United States never had any hold in the Mediterranean' was contrasted to the present state of affairs.

A letter by the Soviet historian Eugene Tarle published in the New York Herald Tribune attacked a statement by Admiral Halsey in which the United States Admiral had asserted the principle of 'freedom of the seas'. 'We demand the right to go anywhere at any time. It's nobody's damn business where we go'. Tarle interpreted the above as a 'demand for unhampered movement of American vessels in alien waters'.

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1 Xydis. American Naval Visits gives an extensive account of the naval visits to Greek and Turkish waters of the battleship Missouri and the aircraft carriers Franklin D. Roosevelt and Randolph. Particular attention is paid to the international background of these visits, press speculation as to their intentions, and the reaction of the Greek, Turkish and Soviet mass media coverage of them.

2 Belli, op.cit., p.8-12.

3 This was clearly a reference to the cruise in Arctic waters by the aircraft carrier Midway. The U.S. Navy maintained that this exercise - Frostbite - was an attempt to assess carrier operations in Arctic conditions.

4 E.g. the Greek elections as an immediate issue and more generally a compelling of a solution to the general war settlement.

5 Belli, op.cit., p.8-12.

In November 1946 the American press announced details of a cruise to 'Russia's backyard'\textsuperscript{1} by the USS Randolph and escorting vessels. Prior to this Stalin in an interview with Hugh Baillie had expressed indifference to United States naval demonstrations in the Mediterranean.\textsuperscript{2} This attitude was reversed on the day the text of the interview was published in the American press in a speech by Molotov at the United Nations General Assembly, which complained of the pressure stronger powers were bringing to bear on other states.

We know that squadrons of naval vessels and military aeroplanes sometimes appear in seas and regions where they have not been before, when this is considered necessary in order to promote the success of diplomatic negotiations.\textsuperscript{3}

The Soviet Union continued to express concern over the rapidly expanding presence of American naval forces in the Mediterranean and the establishment of air and naval bases on either shore of that sea, and the proposed entry of Greece and Turkey into the NATO alliance brought sharp reaction.

\textit{(I)t is evidence that the invitation extended to Turkey to join the Atlantic bloc means nothing other than an attempt by the imperialist States to use Turkish territory for the purpose of setting up bases on the Soviet frontiers, with aggressive aims.}\textsuperscript{4}

The Soviet Ministry of Foreign Affairs in a note to the Turkish Ambassador in July 1953 expressed concern

\textsuperscript{1} \textit{New York Times}, 9 November, 1946, p.5.
\textsuperscript{2} Ibid, 29 October, 1946, p.1.
\textsuperscript{3} \textit{The Soviet Union and international cooperation'} Speech at the Plenary Meeting of the General Assembly, 29 October, 1946, delivered by M.V. Molotov in Molotov Problems of Foreign Policy (Moscow, 1949), p.256.
\textsuperscript{4} Keesing's Contemporary Archives, p.11853A. For a similar charge attacking both Greece and Turkey see 'New candidates for the Atlantic bloc' \textit{New Times}, No. 21, 1951, p.17.
about the number of foreign naval formations visiting ports in the Black Sea Straits.\(^1\)

The Soviet Ministry responded to the formal Turkish reply, which expressed surprise at the Soviet Union's concern, by publishing a list of foreign naval vessels which had visited the Black Sea Straits.

The Black Sea Straits have been visited by:-

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign Vessels</th>
<th>Displacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>33</td>
<td>197,000 tons</td>
</tr>
<tr>
<td>1951</td>
<td>49</td>
<td>378,000 tons</td>
</tr>
<tr>
<td>1952</td>
<td>69</td>
<td>587,727 tons</td>
</tr>
<tr>
<td>First seven months of 1953</td>
<td>60</td>
<td>More than 300,000 tons</td>
</tr>
</tbody>
</table>

when the visits to the Black Sea Straits by foreign naval vessels have reached the above-mentioned large dimensions, the request by the U.S.S.R. Foreign Ministry for additional information from the Turkish Foreign Ministry concerning the increasing frequency of visits to the Black Sea Straits by large foreign naval formations could not come as a surprise.\(^2\)

4) The Far East

In the Far East the Soviet Union gained control of the whole of Sakhalin and the Kurile Islands by taking part in the final stages of the war against Japan under the terms of agreement worked out at Yalta. Although these gains virtually made the Sea of Okhotsk a Soviet lake they did little to improve the Far Eastern fleet's prospects of unimpeded access to the Pacific.

Under the Russo-Chinese Treaty of 1945 the Soviet Union regained Port Arthur which had been lost in the Russo-Japanese War of 1904-5.\(^3\) Although Port Arthur was

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ice free and gave direct access to the Pacific. The problems of operating it as a joint naval base with Vladivostok had not changed since the conflict with Japan some forty years earlier. Because Port Arthur and Vladivostok are separated by 1,200 miles of sea, including the relatively narrow Korean Straits, any attempt to link the forces at the two ports would be vulnerable to an enemy blockade of the Straits, and relatively large forces would be required simply to give the attempt a minimal chance of success.

Following the success of the Chinese Communist revolution, the Soviet Union agreed to the retrocession of Port Arthur as part of the package of agreements which followed Mao's visit to Moscow in December 1949 - January 1950. This retrocession, due to be effected 'immediately upon the conclusion of a peace treaty with Japan but not later than the end of 1952,' was delayed. In an exchange of notes dated 15 September, 1952, the Chinese 'requested' the Soviet Union to prolong the deadline for the withdrawal of its forces pending the conclusion of peace treaties between the Chinese Peoples Republic and Japan and the Soviet Union and Japan.

The situation remained unchanged during Stalin's lifetime but during their visit to China in October 1954, Bulganin and Khrushchev agreed to return Port Arthur to


Chinese control, a policy that was effected in May 1955.\footnote{Gittings, John, \textit{Survey of the Sino-Soviet Dispute} (London, 1968), p.56.}

Soviet diplomatic activity towards the states which dominate the access points to the seas most vital to Soviet defence followed a discernible pattern in the post war period. First the Soviet Union indicated the importance of the states in question to its own security and suggested that existing arrangements be revised. Following rejection of the suggested revisions the Soviet Union then, where appropriate, either insisted on the scrupulous observation of the conditions pertaining to the establishment of foreign bases or else sought regional agreement on its version of the closed sea doctrine. As Butler has pointed out

\begin{quote}
The doctrine (of the closed sea) purported to secure the Baltic and Black Sea flanks from Western military influence by excluding, in cooperation with other littoral states, the warships of non-littoral powers, it would establish a line over which a non-littoral power could not send its warships without subjecting itself to the charge that it had committed a violation of international law. The stipulation of regional regulation of the regime of a closed sea is an important qualification, for the Soviet Union has been careful not to assume the transparently unlawful right to determine or police such a regime unilaterally.\footnote{Butler, op.cit., p.131.}
\end{quote}

The Soviets were extremely cautious in their initial suggestions that existing treaties be revised. When rebuffed they sought to avoid a situation whereby the states in question would turn to the other Great Powers for security, and thus bring Britain and/or the United States directly into areas essential to Soviet security. Although in the case of the Spitzbergen islands and the Black Sea Straits the Soviet Union sought the right to establish military bases it seems certain from the wording
of the request, which drew attention to the use the Germans had made of these areas during the war, and from the state of the Soviet Navy, that these naval and air bases were intended, at least initially, to be primarily defensive in purpose.

The inclusion of Norway and Denmark (1949) and Turkey and Greece (1951) in the NATO alliance was a reverse for Soviet policy although both Norway and Denmark refused to allow foreign military bases to be established on their territory. The Soviet press and government denounced naval exercises and port visits by foreign naval vessels in these regions. As George Kennan noted,

> It seems preposterous to the Russians that foreign planes and naval vessels should be able to approach with impunity within a few miles of their coastal installations. For these reasons they have shown and will continue to show an extreme and almost pathological degree of sensitivity about their maritime frontier.¹

The diplomatic activity of the post war period did not result in any improvement so far as the Soviet Navy's access to the high seas was concerned. Access points from the fleet areas were still dominated by foreign powers which, by 1953, had all entered alliances involving the United States. To repeat: By 1945 the Soviet Union had undeniably strengthened its position in the historically important seas but this strengthening of position did nothing to improve the fleet's strategic offensive capabilities against a trans-oceanic sea power such as the United States.

CHAPTER II - CONCLUSION

Soviet diplomacy failed to improve the security of the European fleet areas beyond that which had resulted from territorial acquisitions and the installation of friendly regimes in the post-war era. Access to the virtually land enclosed seas was under foreign control and by the early 1950s these countries which flanked the points of entry were part of the United States post-war alliance system. Hostile naval forces could gain relatively unimpeded access to the seas which abutted the Soviet Union from which sea based attacks could be launched on the Soviet landmass or on Soviet ground forces operating in the coastal region. The security of the fleet areas and the seas on which they were located was therefore to remain a major preoccupation of the Soviet Navy and the Soviet armed forces as a whole.

Soviet post-war military thought was dominated by Stalin's doctrine of the permanently operating factors, a doctrine singularly inappropriate as a basis for evolving a strategy against a power whose territory was beyond the reach of Soviet armed forces.

The assessment of the Soviet Navy's role during the war strengthened the traditional view that its task was to provide assistance to the ground forces. Moreover Soviet accounts of the war suggested that the major achievements of the allied naval powers in the Atlantic and Pacific, while important, were secondary to the decisive role of Soviet ground forces in defeating Germany and Japan.

Soviet naval commentators noted the major trends in the war on the high seas, the new and important roles of aircraft carriers, the necessity of reliable air support for naval operations and the effectiveness of submarines against sea communications. However, much of this appears to have been regarded as irrelevant for a navy concerned to maintain the security of enclosed seas. There is nothing to suggest that the historic role of the navy was to be changed, nor that any broader task, beyond the attempt to dominate the seas of
However, the new adversary, the United States, was not a European power and the fleets of the United States and her allies, which controlled the high seas, were capably of launching sea based strikes against the Soviet Union. The political-military leadership's assessment of the role of Soviet sea power, on which the immediate post war construction programme would be based, while not irrelevant to Soviet security requirements, was too limited to be of lasting utility in the emerging post war naval situation.
CHAPTER III

The Post War Reconstruction of the Soviet Navy

The devastation inflicted on the Soviet Union during the course of the Second World War was immense. War losses were estimated at twenty million people, and a recent Soviet source states that 'the riches of the land were reduced by thirty percent'.

It was within this context that the Navy had to reconstruct. In doing so it competed for scarce resources with the other traditionally favoured branches of the armed forces, and with the full range of civilian demands.

There can be no doubt that the Soviet Navy was seriously weakened during the war, despite the restrictions placed on the use of the Baltic Fleet in 1945. Not only were ships destroyed during the course of the war, but naval construction yards were devastated and few of the


Men'shov's detailed figures indicate that the destruction included:

- 1,710 towns and urban settlements
- 70,000 villages and hamlets
- 32,000 industrial enterprises
- 93,000 kolhkozes and 1,876 sovkhozes
- 65,000 kilometres of railway line torn up
- 16,000 locomotives destroyed or removed

and 428,000 railway carriages destroyed or removed.

2 The Main Naval Staff, the Stavka and Kuznetsov himself had opposed the Baltic Fleet's use of its major surface ships in the Southern Baltic in 1945. 'Losses of ships, especially big ones, would be hard for the personnel of the fleets and for the people to bear, which is explained not by high cost so much as by the impossibility of replacing them quickly with new ones ... The fleet had to be preserved, used carefully, and exposed only to justified risk when the situation demanded it.'

ships laid down in the 1938 building programme survived the war.¹

It is difficult to be certain of the composition of the Soviet Navy at the end of hostilities in 1945. The following table serves only to indicate the approximate size and distribution of major units by fleet area.

<table>
<thead>
<tr>
<th>Type</th>
<th>Baltic¹</th>
<th>Northern¹</th>
<th>Far East²</th>
<th>Black Sea³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battleship⁴</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Cruisers⁵</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Destroyers⁶</td>
<td>12</td>
<td>18</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Small Surface</td>
<td>627</td>
<td>146</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>Submarines</td>
<td>28</td>
<td>22</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Naval Aviation</td>
<td>787</td>
<td>721</td>
<td>1,500</td>
<td></td>
</tr>
</tbody>
</table>

Sources:
- Janes Fighting Ships, 1945-46.

Notes:
1. The History of the Great Patriotic War gives figures for the Baltic, Northern and Far Eastern Fleets as of 1 June, 1945.

¹ See Chapter I, Appendices 2-5, p.46-49 above for details.
Notes (Cont)

2. These figures are from Kuznetsov 'Forty-Five' and do not differ substantially from those provided in The History except for naval aviation which is listed as approximately 750.

3. The Black Sea figures which I have been unable to trace from any primary source are based on Meister and Janes Fighting Ships 1945-46. I have taken the total given in Janes for any one type and subtracted the units from the other Fleet areas and compared this with Meister's estimated.

4. These were three Gangut class battleships built for the Tsarist Navy and recommissioned, after refits and repairs, into the Soviet Navy.

5. Among the cruisers listed are:

   (a) the Lutzow, an incomplete heavy cruiser from Germany. During the war it served as a floating battery. It was left unfinished in the post war era.

   (b) two medium cruisers from the Tsarist Navy's building programme of 1912. Other medium cruisers were from the Kirov programme of 1932.

   (c) the light cruiser Aurora, a relic of the October Revolution, is also listed.

6. Among the destroyers listed were possibly as many as seven of the Novik class which originated with the 1912 Tsarist programme and were completed after the Revolution.
The Soviets also took over warships and auxiliaries from the German and Japanese fleets. According to Kuznetsov:

The ships received did not have great fighting significance. But all the same they gave us a certain help in training personnel and reinforcing our rear organisations with auxiliary ships. Several of them sailed for some time as part of our fleets, reminding us of a hard war and a difficult victory.1

Among the submarines available to the Soviet Navy in 1945 were units from the following classes:

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Built</th>
<th>Displacement</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>11</td>
<td>1936-41</td>
<td>1,390 tons</td>
<td>oceangoing</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>1929-</td>
<td>1,000 tons</td>
<td>limited</td>
</tr>
<tr>
<td>S</td>
<td>16</td>
<td>1935-41</td>
<td>780 tons</td>
<td>medium</td>
</tr>
<tr>
<td>P</td>
<td>2</td>
<td>1928</td>
<td>1,200/1,800 tons</td>
<td>medium</td>
</tr>
<tr>
<td>L</td>
<td>17</td>
<td>1929-35</td>
<td>900/1,300 tons</td>
<td>medium</td>
</tr>
<tr>
<td>M</td>
<td>46+</td>
<td>1935-41</td>
<td>250 tons</td>
<td>coastal</td>
</tr>
<tr>
<td>ShCh</td>
<td>21+</td>
<td>1935-41</td>
<td>650/750 tons</td>
<td>medium</td>
</tr>
</tbody>
</table>

Sources:

1 Kuznetsov, 'Forty-Five', part 2, p.53-4. Kuznetsov also gives details of the bargaining over the division of the German Fleet at the Potsdam conference.
As well as these boats the Soviet Union had three ex-Royal Navy V-class submarines, six Italian submarines of mid-1930s construction, and a variety of recent German submarines which incorporated the snorkel device.\(^1\) Of greatest interest were the XXI, XXIII and XXVI types which had demonstrated the potential, in the closing stages of the war, to revolutionise submarine operations. As well as the snorkel device the Soviets also captured the design of the Walther propulsion system which promised greatly increased submerged speeds for submarines.\(^2\) It is possible that the advancing Soviet Army found plans for a V-2 type rocket capable of being launched from a submarine or from containers towed by submarines.\(^3\) As well as the plans and examples of German submarines the Soviets captured a number of scientists and technicians at various construction sites. They transferred the men, documents and equipment to the Soviet Union.

The war disrupted the Soviet shipbuilding plans of the immediate prewar years. Meister claims that during the course of the war some ninety eight Soviet shipyards of varying sizes were destroyed and that it was some five years before the major Black Sea yards returned to full operation.\(^4\)

The ports of the Black Sea, Baltic Sea and the Sea of Azov, as well as basins of rivers and lakes to the west of the Volga, had been reduced to such ruin and destruction by the enemy as history has never known in any previous war. In the process of falling back, the enemy blew up berths, moles and lighthouses, scuttled

\(^1\) Janes Fighting Ships 1945-46.


\(^3\) Ibid, p.148-49, also Breyer, S., op.cit., p.52-54.

vessels in harbours and roadsteads, mined entrances to channels and port structures, dumped steam locomotives, cars, cranes and hoist lifts into the water and blasted multi-span bridges.\textsuperscript{1}

Stalin was fully aware of the weakness of the Soviet Navy and the implications of this weakness for Soviet actions abroad. In a conversation held in April-May 1944 with the Yugoslav Communist Djilas about the feasibility of supplying arms to the Yugoslav liberation forces Stalin is quoted as saying: 'Ships are needed for this. And we have no ships. Our Black Sea fleet is destroyed.'\textsuperscript{2}

In January 1947 during a discussion of the first post-war five year plan Stalin again revealed his anxiety about the weakness of the Soviet Black Sea Fleet. He was concerned to find a way to build the Volga-Don Canal which he characterised as

A terribly important job from the military point of view as well; in case of war they might drive us out of the Black Sea - our fleet is weak and will go on being weak for a long time. What would we do with our ships in that case?\textsuperscript{3}

Besides appreciating the weakness of the Soviet Navy, Stalin was keenly aware of the naval power of the United States. Djilas reports Stalin as saying:

The uprising in Greece will have to fold up (because) they have no prospect of success at all. What, do you think that Great Britain and the United States - the United States the most powerful state in the world - will permit you to break

\textsuperscript{1} The Hydronauts (Moscow, 1964) cited Polmer, N. 'Soviet shipbuilding and shipyards', \textit{USNIP}, Vol. 98, No. 5, p.275.

\textsuperscript{2} Djilas, M. \textit{Conversations with Stalin}, translated Petrovich, M.B. (Harmondsworth, 1963), p.54.

\textsuperscript{3} Ibid, p. 121. In the event the Volga-Don canal was of limited use for the transfer of naval vessels. See Chapter 1 p.12 for comment.
their line of communication in the Mediterranean? Nonsense. And we have no navy.1

This, then, was the position which faced Soviet naval planners in the immediate post war period: a badly damaged, old fleet, a crippled shipbuilding industry, a series of geographic obstacles to the high seas, the naval forces of potentially hostile powers flaunting superiority in their 'backyard', a war record which underscored their role as 'faithful helper of the Army', and a naval doctrine based on the wartime role. The only immediate way in which the Soviet Union was capable of reacting to United States naval movements was on a verbal diplomatic level.

In addition to these naval problems the fact of an American atomic monopoly had to be faced.2

The development of a nuclear capability and a suitable delivery system were clearly high order priorities for the Soviet Union in the post war period.3 It was also necessary to 'provide for the defence of the Soviet people' while reducing the manpower in the Army and Navy, thus enabling the discharged servicemen to contribute to the reconstruction of the shattered country.4 During the period of American atomic monopoly

1 Ibid, p.140-1. This incident probably occurred in September 1947 when Djilas and Kardelj were in Moscow to discuss the establishment of the Cominform.
2 Molotov, in his speech to the United Nations General Assembly on 29 October 1946, had spoken at length on the subject of control of atomic weapons and raised the issue of 'atomic diplomacy' being applied to influence small countries. Problems of Foreign Policy, p.257-267.
3 The key dates for Soviet nuclear development are:
   November 1947 - M.V. Molotov claimed that the Soviet Union had the secret of the atomic bomb.
   August 1949 - experimental testing of a nuclear device.
   August 1953 - a thermonuclear device successfully tested.
   Men'shov, 'Armed Forces in the postwar period', trans. p.32.
4 Ibid, p.32, gives the following figures for the reduction in armed forces personnel: May 1945, 11,365,000 reduced by 8.5 million to give 2,874,000 by 1948.
   These are the figures supplied by Khrushchev in January 1960.
we could resist the imperialists only by
a large army equipped with the finest tanks,
as well as a strong air force and navy.1

The post war naval building programme concentrated
on the large scale production of medium range submarines,
a cruiser programme, with attendant destroyers, and a
considerable increase in the number of land based aircraft
capable of providing air protection for surface units in
restricted waters.

It is impossible to be certain of the details of
the process which produced the final construction plan.
However, it is clear that post war planning for the navy
began in September 1945 at the latest. Kuznetsov recalls
that shortly after the conclusion of the Japanese
operations while he was in the Far East

....I was rung up on the high-frequency
(i.e. the secure) telephone. The Supreme
Commander (Stalin) asked when I would be
flying out to Moscow. 'The question of
what to do about a new shipbuilding
programme has to be decided!' said Stalin,
and hung up. In the government they were
already deciding the future of the Navy,
and hurrying us sailors on to work out
the new programme. Peacetime had begun,
new tasks had arisen.2

As in the prewar period Stalin himself exerted a
great deal of influence not only on the major outline of
the post war shipbuilding programme but also on more
detailed decisions concerning armament. No doubt there
is a deal of exaggeration in Admiral Golovko's claim:

Comrade Stalin shows constant concern for
the construction of the best types of
warships and armaments, points out ways of
further developing and perfecting Soviet
Naval science, and defines the direction
and content of Party-political education
for Soviet servicemen.3

1 Ibid, p.32.
2 Kuznetsov, 'Forty-Five', part 2, p.56.
3 Golovko, A. (Admiral), Navy Day Speech Izvestia
29 July, 1951, p.2.
but scepticism should not obscure the fact that many of
the wartime leaders of the United Nations alliance,
political and military, were astounded by Stalin's grasp
of the broad strategic implications of operations and the
technical details of military equipment. 1

Soviet naval analysts appear to have had definite
ideas as to the structure of the post war fleet. Admiral
Alafuzov wrote:

The surface forces have always been, and still
are, the basic and most universal element of
the navy. . . . They can operate on the near and
far approaches to our shore, and therefore
they are capable of defending against enemy
efforts to invade from the sea, or against
separate strikes at our coasts. 2

The views of Captain Shner and Kuznetsov on the necessity
of aircraft carriers in a modern fleet have already been
mentioned.

Apparently Stalin was not convinced by these claims.
According to Kuznetsov some small and large aircraft
carriers had been proposed, and apparently accepted by
Stalin, in the post war building programme 'but by Stalin's
personal instruction they excluded from it at first the
big and then even the smaller ships'. 3

1 See, for example, Churchill, W.S. The Second World War:
Vol. 4. The Hinge of Fate (London, 1951), p.434, for
Stalin's reaction to 'Operation Torch', the North African
invasion.

Deane, J. (Major-General, USA) The Strange Alliance (New
York, 1947), p.106, describes Stalin's grasp of weapons,
aircraft and aviation tactics.

Djilas, M. Conversations, p.55, describes Stalin's
reaction on being presented with a rifle used by the
Yugoslav partisans: 'He opened and shut it, hefted it, and
remarked: 'Ours is lighter'.

2 Alafuzov, V.A. 'On the fundamentals of naval operations',
p.26 quoted in Herrick, Soviet Naval Strategy, p.58

3 Kuznetsov, N.G. 'Soviet naval development prior to World
War II' Oktyabr No. 11, Nov. 1965, trans. JPRS No. 33,537
in Soviet Military Translation No. 218, 30 December 1965,
p.13. See Herrick Soviet Naval Strategy p. 64, f.n. 15 for
the further evidence of a 'Former Soviet Naval Officer' on
the carrier question.
Kuznetsov also records that Stalin's views on anti-aircraft defence for the surface units had remained unchanged since the prewar period. When, in the post war period, we suggested replacing one large calibre turret on certain cruisers with an anti-aircraft installation which would have considerably strengthened the ship's anti aircraft capability ...this proposal was decisively rejected.

Stalin also held strong views on the calibre of the main batteries for the cruisers:

(We sailors insisted that cruisers be built with guns not larger than 22.5 cms. Such cruisers could successfully smash all ships of their class and would be relatively small and inexpensive.

Although Stalin accepted the sailors' view after some vacillation, he apparently insisted in 1949 that a cruiser with 30 cm guns be included in the programme.

These disputes between Stalin and his Admirals are of interest not only for what they tell us about the formulation of the building programme: they also reveal a lack of coordination between high ranking naval officers and Stalin on the role of the navy in a future war. The dispute over anti-aircraft armament and the fate of the carrier programme suggest that the political authorities responsible for deciding major military issues, and the Army officers who dominated the Ministry of the Armed Forces, saw the post war navy as carrying out similar tasks to those which it had performed during the war. Carrier aviation and heavy anti-aircraft capability

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1 See p. 42 above.
could be dispensed with but only if shore based aviation were able to cover the fleet units in their areas of operation. To dispense with the carrier programme was to commit the navy to a defensive strategy and to restrict its operations to the coastal zones. The naval officers, on the other hand, suggested a building programme which would have given the Soviet Navy a capability for an offensive strategy involving wartime operations on the high seas.

Kuznetsov does not specify the dates on which the major decisions relevant to the post war naval programme were taken. It is likely that the navy's programme for a high seas fleet was presented in late 1945 and early 1946, possibly before the February 1946 reorganisation of the separate Commissariats of Defence and Naval Affairs which amalgamated to form the Ministry of the Armed Forces, and almost certainly before Kuznetsov, a strong advocate of the high seas fleet, was replaced by Yumashev in 1947. Kuznetsov's endorsement of the reorganisation, despite the fact of his replacement, suggests that it was not until after the February 1950 decision to establish separate Ministries of War and of the Navy (a move Kuznetsov described as incomprehensible) that the naval cut backs occurred.

Prior to the war Kuznetsov had complained that the navy, despite its post-December 1937 status as a separate commissariat, had no real control over naval policy 'all we in the navy could do was observe what the People's Commissariat for Defence was doing'. It is tempting to speculate that this situation recurred between February 1950 and March 1953.

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1 Kuznetsov became a First Deputy Minister for Defence under the new Ministry.
3 Ibid, p.102.
CONSTRUCTION PROGRAMMES

The following table indicates the scope of the post war building programme. It is based on an examination of the ships which actually resulted from that programme although where there is evidence that classes of vessels were to be part of the programme and were subsequently cancelled these have been included. Moreover, where there is evidence that a class such as the Sverdlov light cruisers or the Skory destroyers were originally planned to build to a certain number these figures have been indicated.

It has proved impossible to indicate precisely how long it took to get individual shipyards into operation after the war or to gain accurate figures for the numbers of pre-war vessels which were completed after the war. Programmes on which construction work did not begin but which must have reached the status of a firm design and building commitment have been included although in some cases only tentatively. The time span indicates the construction time for the class as a whole, from commencement of the first vessel to the completion of the last vessel.

l) Cruisers

The vessels of the Chapayev class which had been laid down in the pre-war years were completed by 1950. The work had been carried out at the Ordzhonikidze Yard in Leningrad and at the Marty Yards, Nikolayev, following the extensive repairs necessitated by war time destruction.

By 1953 it is probable that six of a projected class of twenty four Sverdlov class light cruisers had been completed and that an equal number were building at yards
<table>
<thead>
<tr>
<th>Type</th>
<th>1945</th>
<th>1950</th>
<th>1955</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRUISERS</td>
<td>Complete - 5 Chapayevs</td>
<td>Sverdlov - 24 planned</td>
<td>Original plan made</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>provision for heavy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>aircraft carriers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nikolayev &amp; Leningrad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>yards</td>
<td></td>
</tr>
<tr>
<td>DESTROYERS</td>
<td>Complete some 'O' class</td>
<td>Skory 85 planned</td>
<td>Tallin 1 only</td>
<td>Kotlin 30+ planned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRIGATES</td>
<td>Complete - some Albatross</td>
<td>Kola (12 planned)</td>
<td>Riga (48 planned)</td>
<td></td>
</tr>
<tr>
<td>SUB CHASERS</td>
<td>Complete some Artillerist</td>
<td>Kronstadt 200+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCEAN-GOING</td>
<td>Possible completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBMARINES</td>
<td>of some K-class units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEDIUM RANGE</td>
<td>Possible completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBMARINES</td>
<td>of some SHCH class</td>
<td></td>
<td>W 240</td>
<td></td>
</tr>
<tr>
<td>COASTAL RANGE</td>
<td>Possible completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUBMARINES</td>
<td>of some M class</td>
<td></td>
<td>Q (39 planned)</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Janes Fighting Ships, 1945/6 - 1973/4.  
Breyer, S., Guide to the Soviet Navy, esp. Chapter 9 and Appendix I.  
McGwire, M., 'Soviet Naval Procurement'.

Note: A bracket indicates that the figure is the best available and presents an order of magnitude rather than a confirmed number.
### TABLE II

CARRIER AND CRUISER CONSTRUCTION POST WAR STALIN PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (in tons)</th>
<th>Armament (in mm)</th>
<th>Construction Data</th>
<th>Range/Radius and Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapayev</td>
<td>5</td>
<td>11,500</td>
<td>main 12-152mm (4x3)</td>
<td>Laid 1938-40</td>
<td>Range 3,400 miles at 15 knots</td>
<td>This class was a replacement for the Kirov vessels and planned in the pre war construction programme. Six vessels had originally been intended but one was scrapped at Nikolayev by the Germans in the course of the war. Two others which were building at Nikolayev were removed to Poti by the Soviets during the war.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15,000</td>
<td>dual purpose 8-100mm (6x2)</td>
<td>Launch 1941</td>
<td>Max speed 34 knots</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>anti aircraft 24-37mm (12x2)</td>
<td>Completed 1948-50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mines 100-200</td>
<td>at Marty Yards and Orzhonikidze Yard Leningrad</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>15,500</td>
<td>main 12-152mm (4x3)</td>
<td>Laid 1948-53</td>
<td>Range 6,700 miles at 18 knots Speed 34 knots</td>
<td>Apparently a post war development based on the Chapayev class incorporating some of the results of war time experience and developments into the design. Programme cancelled before completion (see p.144-147 below for an account).</td>
</tr>
<tr>
<td></td>
<td>plan</td>
<td>19,000</td>
<td>dual purpose 12-100mm (6x2)</td>
<td>20 only of the average rate of 4/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>deep load</td>
<td></td>
<td>anti aircraft 32-37mm (16x2)</td>
<td>Launch 1951-54, 17 only. Complete 1952-58</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mines 140-250</td>
<td>at Marty Yard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedoes 10-533m (2x5)</td>
<td>At Nikolayev and Orzhonikidze Yard Leningrad (possibly 1 or 2 at Syerodvinsk)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sverdlov</td>
<td>24</td>
<td>15,500</td>
<td>main 12-152mm (4x3)</td>
<td>Laid 1948-53</td>
<td>Range 6,700 miles at 18 knots Speed 34 knots</td>
<td>Apparently a post war development based on the Chapayev class incorporating some of the results of war time experience and developments into the design. Programme cancelled before completion (see p.144-147 below for an account).</td>
</tr>
<tr>
<td></td>
<td>plan</td>
<td>19,000</td>
<td>dual purpose 12-100mm (6x2)</td>
<td>20 only of the average rate of 4/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>deep load</td>
<td></td>
<td>anti aircraft 32-37mm (16x2)</td>
<td>Launch 1951-54, 17 only. Complete 1952-58</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mines 140-250</td>
<td>at Marty Yard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedoes 10-533m (2x5)</td>
<td>At Nikolayev and Orzhonikidze Yard Leningrad (possibly 1 or 2 at Syerodvinsk)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruiser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CANCELLED</td>
</tr>
<tr>
<td>Carriers</td>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>CANCELLED</td>
</tr>
<tr>
<td></td>
<td>2 large</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>There is evidence cited p.10 above that a class cruiser was planned. Such a class would have been logical enabling the incorporation of wartime experience and developments at a higher level of sophistication. Construction would have been undertaken in the mid to late 50s when the Sverdlov programme was complete. Jones Fighting Ships 1957-6 reports two large cruisers on the stocks.</td>
</tr>
<tr>
<td></td>
<td>2 small</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: As for Table I, p.95.
recently vacated by the pre-war cruisers.\(^1\) The Soviet Navy was at this time the only navy concentrating on the development of this type of vessel. The Royal Navy completed two Tiger class cruisers in 1959 and 1960 while the United States Navy completed some cruisers laid down in wartime and in the mid 1950s began to convert gun cruisers to guided missile armament.\(^2\)

\(^1\) Janes Fighting Ships 1953-4 suggests that only one Sverdlov had been completed (p.301), with a further seven to nine others at varying stages of completion. Figures from the 1954-55 and 1955-56 editions, however, suggest that this is low. The figures used in the text are taken from R.W. Herrick Soviet Naval Strategy, p.65, and agree with McGwire's projections on page 77 of his article 'Soviet Naval Procurement', in The Soviet Union in Europe and the Near East (London, 1970).


\(^3\) Janes Fighting Ships 1953-54, p.301-302.

to be used in the familiar Soviet naval role of providing flank support for military operations in coastal areas.\(^1\)

If, as has been suggested, Stalin intended a further class of heavy cruisers then this addition would have done nothing to alter the role of the cruiser component of the fleet.\(^2\) Without carrier based air power these vessels were limited to areas of operation capable of being covered by land based aviation.

Although there is little information available on the range of Soviet military aircraft it appears that in the early 1950s the Soviet Air Force had nothing more advanced than the Tu-4, a Soviet version of the B-29 Super Fortress, or the Tu-6, a high altitude reconnaissance aircraft with a maximum range of 1,550 miles.\(^3\) While both these aircraft may have been of some use against submarines they would not have been capable of surviving at their maximum range against aircraft from a carrier because no fighters could escort them to this distance. The maximum radius of Soviet fighters appears to have been little more than 600 miles. The early MIG-15 had an airborne endurance of two hours.\(^4\) This suggests that the naval fighters' role was to be that of the previous war - defending ports and naval

---


The land operations covered could be envisaged as either a Soviet attempt to seize control of the coasts of the Baltic and Black Seas in the context of the seizure of continental Europe or else the repulse of 'imperialist' invasion forces.

2 Janes Fighting Ships 1957-58, p.318 reports the sighting of two large cruiser hulls on the stocks of Nikolayev.


bases and, if required, assisting the Soviet Air Force in its ground support role. In addition these aircraft could carry out coastal convoy escort duties, and air patrols above Soviet surface forces provided these surface units remained within 100 miles of the coast. The fighters could provide an escort for the bombers and torpedo bombers of the Naval Air Force for operations extending to a maximum of 400 miles from the coast.  

2) Destroyers

Following the war a number of 'O' class destroyers were completed. The number in commission in 1953 was probably ten. This class was followed by the Skory class destroyers of which, it has been estimated, some eighty five vessels were to have been produced. The large numbers projected for this class and the number of yards involved, Zhdanov in Leningrad, Marty at Nikolayev, and yards at Komsomolsk and Severodvinsk suggest that this was to be the post war generation destroyer.

During the Stalin era design decisions must have been made for at least two other classes of destroyer type vessel. The destroyer leader Tallin was laid down in 1953 and completed in 1955, and the Kotlin class began building in 1954.

---

1 Escorting a bomber to a distance of 400 miles would give the MIG-15 a maximum over target duration of 40 minutes. This does not allow for bomber protection to and from the target area and is therefore subject to great reduction. Escorting surface ships was essential if they were to be protected against carrier aircraft attacks. If a constant combat air patrol was to be maintained over the surface vessels these probably could not operate at distances of even 100 miles from shore given the two hour endurance of the aircraft available.

These figures are supported by the evidence of a 'Former Soviet Naval Officer' cited in Herrick Soviet Naval Strategy, p.137-139. The Soviet Naval Air Force is treated at greater length at p.115-117 below.

2 Janes Fighting Ships provides figures which vary from 18 in 1951-2 and 1952-3 to 10 in 1953-4 and 15 in 1955-6. As the Skory class destroyer was being brought into service at this time the estimate of 10 appears to be reliable - a run down from some higher number of previous years.

These vessels are more appropriately discussed in a subsequent chapter. Here it is enough to note their existence in the plan, and the more important advances over the earlier Skory's, as indicated in Table III.

3) Frigates

The following table indicates the characteristics of the frigates or destroyer escort classes laid down in the Stalin era.

4) Submarine chasers

The characteristics of the prewar Artilerist and the post war Kronstadt class of submarine chasers is indicated below in Table V.

The armament mix and range characteristics of the vessels produced in the immediate post war building programme, together with the absence of any major programme for building a fleet of auxiliary vessels, supports the contention that the post war fleet was designed for a coastal role, to operate within the range of shore based aircraft.

The mining capability of the major surface warships and the long and medium range submarines is indicated in the tables. This, together with the absence of a long range offensive aerial mine laying capability, (due to a lack of fighter support for long range aircraft) and the absence of effective offensive use of the K class submarine during the previous war\(^1\) suggests a continuation of the Tsarist practice, established during the Baltic phase of the Crimean War, and practised by the Soviets in World War II, of laying protective mine fields in coastal waters and particularly in defence of naval base areas.

The range and armament of the Sverdlov cruiser are

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TABLE III
DESTROYER CONSTRUCTION - POST WAR (STALIN) PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (tons)</th>
<th>Armament (in mm)</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7 a.</td>
<td>1,800 std. (2x2)</td>
<td>main 4-130mm</td>
<td>Laied 1937-41</td>
<td>Max Speed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 b.</td>
<td>2,590 deep load</td>
<td>anti aircraft</td>
<td>Launch 1941-43</td>
<td>36 knots</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-85mm (1x2)</td>
<td>work delayed due to</td>
<td>work</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6-37mm mines 90</td>
<td>Completed 1943-47</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedo tubes</td>
<td>at Zhdanov Leningrad</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6-533mm (2x4)</td>
<td>Naval Yard</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>depth charges</td>
<td>Sevastopol</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Komsomolak (F.E.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Šverdlovsk (Arctic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skory</td>
<td>85</td>
<td>2,600 std. (2x2)</td>
<td>main 4-130mm</td>
<td>Laied 1949-53</td>
<td>3,900 miles</td>
<td>A post war development of the '0' class.</td>
</tr>
<tr>
<td></td>
<td>plan</td>
<td>3,500 deep load</td>
<td>(2x2)</td>
<td>Completed 1952-56</td>
<td>at 13 knots</td>
<td>Breyer p.266 claims the class represented a stage of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>anti aircraft</td>
<td>at Zhdanov</td>
<td>33 knots</td>
<td>development that had been reached in 1939-40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-85mm (1x2)</td>
<td>Leningrad and</td>
<td></td>
<td>poor seakeeping qualities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-37mm mines 60</td>
<td>Yards at Nikolayev,</td>
<td></td>
<td>limited amount of electronic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedo tubes</td>
<td>Komsomolak,</td>
<td></td>
<td>equipment in original design</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10-533mm (2x5)</td>
<td>Šverdlovsk.</td>
<td></td>
<td>but additional gear was added.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 depth charge</td>
<td></td>
<td></td>
<td>Main 130mm guns have low angle of elevation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>throwers</td>
<td></td>
<td></td>
<td>Anti aircraft 7-37mm replaced in 1953 with</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8-37mm in 4 x 2.</td>
</tr>
<tr>
<td>Tallin</td>
<td>1</td>
<td>3,200 std. (2x2)</td>
<td>dual purpose</td>
<td>Laied 1952 or 53</td>
<td>2,900 miles</td>
<td>Only one vessel of this type was constructed,</td>
</tr>
<tr>
<td></td>
<td>4,300</td>
<td>4-300 deep load</td>
<td>4-130mm (2x2)</td>
<td>at 18 knots</td>
<td>at 18 knots</td>
<td>probably because of poor stability. It was the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>anti aircraft</td>
<td>Baltic</td>
<td>38 knots</td>
<td>first large Soviet vessel to be built with a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16-45mm (4x4)</td>
<td></td>
<td></td>
<td>flush deck. As a flotilla leader it is</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mines 72-90</td>
<td></td>
<td></td>
<td>significantly larger than the Skorys. Improvements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedo tubes</td>
<td></td>
<td></td>
<td>over Skorys:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10-533mm (2x5)</td>
<td></td>
<td></td>
<td>1. turrets and firing directors fully stabilised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-76 barrelled</td>
<td></td>
<td></td>
<td>2. ASW rocket launchers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ASW rocket launch</td>
<td></td>
<td></td>
<td>3. improved electronic gear fitted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4. gunnery armament improved</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5. significantly faster</td>
</tr>
<tr>
<td>Kotlin</td>
<td>30+</td>
<td>2,850 std. (2x2)</td>
<td>dual purpose</td>
<td>Laied 1954-55</td>
<td>5,500 miles</td>
<td>Flush deck. Greater stability than Tallin</td>
</tr>
<tr>
<td></td>
<td>3,500</td>
<td>3,800 full load</td>
<td>4-130mm (2x2)</td>
<td>Last completed 1958</td>
<td>at 16 knots</td>
<td>because of lower free board. Intended for large</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>anti aircraft</td>
<td>at various yards in</td>
<td>Max speed</td>
<td>series production probably as a replacement for</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16-47mm (4x4)</td>
<td>Leningrad and</td>
<td>30 knots</td>
<td>the Skory but programme cancelled, see p.147/8.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>mines 80</td>
<td>Nikolayev.</td>
<td></td>
<td>below. ASW depth charge throwers originally</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>torpedo tubes</td>
<td></td>
<td></td>
<td>mounted had only a transverse throw capability.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10-533mm (2x5)</td>
<td></td>
<td></td>
<td>Have been significantly modified and converted</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6 depth charge</td>
<td></td>
<td></td>
<td>during the Khrushchev era. See p.164 below.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>throwers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: As in Table 1, p. 95
### TABLE IV

**FRIGATE CONSTRUCTION - POST WAR (STALIN) PROGRAMME**

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (tons)</th>
<th>Armament (in mm)</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albatross</td>
<td>3</td>
<td>920</td>
<td>anti aircraft 3-100mm (3x1) 6-37mm mines 20 torpedo tubes 3-533mm (1x3)</td>
<td>Laid 1939 (?) Completed postwar Far East (and Marty Yard Nikolayev)</td>
<td>25 knots</td>
<td>Only the three vessels building in the Far East survived the war of which one was completed in 1944. The five at Nikolayev were scrapped by the Germans.</td>
</tr>
<tr>
<td>Kola</td>
<td>12</td>
<td>1,500 std. 1,900 full load</td>
<td>dual purpose 4-100mm (4x1) anti aircraft 4-37mm (2x2) mines 30? torpedo tubes 3-533mm 4 depth charge throwers</td>
<td>Laid 1950-51 First seen 1954 Last completed 1957 Baltic yards.</td>
<td>31 knots</td>
<td>There may have been 24 of these vessels planned as a successor to pre war frigates. The lack of radar and contemporary fire control equipment made them weak in anti aircraft defence. The 100mm guns hand operated for a rate of fire of 15-20 rounds/minute. Breyer p.276 suggests vessels designed for duty in coastal areas subjected to rough seas, Arctic and North Pacific. Janes Fighting Ships 1963/4, p.423 suggests Baltic and Far East duties.</td>
</tr>
<tr>
<td>Riga</td>
<td>54</td>
<td>1,200 std. 1,600 full load</td>
<td>dual purpose 4-100mm (4x1) anti aircraft 4-37mm (2x2) mines 60? torpedo tubes 3-533mm 4 depth charge throwers</td>
<td>Laid 1952 or 53 First completed 1955. Last completed 1959 at yards in Baltic, Black Sea and Far East.</td>
<td>2,500 miles at 15 knots Max. speed 28 knots</td>
<td>Lighter hull but better sea-keeping qualities reported than for Kola. Adherence to torpedo armament on this type of vessel explained by fact that Soviet Navy at least in this period did not have to reckon with a powerful submarine threat as did the frigates of the USN and RN - rather the threat was surface vessels. However modernised units have been fitted with 16 barrelled rocket launchers for ASW.</td>
</tr>
</tbody>
</table>

Sources: As in Table I, p.95.
### TABLE V

**SUBMARINE CHASERS - POST WAR (STALIN) PROGRAMME**

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (tons)</th>
<th>Armament (in mm)</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artillerist</td>
<td>240</td>
<td>240</td>
<td>1-76mm anti aircraft</td>
<td>Laid 1940</td>
<td>25 knots</td>
<td>Originally 40 units planned and laid of which only 17 were completed. Possibly some units were finished in the post war period.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-37mm (2x1)</td>
<td>Completion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3-13mm (3x1) depth charges</td>
<td>2 by 1941</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+4 by 1942</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+11 subsequently</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Boat yards along</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Volga</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kronstadt</td>
<td>200</td>
<td>300 std.</td>
<td>1-100mm anti aircraft</td>
<td>Built between</td>
<td>1,500 miles at 12 knots</td>
<td>A development of the pre war designed Artillerist. Two versions the major difference being that early units carried mines while later units had depth charge throwers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 full load</td>
<td>2-37mm (2x1) mine rails and depth charges</td>
<td>1948 and 1956</td>
<td>Max speed 24 knots</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>later units incorporated depth charge throwers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: As in Table I, p. 95.
broadly comparable with light cruisers of the USN and the RN which were completed following the war.\(^1\) But where the USN and RN cruisers were designed to give close cover and anti aircraft support for convoys and aircraft carrier groups, and to provide support for assault landings,\(^2\) only the latter role could have been intended for the Soviet cruiser following Stalin's intervention to cancel the aircraft carrier programme. (It is unlikely that Soviet cruisers could have played the role of commerce raiders as the Germans had attempted in World War II as they had neither the tankers nor the overseas support facilities necessary for replenishment of the raiders operating on the high seas. Air protection was not sufficient to safeguard vessels operating in this wartime role even in the Southern Baltic, where the cruisers could expect considerable air harrassment when returning to ports to refuel and resupply.)

The light anti-aircraft armament suggests that the Sverdlovs were intended to operate within the range of shore based fighter aircraft. Hence it can be assumed that these vessels were intended primarily to cover landing operations and to provide flank protection for military operations in coastal areas.

The anti-submarine warfare developments of the Soviet Navy in this period also suggest that operations were to be confined to coastal areas. The low priority afforded a large anti-submarine capability stemmed from the elimination of German naval power in the post war period. Soviet merchant shipping in the early 1950s was neither large nor vital enough to attract a major allied submarine effort and there was consequently no need for an anti-submarine specialisation in either destroyers or destroyer

\(^1\) Janes Fighting Ships 1956-7 for Tiger class cruisers RN and for Cleveland class cruisers USN.
\(^2\) See the general notes under cruisers, Janes Fighting Ships, 1964-65, p.269.
escorts. What was required was an anti-submarine capability for the protection of vessels engaged in ground support functions in the Baltic and Black Seas and in Soviet coastal waters. Hence the large number of small Kronstadt submarine chasers.

Kuznetsov's complaints that Soviet surface vessels did not have sufficient anti-aircraft weapons have been mentioned above. Protection against air attack could only be guaranteed within the range of shore based fighters, and it appears that Stalin, for one, was of the opinion that within this protected area shipboard anti-aircraft weapons would be used only in an auxiliary role, and did not require the emphasis his Admirals apparently urged.

5) Submarines

As with the surface vessels the Soviet Navy found itself in possession of a number of uncompleted pre-war classes of submarines following the war. The most successful of these, the Shch medium range class and the MV coastal class were probably continued in production. The larger Shch types incorporated an important feature of the captured German units; the Snorkel. Pre-war boats were gradually phased out\(^1\) and replaced gradually with new units. Some of the earlier boats were kept but as training rather than operational units.

The new post-war medium range submarine was the NATO designated 'W' class, a modification of the German XXI type. Hadeler points out that the Soviet modifications involved a reduction in size because the German submarine, a vessel of some 1,600 tons on the surface, was too large for

\(^{1}\) Janes Fighting Ships 1953-4, p.314.
TABLE VI
OCEANIC RANGE SUBMARINES - POST WAR (STALIN) PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction data</th>
<th>Radius/Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Surface/Submerged</td>
<td>10-533mm tubes</td>
<td>1939-43 post-war</td>
<td>Surface 29 knots</td>
<td>It is possible that some of these boats remained to be completed following the war and that they were finished in the post war period. Janes Fighting Ships 1945 through to 1953 reports an increase in the size of this class. However it is equally possible, and not necessarily contradictory to the above, that the Soviet submarine design teams concentrated on incorporating the advances of German submarine technology into Soviet construction.</td>
</tr>
<tr>
<td>K</td>
<td>1,500/2000</td>
<td>tons</td>
<td>20 torpedoes carried</td>
<td>Laid 1949?</td>
<td>Submerged 10 knots</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,900/2,200</td>
<td>tons</td>
<td>2-100mm guns</td>
<td>Completed 1951-55 at Sudomech Yard, Leningrad 18 and Navy Yard Severodvinsk (11?)</td>
<td>20,000 - 26,000 miles (surface cruising) 18 knots surface 15 knots submerged</td>
<td>First of the post war long range cruising submarines built by USSR. Adopted many features of the German XXI Type Boat in particular the snorkel. Earlier versions were equipped with guns Z I had 2-25mm A.A. Z II had 1-100mm gun, which were subsequently removed. There may have been some delay in deliveries as different types of propulsion system were experimented with - notably the Walthar hydrogen peroxide system - and/or because of difficulties in incorporating the snorkel system.</td>
</tr>
</tbody>
</table>

Sources: As in Table I, p.95.
## TABLE VII

**MEDIUM RANGE SUBMARINES-POST WAR (STALIN) PROGRAMME**

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Radius/Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShCh</td>
<td>650/750</td>
<td>6 torpedo tubes, 1-45mm gun</td>
<td>1935-40</td>
<td>Surface 14 knots, Submerged 8 knots</td>
<td>It is possible that some of these vessels were completed following the war.</td>
<td></td>
</tr>
</tbody>
</table>

| W     | 240 | 1,030/1,180 | 6-533mm torpedo tubes, 4 bow 2 stem, 18 torpedoes carried (or 40 mines) | 1951 - 1957 at yards throughout the U.S.S.R. | 13,000 - 16,500 surface cruising, 17 knots submerged 15 knots | The design is thought to have been influenced by the German XXI type which may explain the delay in laying this class until the early 1950s. Early versions had A.A. guns or 100mm gun. Not until the IV model was the snorkel attachment a permanent feature and this became the standard version of the boat. The delay in fitting the snorkel suggests difficulties in application. |

**Sources:** As in Table I, p.95.
## TABLE VIII
### COASTAL RANGE SUBMARINES - POST WAR (STALIN) PROGRAMME

<table>
<thead>
<tr>
<th>Class No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Radius/Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surface/Submerged</td>
<td>4-533mm tubes in bow. 8 or 10 torpedoes carried</td>
<td>1954-1957</td>
<td>3,500 miles at surface cruising speed</td>
<td>A pre-war design which had several variants (see table V Submarines 1927-45 in Appendices, Chapter I for details). Due to its satisfactory performance in restricted and shallow waters during WWII it may have had some post-war carry over.</td>
</tr>
</tbody>
</table>

| 22+       | 650/740      | 18 knots surface 16 knots submerged | 1954-1957 | 3,500 miles at surface cruising speed | Although construction did not begin until 1954/5 firm design decisions must have been taken in the Stalin era. The boats may have been originally fitted with the Walther propulsion system which offered the possibility of high submerged speeds of limited duration. The removal of this system or its rejection probably accounts for the delay in construction and may have been reflected in the small numbers produced compared with the pre-war Ms. |

Sources: As in Table I, p.95.
for operations in the Baltic and Black Sea.¹ This suggests that Stalin had not built a submarine force suitable for closing the Atlantic seaway between the United States and her NATO allies. Even if the Soviet Navy had had the six 'Z' class ocean going submarines which MccGwire estimates were available in 1953² these boats together with the available 'W' class vessels³ would not be sufficient to pose a major threat to the NATO lines of communication.

In February 1953 it was reported that the Soviet Navy had stationed thirty submarines with the Northern Fleet.⁴ For the same year Janes Fighting Ships records a Soviet submarine total of some 370 boats.⁵ The stationing of 8% of the Soviet submarine force in the North at this time is comparable with the distribution of Soviet submarines immediately prior to the 'Great Patriotic War'. In June 1941 the Soviets had 15 submarines with the Northern Fleet⁶ at a time when the total submarine fleet was estimated to be 245. The Northern Fleet was reinforced in 1942 to a

¹ Hadeler, W. 'Ships ...', p.157. Janes Fighting Ships 1973-4 gives the surface displacement of a W class submarine as 1,030 tons with a range of 13,000 to 16,500 miles at 17 knots surfaced. The editions of Janes in the 1950s give a higher displacement. Whether this was due to confusion with other classes or based on misinformation is not clear but it is important that for a considerable time the Soviet Union was credited by the West with a vastly greater capability for a forward naval posture than in fact it had.

² MccGwire, M. 'Soviet Naval Procurement', p.78.
³ MccGwire, M., ibid, suggests a figure of 12 available in 1953 with 36 building.
⁵ Janes Fighting Ships 1953-4, p.312.
⁶ Kozlov, I. Capt. 1st Rank (Reserves), 'Defence of internal communications by the Northern Fleet 1941-1945', Voyenno Istoricheskiy Zhurnal, No.4, 1972, translated by G. Jukes, A.N.U.
⁷ The total number of Soviet submarines is given in Hadeler 'Ships......', p.158, Table VI, Distribution of Russian Submarines.
total of 23 submarines. ¹ In January 1945, 22 submarines were reported in the Northern Fleet. ² This suggests that in 1953 as in the period 1941-1945 these boats were intended primarily for defensive operations in the fleet areas and not for ranging into the Atlantic Ocean to effect a guerre de course strategy.

If all the submarines capable of operating in the Atlantic had been posted to the Northern Fleet area in 1953 this would have amounted to little more than twenty eight such craft. ³ Of these the Soviets might have been able to maintain an average of seven boats on station in the Atlantic over an extended period ⁴ and these boats would have to pass the anti-submarine barriers the NATO allies would presumably establish across the North Cape-Spitzbergen and the United Kingdom-Iceland-Greenland passages.

¹ Kozlov, I., op.cit.
² See p.84 above.
³ The twenty eight submarines would include 10 Ks, a prewar long range submarine and 6 Zs and 12 Ws which according to MccGwire's estimates were available in 1953.
⁴ The calculation that one quarter of Soviet submarines could be maintained on station at any one time has been adopted from German operational experience where one third on station was the average ratio maintained. The Germans for a considerable part of the war had a more direct access to the Atlantic than is available to the Soviet Union and allowance for this fact has been made and the ratio adjusted accordingly.


An article 'The Russian Submarine Fleet', Naval Review, Vol. 42, No. 1, 1954, p.57-58 approaches this problem from a different perspective. The author discounts all boats of coastal range, and boats stationed in the Pacific and Black Sea. He also subtracts a proportion of boats because of factors such as age, operational efficiency, and the requirements of submarine training. The remainder of the boats is then divided by three to give a number of vessels available on station. On this basis he arrives at a figure of twenty five boats on station in mid-Atlantic.

Either of the calculations produces a figure which is a far cry from the total of 370 submarines in the Soviet fleet.
The Z class long range submarine, like the prewar K class, deserves attention because its range gives it an operational capability at a considerable distance from the Soviet base areas. If the estimated building plan projection of 36 Z class submarines presented in Table VI above is accepted (in fact only 29 were built) then providing all these vessels were established in the Northern Fleet Area, which is unlikely, this would have enabled a theoretical mid-Atlantic on station presence, sustained over time, of no more than 9 vessels. It is unlikely that Soviet naval planning envisaged the Z class as disrupting the Atlantic sea lines of communication. The number of submarines is too small, given the amount of enemy shipping, on World War II experience, they could expect to be involved.

It is much more likely that the Zs were to be used against high value targets such as aircraft carriers.¹ Their long range would afford them a considerable time on station² especially if they were to be deployed in the Spitzbergen-Northern Cape gap or, further afield, in the Greenland-Iceland-United Kingdom gap.

¹ See p.113 below for a discussion of aircraft carrier developments; and p.71-72 above for Soviet concern over naval exercises in the North Atlantic region.
² It is difficult to give an approximation for the time on station because we have no clear indication of what Soviet wartime practice might be. During the war an attempt was made to send a K class submarine on an extended operation to the Southern Baltic from mid December 1941 until May 1942. Although the attempt was called off, because of damage to the submarine's superstructure, its being mooted at all suggests that the necessities of wartime may call for operational times beyond the two month patrol limit which is accepted by the U.S. Navy for the deterrent force of Polaris/Poseidon Fleet Ballistic Missile Submarines.

See Achkasov, V., Capt. 1st Rank, 'Submarines of the Red Banner Baltic Fleet on enemy lines of communication in 1941-1942', Voyenno-Istoricheskiy Zhurnal, No. 12, 1972. p.66, translation by G. Jukses, A.N.U. for the planned development of the K class. It is unlikely however that the Z class would remain on station for longer than 9 weeks, if operating in the G-I-U.K. area, given that the Z is capable of independent operations for a period of 12 weeks and allowing for a transit time of 1½ weeks each way.
It is possible that the Northern Fleet did not enlarge its operational area beyond that of World War II, which extended from Spitzbergen in the West to Tiksi in the East until the late 1950s or early 1960s. If this were the case, then the Northern Fleet could rely on maintaining a high state of readiness and deploying its submarines in surges as the occasion warranted.

If the Zs were to be sent further afield then war time experience suggests they would have been capable of maintaining a front line of defence against the entry of carrier task forces to the Norwegian Sea. A secondary line of defence against the carriers, across the Spitzbergen-Bear Island-North Gap channels, maintained by W class submarines and possibly surface vessels under an uncertain umbrella of air power could have prevented the carriers penetrating the Barents Sea. Carriers would not penetrate the main defensive zone until they came within the Barents Sea itself.

It is possible that while the Z class was being developed some thought was given to its eventual use as a vector for a ballistic missile with a nuclear warhead. German designs existed for ballistic missiles to be fired

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1 Golovko, A. *With the Red Fleet*, p. 1 for Northern Fleets operational area during the war. See p.380-382 below for an account of Soviet naval activities in the North Sea during the late 1950s and early 1960s.

2 An uncertain umbrella because of the distance between Soviet territory and the Spitzbergen Islands, some 500 miles, exceeded the radius within which constant air cover could be provided (100 miles).

3 This suggested deployment pattern is drawn by inference from its possible counterpart in Soviet Army doctrine. 'An army in defence was organised in several zones: an advanced outpost zone, a main defensive zone, and one or more secondary defensive zones', R.L. Garthoff, *How Russia Makes War*, p.76.

Thus the Z class submarine barrier at the G-I-U.K. gap formed the advanced outpost, the Spitzbergen-North Gap the main defensive zone, and the waters of the Barents Sea the secondary defensive zones.
from submarines, and Soviet rocket development and research relied heavily on German science and technology. Work on a nuclear weapon proceeded throughout the period. Certainly the conversion of some of the Z class which occurred in 1955-57 must have been planned in the late forties or early 1950s.  

**Carrier Capability 1946-1953**

Developments in aircraft carrier capabilities did not escape the attention of Soviet commentators nor, we may be sure, did they pass unnoticed by Soviet military planners. From March 1946 onwards the USN had been carrying out a series of carrier operations in the Arctic. Such operations must have indicated the possibility of the deployment of carrier task forces in the Norwegian and Barents Sea.

Throughout the remainder of the 1940s the USN conducted a series of exercises designed to illustrate that aircraft capable of carrying nuclear weapons for considerable distances could be flown from the decks of aircraft carriers. These flights while impressive in

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1 See p.87 above.
2 See p.174 below.
3 Operation Frostbite was the first of a series of exercises designed to develop a capability for carrier operations in areas above the Arctic Circle. Flight operations were conducted from the USS Midway which with three destroyers cruised in the Davis Strait. The aircraft involved were mainly of W.W.II origin but included the newer F8F Bearcat and the FR-1 Fireball. United States Naval Aviation 1910-1970. NAVAIR 00-80P-1 (Washington D.C., 1970), p.159.
4 For a Soviet reaction to these operations in Arctic regions see B.B.C. Foreign Radio Broadcasts No. 164, 19 August 1946, p. PI & 2. For subsequent Soviet reactions to USN exercises in the Arctic, see p.71-72 above.
5 These tests culminated in the flight of a Neptune P2V-3C aircraft from the decks of the carrier Coral Sea carrying a 10,000 pound load. The aircraft took off from the carrier in the Atlantic, flew to the West Coast of the U.S.A., dropped its load and returned to land in Maryland. U.S. Naval Aviation, p.169.
themselves, were designed to demonstrate the potential of carrier based aviation in the event of a nuclear war. Once that potential had been demonstrated it was possible to initiate the design and construction of carrier based aircraft capable of delivering nuclear weapons over long ranges.1

Wartime Essex and Midway class carriers underwent conversions designed to strengthen their elevators and flight decks and increase their fuel storage.2

On 31st August 1950 the AJ-1 'Savage' had completed carrier qualification tests on board the USS 'Coral Sea', marking the introduction of nuclear armed attack bombers to carrier operations.

Throughout the early 1950s, carriers from the USN and RN increased their operational efficiency by incorporating two British innovations, the angled deck and the steam catapult. The angled deck provided a greater safety margin in handling aircraft by creating a longer clear deck for take off and landing while the steam catapult provided an external power source, essential to enable the aircraft carrying heavier loads to take off from relatively restricted areas.

The new Forrestal class carriers incorporated these innovations and were built to operate the larger, heavier naval aircraft capable of carrying nuclear weapons.

The AJ-1 'Savage' after a brief period of service was withdrawn in 1954 and replaced as the attack bomber of the carrier fleet by later versions of the AD 'Skyraider'.

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1 The first such contract was issued to North American Aviation In. in June 1946. Ibid, p.160.
2 Ibid, p.163 Janes Fighting Ships 1953-5 reports fourteen of these conversions eventually took place.
which had a combat radius of about 500 miles.¹

The following map indicates the area of the Soviet Union which could be subject to attack by carrier launched aircraft operating in the Barents Sea. Clearly there was no threat to the major population area of Leningrad or Moscow but the Northern Fleet Area itself was vulnerable, as was any force attempting to operate in the northern regions.² The problem of carrier based aviation would emerge more markedly as aircraft ranges increased.

**Soviet Naval Aviation**

The major fleet units, both surface vessels and submarines, required protective cover which could only be provided by land based aircraft. Moreover coastal air defence for some 50 miles inland was the responsibility of naval aviation units attached to the various fleet areas.³

Writing in 1950 a western commentator on Soviet aviation, Asher Lee, pointed out that naval aviation units attached to the fleet areas 'have not yet the assistance of either the latest jet planes or a radar screen to help the early warning system' and he assessed the ability of naval aviation to defend target areas such as Leningrad, Baku and Vladivostok against daylight attack as low.⁴ Night attacks would find the Soviet Air

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¹ See H. Gann, 'Douglas Skyraider' in Aircraft in Profile Vol. III, (Windsor, Berks., 1966), p.144, where the AD-4 is credited with a combat range of 1,110 miles and the AD-6 with a combat range of 1,143 miles. Gann actually flew the aircraft and I have accepted his figures for range as a better guide than figures in *Janes All the Worlds Aircraft*, 1953-4 to 1956-7.

² See p.72 above for a specific protest relating to NATO naval exercises designed to attack enemy forces advancing into Norway.

³ Isakov, 'The Red Fleet ...', p.35, for an example of naval aviation being used for support of land operations in the Baltic. For the general point see R.L. Garthoff *How Russia Makes War*, p.361.

Force almost totally powerless, until radar control of anti aircraft fire and all weather night fighters were available on a much greater scale.  

Following the war the decision was made to equip the air force and naval aviation with jet aircraft in three stages. During the initial stage developmental work was undertaken on German engines. This was followed by the introduction to Soviet plants of British engines built under license. During this period the MIG-15, LA-15 and YAK 23 single engined fighters were produced together with the IL-28 twin engined bomber and the three engined TU-14 bomber. Finally Soviet jet engines from Soviet design offices were produced and incorporated in the MIG-19 fighters, the YAK-25 fighter interceptor and the TU-16 long range bomber (3,600 miles).

Aircraft from the secondary stage of development must have been part of the naval aviation units which took place in the fly past on Soviet Air Force Day 1951. The MIG-15, which entered service with the Soviet Air Force in 1948, did not enter Soviet Naval Aviation until 1951, and it was replaced in 1953-4 by the MIG-17, a follow-on aircraft. Whether or not the MIG-19 and 21 were intended to enter naval service is difficult to determine. The important point is that all these fighters, despite variations in armament and speed, were characterised by low combat radius estimated at between

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1 Yakovlev, A.S., Aircraft Construction reports that it was only 'In the early fifties (that) the design offices of Mikoyan Lavochkin and Yakovlev were given the task of designing the first Russian all weather night interceptor', p.104.
2 Ibid, p.103-5.
5 Taylor, op.cit., p.587.
210 and 300 miles, with the exception of the MIG-19, which was credited by some observers with a radius of 600 miles. Moreover these fighters were stated to have an in flight endurance of only two hours.¹

The short range and flight time suggests that these fighters would be virtually useless as escorts for the slower naval aviation bombers or as a combat air patrol for surface naval forces except within very narrow operational areas.

In 1951 the Navy received the first of perhaps as many as seven hundred tactical jet bombers, the IL-28, which had entered the Air Force in 1949. Its combat radius of some 750 miles can be extended by the use of wing tip tanks and it has a maximum speed of about 550 miles per hour.² A companion bomber the Tu-14 has a similar speed but a radius of 1,125 miles. It was apparently not as successful as the IL-28 and enjoyed only small scale production, running to perhaps 300 units, which were incorporated into the Naval Air Forces.³

Soviet Naval Aviation by 1953 was clearly increasing in size, as aircraft designed for the Air Force were subsequently allocated to Naval Aviation, but whereas the bombers clearly had the operational range to attack aircraft carriers their armament, free fall bombs, and the lack of fighter escorts, seriously limited their capability to do so.

The aircraft of the Naval Aviation units do however appear ideally suited to the role of Soviet naval aviation in World War II; the support of ground troops in coastal regions and the protection of naval bases.

¹ Taylor, op.cit., p.585-7; Armour, op.cit., p.191; and Munro, op.cit., p.80-86.
³ Taylor, op.cit., p.621; Armour, op.cit., p.191.
CHAPTER IV

INTRODUCTION

The immediate post war naval construction programme, significantly influenced by Stalin's interventions, was to produce a large number of heavy, artillery firing cruisers, medium range torpedo armed submarines and an array of coastal vessels. Such a programme, and the initial research and development of sea-based missile systems and nuclear propulsion units for subsequent use in submarines, involved considerable outlays and the use of scarce resources. It was designed to enable the Soviet Union to dominate the enclosed seas.

Following Stalin's death significant changes occurred in Soviet society. For our purposes the most important of these were the increased emphasis given to consumer goods at the expense of heavy industry and the critical reappraisal which occurred throughout the armed forces necessitated by the introduction of nuclear weapons and developing missile technology. The approach of the new leadership to domestic, economic, foreign and defence policy questions resulted in large scale reductions in manpower and the re-equipment and re-organisation of the armed forces which set the context for the major changes which occurred in the Navy.

The new political leadership pressed the Soviet Navy to undertake a reassessment of its force requirements appropriate to an age of sea based strikes launched from points well beyond the areas of traditional concern to Soviet sea power. The leadership of the navy changed hands because of political dissatisfaction with the continued emphasis on large expensive surface vessels and the apparent inability of the Soviet Navy to adjust to the rapidly changing naval environment. Khrushchev in particular was concerned at the potential threat from sea based strike forces and saw the solution to this problem, so far as the Navy was concerned, in the relatively less expensive and more effective field of missiles launched from submarines, small surface vessels and aircraft.
Some attention must be given to the claim that the period of the mid-1950s saw the beginnings of a balanced fleet development. It is clear from the evidence presented in this and the subsequent chapter (on the ship building programme) that this was not the case. Although the Soviet's continued the submarine launched ballistic missile programme, giving them a direct strike capability against the United States, the navy as a whole was unable to operate in a hostile environment beyond the range of assured cover provided by land based aircraft.
CHAPTER IV
From Stalin to Khrushchev: From Kuznetsov to Gorshkov

Background Factors

The period following Stalin's death in March 1953 was characterised by change in almost every aspect of Soviet affairs. Commentators noted a relaxation of the intense drive to reconstruct after the ravages of war, a concern to redirect the economy toward a greater satisfaction of consumer demands, and new approaches in foreign policy. That the changes themselves were subject to open debate involving the political and military leadership was in itself a significant change.

During the post-Stalin power struggle Malenkov had proposed the reorientation of the production potential of the country towards consumer based industry. Moreover, Malenkov and Mikoyan appear to have been groping towards a defence doctrine of 'mutual deterrence' and a policy line that a future war was unwinnable in any meaningful sense. Malenkov spoke of the possibility of 'a new world holocaust which, with the present means of warfare, means the destruction of world civilisation' while Mikoyan claimed that the danger of war has receded to a large extent...because we now have not only the atomic bomb but also the hydrogen bomb which in the hands of the Soviet Union are a means of checking the aggressors and for waging peace.

1 Malenkov announced in August 1953 that the 'main task' of the Party and Government was to ensure further improvement in the material well being of the Soviet people. Heavy industry had developed to the point where 'we have all the necessary conditions for bringing about a sharp rise in the production of consumer goods'. Malenkov, 'Speech to the Supreme Soviet', Pravda, 9 August, 1953.

Whereas previously the United States had escaped the full impact of the war 'now the situation would seem to be different'.

These proposals, to increase consumer production at the expense of heavy industry and to alter fundamentally the Party doctrines on war, aroused the antagonism of the military because they implied cuts in defence expenditure. Moreover the Soviet military could argue that at present their thermo-nuclear strength was not sufficient to sustain a concept of 'mutual destruction'. The United States could escape the full consequences of war because at the time the Soviet Union had no viable...

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2 Garthoff, R.L. Soviet Strategy in the Nuclear Age (New York, 1958) p. 23, indicates that military budget allocations declined in 1953 and 1954. The meeting of the Supreme Soviet which accepted Malenkov's resignation increased the military budget by over twelve per cent.


3 Marshal Zhukov, when asked how he had estimated that the United States had only five or six atomic bombs in its stockpile at the end of the 1940s, admitted that it was based on Soviet experience. 'We know from our own experience how difficult that is'.

Zhukov, G.K. (Marshal), interview with W.R. Heartst...
delivery system capable of reaching the American land mass.¹

Malenkov's views were disputed by his direct political opponents. Khrushchev maintained that capitalism was facing a period of crisis from which it might seek to escape by launching a new war.² He also claimed that the Soviet Union had and would continue to stress the development of the heavy industrial sector of the economy.³

In the period following Malenkov's resignation from the Premiership Khrushchev was to adopt his policies, albeit in modified form. He told the Twentieth Party Congress that war was not fatalistically inevitable, a significant modification of the 'Leninist' doctrine of inevitable conflict between social systems previously in vogue, but at the same time spoke of the need for 'vigilance', and maintaining 'the means to give a smashing rebuff to aggressors should war occur'.⁴ While such a war, should it occur, would lead to 'incredible destruction and loss' and be a 'disaster to all mankind', the result

¹ Not until the conversion of the Z-class submarines to carry two 350 mile range SARK ballistic missiles in 1955-57 did the Soviet Navy acquire a delivery system capable of inflicting damage on the United States. By this time, 1957, the ICBM programme had shown its potential but there were insufficient missiles to make this a credible deterrent once reliable surveillance techniques became available in the 1960s.

² 'Speech of N.S. Khrushchev at the meeting of electors of the Kalinin electoral district of the City of Moscow 6 March 1954', Pravda, 7 March 1954. Bulganin, whose views were cited in p.2, f.n. 3, was speaking as a political opponent of Malenkov as well as Minister of Defence.


would be 'the inevitable destruction' of the capitalist system.¹

Khrushchev subsequently became so clearly identified with 'goulash communism', virgin lands campaigns and the desire to provide a greater measure of consumer satisfaction that substantive documentation is scarcely necessary.²

The political struggle which resulted in Malenkov's resignation closely involved the leading figures of the military establishment, who were concerned to maintain what they saw as a necessary level of preparedness. Khrushchev was able to maintain the support of significant members of the military during his later struggle with the anti-party³ group and in his subsequent moves against Marshal Zhukov.⁴

The military was also involved in a debate over fundamental doctrinal issues which had been held in check by Stalin's dominance of the field of military doctrine. The necessity for debate had been occasioned by the development of nuclear weapons, and centred on the continued relevance of Stalin's permanently operating

² One example only.
³ For the role of the military and especially Marshal Zhukov, in Khrushchev's struggle for supremacy in both the Government and Party see Conquest, Robert Power and Policy in the USSR (New York, 1961), p.320-345.
factors and the role of surprise in contemporary warfare.  

The appearance of new weapons, development of which had been initiated under Stalin, continued throughout the period. In 1953 the Soviet Union successfully developed and tested a thermonuclear bomb while in 1954 and 1955 the long range bombers, the MYA-4 Bison and the Tu-95 Bear, were publicly displayed for the first time. These, with the Tu-16 Badger bomber, were to form the basis of the Soviet strategic delivery system until such time as they could be replaced by missiles.


2 The MYA-4 'Bison', a four-engined jet with a range of 6-7,000 miles, was allegedly withdrawn from service as a long range bomber in 1961. Khrushchev scornfully commented 'It could reach the United States, but it couldn't come back'. Khrushchev, The Last Testament. None the less the authoritative Military Balance 1974-5 continues to list 40 MYA-4s in the Long Range Air Force inventory. The Tu-95 'Bear', a turbo-prop bomber, has a range of 7,800 miles with a 25,000 lb. bomb at an over target speed of 500 m.p.h. Wolfe, T.W., Soviet Power and Europe, p.178-181. Janes All the World's Aircraft 1973-4, p.489-490.

3 TU-16 'Badger', a twin-engine turbo jet, has a 4,000 mile range with a 6,600 lb. bomb load at 480 m.p.h. Janes - Aircraft 1973-4, p.488-9.

4 Wolfe, T.W., op.cit., p.179, notes that by the late 1950s, 150 to 200 heavy bombers of the 'Bison' and 'Bear' types had been incorporated into the Soviet Long Range Air Force while possibly 1,000 'Badgers' were added to the operational inventory.

It is doubtful that this was seen by Soviet leaders as giving an intercontinental capability although it did of course provide a considerable capability against America's European allies and American bases in Europe. Khrushchev claims that Tupolev, a major Soviet aircraft designer, had told Stalin that contemporary technology made impossible the task of constructing an intercontinental strategic bomber. Khrushchev dismissed the MYA-4 'Bison'. Not only was its range too limited - 'It could reach the United States, but it couldn't come back', but 'We weren't sure it could fly through dense anti-aircraft fire. Nor did it perform very well in its test flights'. Similarly the Tu-95 'couldn't be used as a strategic bomber' because of its vulnerability to anti-aircraft defence. Khrushchev Remembers: The Last Testament (London, 1974) p.39-40.
Continued experimentation with rockets resulted in the first instance in the development of medium and intermediate range ballistic missiles and finally, in 1957, in the successful testing of an intercontinental ballistic missile and the launchings of the first Sputniks.

By 1955 the Soviet force level had grown to 5,763,000 from its 1948 low of 2,874,000: a growth attributed to Western 'provocations', the most important of which were undoubtedly the formation of the NATO alliance and the Korean War. In August 1955 Khrushchëv initiated a series

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1 These missiles, as with the long range bomber fleet, could not reach the United States but were capable of reaching targets in Europe. First shown during the 7 November celebrations in 1957 they were the products of a programme which had been initiated in the immediate post war period.

Zhukov in his speech to the Twentieth Party Congress in February 1956 claimed possession of 'diverse atomic and nuclear weapons, mighty guided missiles, among them long range missiles'; Pravda, February 1956.

2 The Tass Communiqué Pravda and Izvestia 27 August 1957, p.2, which announced the successful launching of 'An ultra-long-range intercontinental multiple-stage ballistic rocket' continued: 'The results obtained show that it is possible to direct rockets to any part of the globe. The solution of the problem of developing of intercontinental ballistic rockets will make it possible to reach remote areas without resorting to a strategic air force, which at present is vulnerable to up-to-date methods of anti-aircraft defence.'

In the spate of articles which followed the speed, destructiveness, accuracy and invulnerability of the ICBM were stressed, as was the fact that 'No aggressor on earth can now evade retaliation', and that American overseas bases had now lost their significance.

For example, Maj.-Gen. G.J. Pokrovsky, 'Intercontinental Ballistic Missiles', Izvestia, 31 August 1957, p.3., and V. Kruchinin, 'Test of Ultra-Long Range Ballistic Missile is New Success of Soviet Science and Technology', Krasnaya Zvezda, 3 September 1957, p.3.

Sputnik I was launched on 4 October 1957, and Sputnik II on 3 November 1957. The latter carried a 1,100 lb. payload which indicated a substantial thrust capacity.

of troop cuts which continued until 1957.¹

These reductions, made primarily because of the economies involved, coincided with a major reorganisation and re-equipment of the ground forces.² The reorganisation, carried out under Marshal Zhukov, who had been appointed Minister of Defence in February 1955,³ resulted in an increase in firepower per division deployed, although the number of divisions had been reduced as a result of the troop cuts. Unlike subsequent troop cuts announced in 1960 these moves do not appear to have been opposed by the military.

In 1955 PVO (Anti-Air Defence) was established as a separate service of the armed forces under Marshal S.S. Biryuzov. The new branch was equipped with new and more advanced interceptor aircraft and surface to air missile systems.⁴

These changes in the armed forces as a whole, together with the increased priority given to consumer industry, established a climate in which the Navy, still regarded as the seaward flank of the Army, would find it difficult to argue for and justify new and expensive programmes.

¹ In August 1955 the Soviet armed forces were reduced by 640,000 men and in May 1956 a reduction of 1,200,000 men was announced. A smaller reduction of 300,000 men occurred in late 1957. "On a new reduction in the USSR Armed Forces", Pravda and Izvestia, 7 January, 1958, p.2.
² This primarily involved the motorisation of all rifle divisions and an increased emphasis on tank armies. With the advent of tactical missiles, artillery was reorganised and the heavier armour replaced. See Mackintosh, M. Juggernaut, (London, 1967), p.292-3.
³ Among the tactical missiles in service by 1957 were 'Frog I & II', a mobile ground-to-ground missile with a range of 15-40 miles according to varying estimates, 'SCUD', with a range of 50-100 miles, 'SHADDOCK', range of approximately 300 miles. Wolfe, T.W., Soviet Power, p.173-177, and Janes Weapons Systems 1973-4, p.38-40.
⁴ Zhukov moved into the position of Minister of Defence, replacing Bulganin whom Khrushchev nominated as Premier following the fall of Malenkov in February 1955. See Wolfe, Soviet Power, p.184-188.
The cuts in military manpower were claimed as
evidence of the Soviet Union's good intentions and desire
to reduce international tension.¹ The Soviet Union also
proposed a series of zones of peace and nuclear free
zones in the Baltic, Central Europe, the Far East and
in the Mediterranean area.² The call for peace zones
and nuclear free zones, specifically called for the
removal of United States naval forces.

The nuclear arming of the U.S. Sixth
(Mediterranean) Fleet and attached Air
Force began three or four years ago.

...this process has been completed, and
the Fleet has a nuclear striking potential
This force numbers up to 250 combat planes
armed with atomic bombs and based on
aircraft carriers.³

¹ 'Letter from President N.A. Bulganin to President
Eisenhower 1 February 1956', New Times, No. 7, February
1956, Documents.

Bulganin suggested a proposed 'Treaty of Friendship
and Cooperation' between the US and the USSR. He cited
as evidence of Soviet intentions the 1955 reduction in
manpower; the reduction of appropriations for military
expenditure in 1956 by 9,600 million rubles compared
with 1955; the relinquishing of the last of the Soviet
Union's military bases at Porkkala, and the Soviet
initiative in concluding the State Treaty with Austria
in 1955.

See also 'A Real Contribution to Peace', International

² See, for example, V. Jordansky, 'The Baltic Peace

³ Mikoyan's visit to the German Democratic Republic in
August 1957 in which he called for peace in the Baltic
region, reported in I. Chelnokov, 'The Baltic Must Become
a Sea of Peace', International Affairs (Moscow) No. 12,
December 1957, p.135-6, and the celebration of Baltic
Peace Week sponsored by the German Democratic Republic in
1958 and 1959. Reported in New Times, No. 28, July 1958,

² Khrushchev, N.S., Speech to the 21st Party Congress,
Pravda, 28 January, p.2-10, spoke in support of the
Rapacki plan for an atom free zone in Central Europe, and
also called for 'A zone of peace, above all an atom free
zone' to be 'created in the Far East and the entire
Pacific basin'.

³ M. Lvov, 'NATO's Mediterranean Nuclear-Rocket Axis',
International Affairs (Moscow), October 1959, p.51.
The American Seventh Fleet (in the Pacific) is equipped with atomic weapons (atomic fighter bombers and Regulus guided missiles). The establishment of a NATO Baltic command and NATO exercises involving Baltic states were condemned.

These appeals for peace zones were the verbal carrot in Soviet attempts to extricate itself from encirclement by military bases, under the auspices of various Western inspired regional defence pacts such as NATO, the Baghdad Pact (later CENTO) and SEATO. The verbal stick was contained in dire predictions about the fate of countries which played host to foreign military bases in the event of a future war. The Soviet Union's leaders paid visits to Afghanistan, India and Burma which in itself constituted a significant departure from former practice. During these visits economic assistance programmes were initiated, a post-Stalin view of the Third World was developed, and less successfully, the Soviet visitors attempted to denigrate Britain, the former colonial power. In 1955 an agreement to supply arms to Egypt was concluded.

1 Vladimirov, K., Yefremov, A., 'Peace Zone in the Far East' International Affairs (Moscow), No. 6, June 1959, p.21.
3 'In the event of attack on the USSR crushing retaliatory blows will be struck at these bases, first of all by rocket blows'. Maj-Gen. N. Talensky 'Military Strategy and Foreign Policy', International Affairs (Moscow), No.3, March 1958, p.28, and 'The Countries that will suffer most will be those in which the Americans have established their missile bases', 'West German Socialist Editors Interview Khrushchev', 5 May 1959, Pravda, May 9, p.1-2.
These visits and the arms agreement marked the final repudiation of the Stalinist policy\(^1\) of hostility towards the newly independent countries, which had been based on a belief that the ex-colonies were still subservient to the former colonial powers especially in matters of economic and foreign policy. These acts established Soviet influence in countries bordering southern USSR thereby breaking the chain of hostile alliance systems which had threatened to encircle the Soviet Union and its socialist camp.

In Europe besides settling the Austrian question on terms acceptable to the Western powers, and relinquishing claims to the Porkkala base in Finland, the Soviet Union attended a Heads of Government Conference at Geneva in July 1955. Disarmament, European security, Germany and cultural-economic exchange programmes were discussed. Perhaps the main achievement of the Geneva Conference was that it had been held at all. The style of negotiation indicated a relaxation of tension in international affairs, but the relaxed 'Spirit of Geneva', while applicable to the manner of negotiation, was rarely applied by the Soviet Government to the actual solution of the problems themselves.\(^2\)

In 1956 Premier Bulganin and Secretary Khrushchev visited Britain and in 1959 Khrushchev visited the United States and by all accounts established friendly working relationships with President Eisenhower.

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\(^1\) For an account of an emerging new line in Soviet policy prior to Stalin's death and continued under Malenkov, see Mackintosh Strategy and Tactics, p.57-58 and 72-87. However, as Mackintosh notes 'It was left to those who overthrew Mr. Malenkov in 1955 to make a major break with Stalin's legacy in strategy and tactics in the field of foreign affairs', p.87.

\(^2\) Mackintosh, Strategy and Tactics, p.105-116. The quotation is from p.112-113.
Despite the Soviet Union's difficulties with its satellites, the Suez crisis of 1956, the friction in the Middle East in 1957-8 and the offshore islands dispute in the Far East the atmosphere of cold war had been replaced by one of thaw.\(^1\)

The Navy in the Post-Stalin Era

As early as Navy Day 1953 Kuznetsov suggested that Stalin's views on the relevance of the experience of World War II and the subordinate role of the Navy were not regarded by the Navy as eternal verities.

The single experience of the great patriotic war is now already inadequate. In order not to lag behind life Soviet naval science must be constantly and creatively elaborated and the achievements of naval theory persistently and stubbornly inculcated in the exercise of combat readiness.

Moreover, Kuznetsov made the point that as well as being a continental power

Our country's sea coasts are washed by the waters of fourteen seas and her maritime borders are more than 47,000 kilometers long - more than two thirds the national borders of our home land. This is why we need for the defence of our state interests at sea a strong and powerful fleet which, together with the Soviet Army, is fully capable of solving successfully the tasks of our country's defense'.\(^2\)

The suggestion that the Soviet Navy should be elevated to a position of equality with the Army and that the Soviet Union needed a strong fleet for 'the defence of state interests at sea' in all probability took the remainder of the military establishment by surprise. What these 'state interests' might be, apart from providing

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\(^1\) For a more extended discussion of the Soviet posture during the last three of these crises see p.219-215 below.

an active defence in time of war, is unclear. Possibly the phrase, and the speech as a whole, was a product of Kuznetsov's euphoric assessment of future naval developments. If he thought that he might retrieve the aircraft carriers from the oblivion to which Stalin had consigned them, and hence develop a high seas fleet capable of contesting and assuming control of the sea, he was soon to learn otherwise.

Following Stalin's death in March 1953 the separate Ministries for War and for the Navy were merged to form a Single Ministry of Defence under Marshal Bulganin as Minister. Admiral Kuznetsov, the ex-Navy Minister became Commander-in-Chief of the Navy and a First Deputy Minister. Bulganin, although a Marshal, gained his rank through political work rather than as a military professional. As such he was the Party's 'Man at the Ministry' rather than the Military's 'Man in Cabinet'. The hard questions involving the adaptation of the military forces for nuclear war, their re-equipment and re-organisation, were raised and solved by professional soldiers of whom the most prominent was G.K.Zhukov now a First Deputy Minister following Stalin's death.

There is little direct evidence of naval reaction to this re-organisation. However in his memoirs Kuznetsov does discuss in some detail naval reaction to the 1946 abolition of the People's Commissariat for the Navy and to the 1950 decision to re-establish a Ministry of the Navy. Kuznetsov recalls that during discussion of the proposed 1946 merger in the Central Naval Staff and the People's Commissariat four major points were made.

1. 'We started from the conviction that modern operations demanded centralised control and joint operations of the various arms of the services.'

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1 Malenkov, G.M., Chairman of the USSR Council of Ministers in a speech to Session of the USSR Supreme Soviet, Pravda, 16 March 1953, p.1.
2. 'sufficient independence should be given to each arm.'

hence 3. 'it would be right to preserve for the successor to the People's Commissar for the Navy, whatever his future designation, the powers of a People's Commissar, including the right of going straight to the government and maintaining contact with other People's Commissars.'

4. 'all operational problems, planning development of combat forces and material in the event of war should be concentrated in the General Staff, as the one supreme operational agency.

The Navy, whether opposed to the reunification or not, was concerned that its point of view could be put directly to Government should the need arise 'Unity of control of all the armed forces had to be combined with sufficient independence for the Navy'. Undoubtedly this was intended to provide the Navy with a sanctioned court of appeal should its needs be ignored in a unified defence establishment dominated by ground forces personnel.

There can be no doubt that the appointment of Zhukov as Minister of Defence in February 1955 was regarded by Kuznetsov, and possibly also by his successor Gorshkov, as a severe blow to naval development.

Kuznetsov had not been on good terms with Zhukov when the latter had been Chief of the General Staff before the war, as he made abundantly clear in his memoirs written in the mid 1960s. In their pre-war encounters Kuznetsov complains that he found Zhukov's demeanour 'rather haughty' and that Zhukov 'made no effort at all to go into naval matters'. Apparently Isakov, then Chief of the Naval Staff, also failed in an attempt to get Zhukov to decide on issues that he raised with him.

1 Ibid, p.102.
2 See p.138-9 below for Gorshkov's attack on 'leftist'. views of some influential 'authorities'.
Zhukov, First Deputy Minister since 1953, evidently felt little need to improve his acquaintance with even the broadest issues of naval development for in an interview in February 1955 he confessed, 'I cannot tell you whether the USSR is building aircraft carriers, because I have had nothing to do with naval matters for some time'.

Kuznetsov, a relic of the post-war Stalin naval era, was eventually dismissed from his formal position of Commander-in-Chief in January 1956. In fact it appears as though he lost his position de facto in mid 1955 for the Moscow ceremonial meeting for Navy Day 24 July 1955 was addressed by Vice Admiral S.G. Gorshkov, First Deputy Commander-in-Chief of the Navy. The Pravda report of the meeting does not even mention Kuznetsov as being present. From what has been said of relations with Zhukov it may well be that Kuznetsov's decline in influence stems from early 1955.

Khrushchev claims that Kuznetsov's dismissal was the result of growing disillusion with his performance as Commander-in-Chief. Khrushchev's own assessment of the Soviet Navy, and Kuznetsov as Commander-in-Chief, was influenced by direct contact with the Far Eastern Fleet following his visit to China in October 1954. He was unimpressed by the coastal defences around Vladivostok, claimed that Port Arthur, which he had just relinquished to the Chinese, was 'defenseless against air attacks' and noted that its entrances were 'easily guarded against enemy submarines and battleships approaching from the sea' but that it was, in the aircraft age, 'a completely unacceptable place in which to keep our Pacific Fleet... even in peacetime'. Moreover the naval exercises

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1 Zhukov, 'Interview with W.R. Hearst, Jnr' New Times, No. 8, February 1955, p.16.
3 Khrushchev, The Last Testament, p.19-29 covers 'The Fall of Admiral Kuznetsov'.
Kuznetsov staged for his visitors struck Khrushchev as 'rather depressing'. 'He (Kuznetsov) seemed to be looking at the present through the eyes of the past'.

Khrushchev has also revealed the following discussion which occurred at a Presidium meeting:

'Tell us, Comrade Kuznetsov, if we had all the ships you've proposed we build, how would that affect our position vis-à-vis our enemies? Would we be able to withstand the full force of a sea attack by the British and American navies?'

'No', he replied 'We'd still be far inferior to the British and Americans'.

'Even if we had all the ships you're asking for?'

'Yes', he said (At least he was being honest).

'Then what sense does it make to invest these colossal sums of money? Even if we approved your recommendations, it would take ten years for us to build all the ships you want, and by then the United States would probably be even further ahead of us because the Americans have much greater material capabilities. I don't see how this money you're asking us to spend would contribute to the security of our country'.

Everyone around the table exchanged views and came to the same conclusion. I went on to say:

'Let's put off indefinitely the question of building up our navy and concentrate instead on the development of our airforce and missiles. Any future war will be won in the air, not on the sea; and our potential adversaries are equipped to attack us from the air. Therefore we should think first about improving our airborne defenses and our means of counter-attack.'

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1 Ibid, p.21-25 for Khrushchev's account of his inspection of the Far Eastern Fleet.
2 Ibid, p.26 emphasis added.
Even if we discount the authenticity of Krushchev's *Last Testament*, it would seem as though this account squares with the independently accepted facts. Kuznetsov's 'neo-Stalinist' navy would remain inferior to the RN and USN, it would cost a colossal sum but add little to the security of the country, and the Americans did have greater material capabilities. Moreover, Soviet defence planning did concentrate on the air force and missile forces even though no satisfactory intercontinental bomber was developed.

Kuznetsov's eventual fall was attributed by Khrushchev to his campaign on behalf of the surface fleet, which was rejected by the Army, (Khrushchev mentions Bulganin and Malinovsky as principal opponents, omitting reference to Zhukov), and by the Government.

Khrushchev's account of the Soviet Navy and its leadership in the mid 1950s is of interest because it contains an explicit rejection of Stalin's views.

As I see it, one of his (Stalin's) biggest errors was his decision to concentrate our resources in the development of the navy, particularly our surface fleet...2

(Stalin) failed to realise the crucial role which aircraft carriers and submarines had played in World War II...he refused to recognise that a surface navy wouldn't be decisive in any future war.....

1 There is in fact an apparent consensus that this, the second volume of Khrushchev's memoirs, is in fact what it purports to be, Khrushchev's own recollections of his period in power. The translator's introduction describes in some detail the voice print methods used to verify the authenticity of the tapes from which the translation was made. What is in doubt is the truth or otherwise of Khrushchev's account. In my opinion the general thrust of his chapter 'The Navy' is supported by the direct evidence of appointments, building programmes and Khrushchev's own speeches reported at the time.

Granted, American naval superiority was undeniable. But, if Stalin could recognise that fact, he should have seen that we must concentrate on developing our defensive weapons, our means of sinking enemy surface ships, rather than on building up an offensive surface fleet of our own....

Clearly Khrushchev did not follow the steps of his predecessor.

Khrushchev confessed to an early enthusiasm for missiles. He was impressed by their accuracy and power, and regarded surface ships armed with artillery as outmoded. Moreover Khrushchev became convinced of the advantages of submarines in the contemporary situation. Submarines were 'much cheaper to build and operate - (they) were also a much more formidable and effective weapon' because they could operate alone or in small packs and easily escape detection.

Evidently the First Secretary's assessment of the submarine was not shared by some 'high ranking naval commanders' who favoured keeping a strong surface fleet.

They could not stop thinking of submarines as auxiliary vessels rather than as the most important element in a modern navy. They refused to see that, while cruisers are cumbersome floating artillery batteries submarines are mobile, underwater missile-launching pads.

Kuznetsov's replacement, Admiral Gorshkov, delivered a broad attack on Stalin's building programme and post-war naval strategy, which has recently been described as

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1 Ibid, p.20.
2 Ibid, p.22 and 29.
3 Ibid, p.28 and 30.
amounting to a doctrine of 'command of the coast'.

The claim that Stalin's post war programme stemmed directly from the Soviet experience of the war has already been examined and, once allowance has been made for the individual assessments of Shner, Alafuzov and Kuznetsov, found to be substantially correct. Gorshkov points to the impact of Soviet military historical research on naval science. Because primary attention was given to Soviet operations and land battles the combat experience of the great naval powers was not considered very instructive. This research served to strengthen the idea that the fleet's role was 'simply being an assistant to the ground forces' and led to a 'stagnation' and 'formalism' in naval theory.

Gorshkov notes that this transfer of experience did not take into account 'the changes which have occurred in the arrangement of forces in the international arena'. He singles out two significant developments: the development of the socialist camp and the emergence of aggressive military blocs headed by traditional naval powers .... During the first post war decade the fleets of this coalition were built up with great intensity, far and away surpassing in their striking power the other branches of the armed forces. The tendency to assign to the Navy the role of one of the primary strategic weapons in a future war was becoming increasingly clear.

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1 This appropriate phrase occurs in J. Erickson, 'The Soviet Naval High Command', USNIP, May 1973, Naval Review Issue, p.68.
2 see p.53-64 above.
3 Gorshkov, S.G., 'Naval Science', p.11 and 15.
4 Ibid, p.11.
5 Ibid, p.11.
The 'command of the coast' doctrine reduced the art of naval warfare to 'the organisation and coordination of various types of forces...with the ability to act only in our own coastal areas.' Surface ships were given the role of primary force but were capable of repulsing enemy attacks 'when at sea adjacent to own coasts'. Only here could they be covered against air attack.

Naval training gave an important place to the organisation of the battle in a mine - artillery position. This required enemy warships to enter prepared minefields thereby committing themselves to an unfavourable position from which they could be attacked by torpedo boats, aircraft, shipboard and shore artillery - the full weight of the Soviet Navy.

Gorshkov was extremely critical of this 'undeviating attempt to conduct every engagement with surface ships by launching the main strike in own coastal waters'. He acknowledged that operations such as these could take place when repulsing strikes by the enemy's fleet at shore objectives, as well as in the course of anti-landing operations.

However the constant repetition of a standard exercise procedure engendered sketchiness and stifled initiative. Moreover it failed to test the Navy's capacities in different but emerging circumstances, i.e., in combat against aircraft carrier task forces standing clear of coastal waters but operating within range of carrier based aircraft.

Both Khrushchev and Gorshkov were critical of the Navy as they found it in 1954-1955. In some respects their

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3 Gorshkov, S.G., 'Naval Science', p.15.
criticisms were similar. Both considered that the Navy was too wedded to the past, both decried the sterility of naval exercises: both were concerned that not sufficient attention was being paid to naval innovations. Khrushchev looked to missiles, aviation and submarines as the wave of the naval future.\(^1\) He was concerned to cut the 'absolutely staggering' naval expenditure and to redirect the military as a whole towards a greater concern for defence against airborne attack and the development of a missile capability.\(^2\) As part of his concern to slash naval expenditure he advocated the development of a missile armed submarine navy and claimed that the surface navy was obsolete,\(^3\) except for coastal operations, and suitable only for ceremonial occasions. In this he was, on his own admission, opposed by the navy and forced to make concessions.\(^4\)

For Gorshkov, Khrushchev's plans for the navy were partially acceptable. He too noted the growing role of the submarine and missile armed aircraft in naval warfare and accepted the demise of the artillery firing heavy surface ship.\(^5\) What he could not accept was the view of 'some extremely influential authorities' who felt that 'with the appearance of atomic weapons the Navy had completely lost its importance.'\(^6\)

\(^1\) Khrushchev, The Last Testament, p.22 and 29 for his evaluation of the impact of missile carrying aviation on the navy, p.29-30 for his evaluation of submarines.
\(^3\) 'The thick iron plating on surface ships had been rendered helpless against armour-piercing shells, to say nothing of nuclear weapons. The heavier the armour, the heavier the ship, the faster it will sink'. Ibid, p.30.
\(^4\) Ibid, p.32.
\(^6\) Ibid, p.18.
These authorities are never identified nor is there any evidence to confirm that the most likely candidates for the title, Zhukov and Khrushchev, advocated the extreme views cited by Gorshkov. Khrushchev's derogatory comments were reserved for the cruisers and destroyers of Stalin's construction programme', a programme for which Gorshkov himself had little respect.¹

What undoubtedly happened in the mid 1950s was that the Soviet Navy was posed a series of searching questions about possible missions in a future war, and the role of the various units which comprised its fighting strength. In a period of review and reassessment of previous dogma in the armed forces as a whole it is unlikely that the Navy escaped the process. The construction programme of this period, to be reviewed in the following chapter, indicates quite clearly that some fundamental reassessment was undertaken.

Khrushchev's contribution to this process has already been reviewed: Zhukov for all his professed ignorance and lack of concern about naval matters could scarcely maintain this attitude in his new role of Defence Minister. The Navy, a vast consumer of capital and resources, must have been carefully examined, given the search for across the board military economies, in a period characterised by a shift towards a greater satisfaction of consumer demands.

It may be that some missile enthusiast asserted that missiles fired from land launchers could destroy enemy fleet formations on the seas and oceans.² Others may have

² See Gorshkov, 'Naval Science', p.18 for this and other charges against the 'influential authorities'. Khrushchev, The Last Testament, p.29, mentions the use of shore based missiles against enemy formations.
negated the importance of fleet support for the ground forces and discounted the possibility of amphibious landings in the nuclear age.

During the period 1954-1959 coastal defence artillery was replaced with cruise missiles.\(^1\) Shorter range missiles were fitted to small torpedo boats to produce 50 Komar class missile boats.\(^2\) There is no evidence of any cut back in the production of patrol boats, submarine chasers and other small surface vessels, which formed the backbone of close in-shore coastal defence.\(^3\)

The overall picture reveals a drastic cut back in the cruiser and destroyer programmes coupled with the construction of small, relatively inexpensive, more powerfully armed vessels to undertake the tasks which had previously been allotted to larger vessels.\(^4\) It is true that these small surface craft had neither the range nor the sea keeping ability to operate far from the coast. But the cruisers had also been restricted in their range of operation by the absence of protective air cover and adequate anti-aircraft weapons.

\(^1\) The first of these cruise missiles, the Salish and Samlet, were derivatives of the Kennel air to surface jet powered missiles and are credited with a range of approximately 60 miles and 120 miles respectively.

The Shaddock cruise missile may not have come into service with the coastal defence forces until the early 1960s. It is credited with a range of 300 miles. Both Samlet and Shaddock would require mid course guidance if used at their maximum range. Janes Weapon Systems 1973-4, p.41-42. Janes Ships 1973-4, p.534-634

\(^2\) The Komar is a conversion of the P-6 torpedo boat fitted with 2 SS-N-2 missiles which have a range of 23 miles. Janes Ships 1973-4, p.566.

\(^3\) Khrushchev, The Last Testament, p.31. 'We relegated our surface fleet to an auxiliary function, primarily for coastal defence. We built P.T. boats, coastguard cutters and sub-chasers armed with depth charges'.

\(^4\) See next chapter for a detailed discussion of the cut back in the Stalin programme and for new construction initiated under the Khrushchev programme.
The planned increase in mechanisation and fire power of the ground forces undoubtedly increased their mobility and ability to by-pass or eliminate defensive cores of resistance to their advance. The role of the expensive and vulnerable cruisers in shelling these pockets of resistance from offshore could reasonably be expected to be accomplished, if not by the land forces themselves, then, at least by those cruisers which were completed, together with small missile armed coastal defence boats operating as ground support for them.

The questioning of the continued feasibility of amphibious landing operations under nuclear war conditions was not limited to influential authorities in the Soviet Union. This was an obvious mission for hard and penetrating reassessment in a situation where officials were anxious to prune overall defence spending hopefully in branches of service other than their own.

While the questioning and probing of the navy's missions and force structure was underway, Gorshkov claims the Central Committee of our Party defined the path of fleet development, as well as the fleet's role and place in the system of Armed Forces in the country. The course taken was one which required the construction of an ocean-going fleet, capable of carrying out offensive strategic missions. Submarines and naval aviation, equipped with nuclear weapons, had a leading place in the programme.

This was the authorised source for the creation of a balanced Navy, capable of successfully conducting combat operations under differing circumstances.

We must discount Gorshkov's attempts to write his own place in Soviet naval history. He was not a saviour who rescued his fleet from the 'influential authorities' short-sighted enthusiasm for missile forces, and in its hour of

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1 For a fuller discussion of the Soviet debate over amphibious landings, see p.377 below.
darkest crisis presided over its development towards a balanced fleet.

Firstly, it was not the Navy as such which had lost its importance, but rather Stalin's Navy, based on artillery firing cruisers and capable of effecting the 'command of the coast' strategy on which Gorshkov himself poured such scorn. Naval construction turned to smaller units and missile armament. At the heart of the new construction programme stood the missile firing submarine and shore-based medium and long range missile firing aviation. The new strategy from which this construction programme stemmed was one of ocean denial.

Secondly the claim that the Soviet Navy began to develop into a balanced navy in the mid 1950s - coinciding with Gorshkov's promotion to Commander-in-Chief - is subject to challenge. Gorshkov offers an entirely vacuous definition of a balanced fleet.\(^1\) We are told that a balanced fleet is 'ocean-going', that it is composed of 'submarine forces, aviation, surface warships and other types of force developed harmoniously', moreover,

In composition and armament it is capable of carrying out missions assigned it not only in a nuclear war, but in a war which does not make use of nuclear weapons and finally it must be able 'to support state interests at sea in peacetime'. There is no indication of what missions were in fact assigned to the Navy. It is left unclear whether the underlying naval strategy is offensive or defensive because there is no indication whether the mission of destroying the enemy's naval forces and contesting for control of the high seas is included in the missions assigned. Gorshkov does claim that as a result of decisions taken in the mid 1950s the Navy was converted to 'an offensive type of long-range armed force'.\(^2\)

\(^1\) Ibid, p.19 including footnote.
\(^2\) Ibid, p.19.
This however is a clear reference to a submarine launched ballistic missile capability and does little to clarify the issue of offensive or defensive naval strategy. The claim to protect state interests at sea in peacetime is vague. There is no indication of what these 'state interests at sea' are, although clearly the protection of the merchant, fishing and research fleets are included. Nor is there any indication as to how these undefined state interests were to be protected by the Navy. Indeed there is no sustained use of the phrase 'protection of state interests' in Soviet naval writings until the late 1960s and even now its precise meaning and implications remain unclear.

The claim that submarine forces, aviation, surface warships and other types of forces developed 'harmoniously' is belied by the ship construction programme of the mid 1950s. Khrushchev may have been enthusiastic about missile firing submarines and naval aviation but he certainly resisted any naval proposals for the construction of aircraft carriers which may have arisen, cut back surface fleet construction and transferred ship yards from naval construction to merchant ship building. Moreover Gorshkov himself admitted that 'submarines and naval aviation...had a leading place in the programme'.

1 The Soviet Navy's inability to provide a secure surface escort for the cargo ships carrying missiles to Cuba in 1962 suggests that this objective had yet to be attained by that date. It may have been this episode which was foremost in Gorshkov's mind when he wrote of the protection of state interest at sea.


3 I do not believe that suggestions for carrier construction were pressed by the Navy during Khrushchev's period of office. There is no evidence of conflict over this question in Soviet material published following Khrushchev's fall and Khrushchev himself admits to a 'nagging desire' to have acquired carriers 'but we could not afford to build them'. Khrushchev, The Last Testament, p.31.

4 See p.194-5 below for evidence.
The leading role given to submarines and shore based aircraft implied a defensive strategy of ocean denial. Admittedly this required a different naval force structure to that needed for a 'defence of the coast' strategy but the new requirements did not produce a balanced fleet in the sense appropriate for an offensive strategy aimed at winning and holding command of the sea.

It is difficult to understand what Gorshkov had in mind when he spoke of an ocean-going fleet. There was no attempt in the latter half of the 1950s to exercise the Soviet fleets outside the major fleet areas, whereas one might expect an attempt at area familiarisation, if not full scale exercises, in more distant waters if only to accumulate operating experience on the high seas in preparation for a more rigorous oceanic role. Moreover if it were intended to have an ocean-going fleet by the late 1960s it would be reasonable to expect the construction of an adequate support fleet during the 1950s. However when the Soviet Union did begin to deploy vessels outside its fleet areas in the mid 1960s it found itself initially handicapped by the lack of an afloat support capability. The absence of an auxiliary fleet suggests that no oceanic role was intended for the Soviet Navy by the decision-makers who had the final word on naval construction during the period of the mid 1950s.

CHAPTER IV

CONCLUSIONS

There were major changes in the Soviet naval construction programmes associated with the rise of the new political and naval leadership. The period from the mid-1950s saw the demise of large artillery armed surface ships and a significant cut back in the numbers of medium range diesel-electric submarines. An increased emphasis on missiles launched from submarines, aircraft and smaller surface ships, and the development of nuclear powered submarines, characterised pronouncements on the future of the navy.

There is little evidence that Stalin envisaged or sought to construct a naval force capable of operating beyond the coastal region. Both Khrushchev and Gorshkov saw that this was too limited a role for the navy at a time when direct threats were being posed to Soviet territory by sea based strike forces increasingly capably of launching attacks from beyond the coastal seas. However if both Khrushchev and Gorshkov could agree that "Stalin's navy" was fundamentally inappropriate in the changing circumstances there is little evidence that they agreed on what ought to replace it. Khrushchev, with his broad social and economic concerns, wanted to cut back on military expenditure: Gorshkov wanted the best navy he could have. Whereas he did not necessarily object to cancellations in the Stalin type surface fleet there is no reason to suppose that he was satisfied with the limited numbers of surface vessels delivered to the fleet under the new construction programme.

The navy was subject to close scrutiny. It was a capital intensive service requiring allocations from a wide range of industry and it was particularly vulnerable to pressures from other competing claims because it was the junior service in the Soviet military hierarchy and had traditionally played a subordinate role in Soviet strategy. Kuznetsov, who was replaced as the Commander in Chief of the Soviet Navy, appears to have been identified as an advocate of a large ocean going navy consistent with his stress on the importance of aircraft carriers.
Whatever the merits of such a case it was inappropriate at a time when the political leadership was determined to institute economies in all branches of the armed forces.

What emerged from the process of discussion and decision was the need for a navy which, while capable of carrying out the functions which had emerged from the analysis of the World War II experience, would be capable of denying an even wider area of sea to hostile naval forces. Such a navy was to be based on the new technology of nuclear power and missiles.

There is no indication - despite Gorshkov's claims to the contrary - of any attempt to develop a balanced fleet capable of carrying out offensive strategic missions on the high seas. There is no evidence publicly available that such an offensive role was even considered. However, during this period the navy developed a submarine launched ballistic missile capability, which at the time constituted the most reliable means available to the Soviet Union for launching a direct attack on the United States. The development was of great significance for it created a highly task specific arm within the Navy which in later public pronouncements was placed second only to the Strategic Rocket Troops in the Soviet force structure.
THE KHRUSHCHEV NAVY

CHAPTER V

Ship Planning and Construction 1953/4 - 1959/60

The analysis of Soviet naval planning and construction can be dealt with most conveniently in four separate sections.

1. The cancellation of the surface fleet programmes from the Stalin plan;
2. The conversions and construction plans for surface vessels agreed to and undertaken in the period 1953/4 to 1959/60;
3. The submarine programme;
4. The naval aviation programme.

The cancellation of the surface fleet programme.

(a) Cruisers

The strength of the Soviet surface navy was to have lain in the twenty four Sverdlov class cruisers and a possible follow on class of heavy cruisers. The Sverdlovs were under construction at the Ordzhonikidze Yard at Leningrad and at the Marty Yard in Nikolayev. Reports in Janes Fighting Ships circa 1958 suggest that at least two hulls of the heavy cruiser programme may have been laid at Nikolayev.¹

Reconstruction of the curtailed cruiser programme suggests the following pattern:

<table>
<thead>
<tr>
<th>Stalin's Cruiser Programme (notional reconstruction)</th>
<th>1948</th>
<th>1950</th>
<th>1952</th>
<th>1954</th>
<th>1956</th>
<th>1958</th>
</tr>
</thead>
<tbody>
<tr>
<td>laid</td>
<td>24 Sverdlovs</td>
<td>Heavy Cruisers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>launched</td>
<td>Pre-War</td>
<td>20 Sverdlovs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>complete</td>
<td>Chapayev</td>
<td>14 Sverdlovs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Janes Fighting Ships 1957-8, p.318. Reference to these hulls continued in Janes until the 1961-2 edition.
Only twenty Sverdlov hulls were laid to 1953, and of these only seventeen were launched from 1951 onwards. 

By 1956 fourteen vessels of the class had been completed.¹ At least six of the hulls, some still on the slip ways, were apparently broken up between 1953 and the late 1950s.² There is no indication that the heavy cruisers, if in fact they existed, advanced beyond the keel laying.

The fate of the cruiser programme, which slowed down perceptibly following Stalin's death, and eventually was abandoned completely, suggests a radical rethinking of fundamental naval missions and doctrine. Khrushchev indicates that the cruiser programme was scrapped because the surface artillery fleet was regarded as obsolete in the age of missiles and nuclear weapons.³ What was the use of an essentially 1930s-type large cruiser, equipped with small guns, in the 1960s? The surface vessels which appeared in the 1960s, and hence must have been agreed to by the mid 1950s⁴, were much smaller with a long range main missile armament. The next vessels comparable in size to the Sverdlovs, the Moskva and Leningrad helicopter cruisers, were specialised, purpose built, anti-submarine vessels.

Khrushchev was also concerned by the expense, in terms of manpower and operating costs, involved in maintaining the surface navy, but this must have been a secondary consideration.⁵

¹ Janes Fighting Ships 1973-4, p.546.
⁴ This agreement may only have an affirmation to continue with a programme initiated in the late 1940s under Stalin. This conclusion is based on an assumption that it would require a period of at least 10 years to move from an initial firm decision to construct vessels to their actual entry into service with the fleet.
⁵ Ibid, p.31.
The decision to scrap the cruiser and destroyer programmes was formally taken by the Ministry of Defence, with the backing of the General Staff, which drew up a formal proposal subsequently approved by the government.\(^1\)

It is difficult to gauge naval reaction to the decision. Khrushchev reports that 'some men in our navy...couldn't get over being completely deprived of cruisers'.\(^2\) Kuznetsov obviously resisted the scrapping of the surface navy and was replaced by Gorshkov as Commander-in-Chief. Gorshkov's attitude is difficult to assess. In particular it is difficult to tell whether he launched a successful campaign to maintain the completed Sverdlovs, which it had been intended to scrap.\(^3\) Khrushchev did speak in terms of scrapping ninety percent of the Soviet Navy's cruisers\(^4\) but, as he himself admits, his public utterances were partially designed for propaganda effect.\(^5\)

It is one thing to dismantle a vessel before completion, and quite another to contemplate breaking up new, already completed, vessels, no matter how unsuitable they may have appeared in a combat role, for naval vessels can be used for purposes other than those originally intended. Following the cancellation of the programme one cruiser was modified, albeit unsuccessfully, in 1961-2, to take a surface to air missile and another was transferred to the Indonesian Navy in October 1962.\(^6\) Sverdlovs have also served as command centres for forces on distant deployment since the mid 1960s, a role for which their

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1 Ibid, p.32.  
2 Ibid, p.32.  
3 See Herrick, Soviet Naval Strategy, p.71-74, for the view that Gorshkov prevailed on Khrushchev not to scrap 90% of the cruisers as he had threatened.  
5 Khrushchev, The Last Testament, provides the following example: 'It always sounded good to say in public speeches that we could hit a fly at any distance with our missiles', p.47.  
size and subsequently added electronic equipment particularly equips them. During 1972 two further conversions were carried out introducing the modern SA-N-4 missile. Moreover even Khrushchev conceded a role for the artillery cruiser in 'softening up shore defences in preparation for a landing assault'. Doubts on whether Khrushchev intended to get rid of the already completed Sverdlovs should not, however, obscure the fundamental point that the former Stalin era navy, based on artillery firing surface ships, had to all intents been discarded. The transfer of former cruiser ways in the Baltic to tanker building underlined the decision to move away from large surface vessels.

(b) Destroyers

Because the precise numbers of the three classes of destroyers initiated in the post war building programme are not known and the information on keel laying, launching and completion is unavailable, tabulation would only create a false sense of precision.

The Skory programme, initiated in the late 1940s, resulted in some 75 vessels being completed by 1956. It is possible that this programme was abandoned, before the completion of the final units, in favour of later types of destroyers. The poor stability of the Tallin class vessel undoubtedly led to the termination of the programme after the initial prototype had undergone sea trials.

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1 Ibid, p.546, and see p.293 below.
3 Times, 25 September 1959, p.3, see p.193-4 below for discussion.
4 McGwire, 'Soviet Naval Procurement' suggests that there were to have been 80 Skorys, 12 Tallin and 36 Kotlin class destroyers, p.77.
   Janes Fighting Ships 1973-4, p.562 suggests that 85 Skorys were originally planned.
The fate of the Kotlin class is a little easier to determine. We do know that more keels were laid than appeared as conventionally armed Kotlin class destroyers, for in 1957 four hulls of this class were used to build the Kildin class missile destroyer. All told some 26 Kottins were completed.

Undoubtedly destroyer programmes were terminated, but, as the case of the Kotlin/Kildin transformation suggests, this had more to do with questions of armament, the change from guns to missiles, than with the belief that vessels of this range and size were outmoded or too expensive, though Khrushchev in a clear reference to the Kotlin/Kildin transformation claims that the resulting vessels were inefficient.

Two Skory class destroyers were transferred to Egypt in 1956, two went to the Polish Navy in 1957-8 and four to Indonesia in 1959. These vessels were apparently no longer regarded as essential Soviet naval requirements in the dawning missile age, and hence could be used as goods in the Soviet arms trade. No new destroyer emerged from the Soviet shipyards between 1958 and 1961, when the first Krupny class missile destroyer was sighted. The apparent hiatus in construction of destroyer type vessels is obscured to some extent by the Kildin vessels which, although unsatisfactory in themselves, did provide apparent continuity in production and, more importantly, enabled the Soviet Navy to gain experience in designing and handling missile armed vessels.

1 See below p.165-6.
2 Khrushchev, The Last Testament, p.32.
(c) Frigates

Frigates of the Kola and Riga class began building in the early 1950s and were completed by 1958/9. This was followed by a two year hiatus until 1960/61 when the Petya class was laid and completed.

Although no figures exist for the actual numbers of Kola and Riga class frigates originally planned it appears as though 10 or 12 Kolas were built and up to 64 Rigas were completed. The Kola class may well have been cut short; a run of 10-12 units seem remarkably few for this type of vessel. Indications that the time required for the completion of launched hulls spread over three years suggest that the class was judged to be unsatisfactory. The completion of 64 Rigas, the successor class, indicates that this was a more successful design than the Kolas, despite some reduction in size, speed and armament. During the late 1960s the original depth charge projectors were replaced by two 16 barrelled anti-submarine rocket launchers. The fact that no such modification was carried out on the Kolas suggests that the Rigas, unlike the preceding class, were considered to be capable of using the new weapons system effectively in a greater variety of sea conditions.

(d) Sub Chasers

It is difficult to detect any major changes in the construction plans of this type of vessel. The major post war class, the Kronstadt, appears to have had a production

1 McGwire, 'Procurement' suggests that 24 Kolas were to be constructed at a rate of 12/year and 72 Rigas were to follow on at 12/year. He suggests a class of frigates designated the Ritya - was intended for building in the late 50s and early 60s. The deletion of the class under Khrushchev was responsible for the two year gap in frigate construction.
3 For a comparison of the Kola and Riga classes see Table p.102 above.
4 First reported in Janes Ships 1969-70, p.552.
run of over 200 units. It was followed by the SO-I class which began production in 1957. Khrushchev indicates in his memoirs that no major changes were made in respect of this type of vessel.¹

The conversion and construction plans for surface vessels 1953/4 - 1959/60

(a) Cruisers

It is probable that the requirement for helicopter or anti-submarine cruisers was recognised in this period. If we allow a minimum ten year period between a design decision being taken and the entrance of a completed vessel into active service then the decision to build the Moskva class can have been taken no later than 1957/1958. Yet this is precisely the period when Khrushchev and possibly other influential authorities were deriding the surface navy. It was a period of military cost consciousness, troop cuts and heavy expenditure on missile development but also a period of establishing new defensive forces and equipment.² It is unlikely that the regime, which had given ample evidence of its willingness to intervene in naval affairs, would have approved the construction of such a task-specific vessel without the demonstration of an urgent clear cut need. The one such need which could win approval was the requirement to counter submarine launched missile systems.

Soviet naval planners must have been aware of the United States Regulus programme. The Regulus I, a subsonic cruise missile with a range of 500+ miles had been deployed aboard conventional submarines since 1953

¹ Khrushchev, The Last Testament, p.31.
² This requirement may well have been appreciated by Khrushchev himself. He had evidently approved the establishment of the air defence forces as an autonomous branch of service. During his term of office the establishment of surface to air missile systems was boosted. The Moskva programme was likewise a defensive system.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (in tons)</th>
<th>Aircraft</th>
<th>Armament (in mm.)</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moskva</td>
<td>2</td>
<td>15,000 stand. 18,000 full load</td>
<td>18 'Hormone' A Ka-25 ASW helicopters search radar under the nose dipping sonar carries anti/sub torpedoes and other stores.</td>
<td>ASW 18 Ka-25 helicopters 1 twin A/S missile launcher 2-12 tube MBUs.</td>
<td>Laid 1962-3 Sea trials Moskva mid 1967.</td>
<td>30 knots max. speed</td>
<td>This vessel marks a radical departure from former Soviet naval construction (see text). It includes a number of recent generation weapons and electronic systems A/S missile launcher SA-N-3 Goblet Variable depth sonar. Three D radar. Probably intended for a longer construction run than in fact eventuated (see text).</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

Sources: Janes Fighting Ships 1974-5, p.533-534.
and by 1958 a 1,000 mile range supersonic Regulus II missile had been developed. Moreover during the 1950s the U.S. Navy had authorisation for purpose built SSGs and SSGNs. The planners must have also been aware of the Polaris project, however, it is possible that in the mid to late 1950s, they did not expect the SLBM to become operational until the late 1960s.

It is unlikely that the Moskva class was intended for use in countering enemy attack submarines, or as a V/STOL platform providing air cover for the surface fleet or amphibious operations, as is sometimes suggested. Despite the growth of the Soviet merchant fleet, which began under Khrushchev's administration, the fact remains that this fleet has limited strategic importance in war. At most it would be used along coastal lines of communication where it could be efficiently protected from enemy submarines by the vast array of coastal defence vessels operating under the cover of land-based naval aviation. Moreover there is no evidence that in 1957/8 the Soviet was preparing for an eventual forward deployment. Major out of area exercises involving surface ships did not

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1 For details of Regulus Project see United States Department of the Navy. United States Naval Aviation 1910-1970. NAVAIR-00-80P-1 passim.

2 Janes Fighting Ships 1974-5 suggests 'the design (for the Moskva) must have been completed while the "November" class submarines were building' implying 'an awareness of the problem of dealing with nuclear submarines'. The 'N' class is the first of the Soviet Navy's nuclear powered attack submarines.

3 Janes Fighting Ships 1968-9, foreword.

4 Breyer, S. Guide, p.236 both suggest the use of V/STOL aircraft from Moskva.


being until 1963\(^1\) nor is there evidence in the late 1950s of a build up of the supply fleet to sustain a forward deployment.\(^2\) The anti-carrier operation, although conducted at growing distances from the shore, as longer range U.S. carrier based aircraft came into service, was assigned to missile armed submarines and naval aviation. It did not at that stage call for surface vessels on distant deployment. There was, therefore, no apparent need at this time, nor in the foreseeable future, for a special purpose vessel designed to protect an out of fleet area naval force from submarine attack.\(^3\)

The fact that Moskva was designed with its superstructure traversing the width of the ship suggests that it was never intended to handle the V/STOL aircraft which first appeared in the Soviet Union in 1967.\(^4\) V/STOL jet aircraft are operated most efficiently in the STOL mode.\(^5\)

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\(^1\) See Holmes, E.P. Admiral, 'The Soviet presence in the Atlantic', p.6-11, and Gorshkov, S.G., 'The great tasks of the Soviet Navy', Red Star, 5 February 1963, translated F.R.B. 14 February 1963, USSR National Affairs p.CC1-CC6. This article, written after the Cuban fiasco, was primarily a call to the Navy to get to sea and train.

\(^2\) The problems this caused for the Soviet fleet once it moved to forward deployment will be discussed below.

\(^3\) Enemy attack submarines could be used in two other roles; as a protection force accompanying enemy SLBM submarines intended to attack defensive ASW forces or to disrupt amphibious operations. The use of Moskva as an anti SLBM system is not incompatible with the first of these tasks. As there is no evidence of an intention to conduct blue water amphibious operations it is unlikely that Moskva was designed to protect amphibious forces. Short ranged coastal amphibious attacks could be adequately protected from enemy interference by the vast array of small coastal ranged sub-chasers and destroyers operating under the protection of land-based aircraft.


\(^5\) The saving in fuel consumption brought about by a rolling take off is the main advantage.
One only needs to consider the Moskva steaming backwards into the wind at 20 knots during aircraft take off, or the plight of a pilot, returning from his mission, being waved off to repeat his landing attempt, to dismiss this possibility. Moreover the width of the deck elevators, approximately 13 feet [1] is too narrow for modern fixed wing aircraft. Recently the Moskva has been modified by addition of a landing pad to the flight deck, presumably to allow V/STOL aircraft tests [2] before the aircraft go into service with the Kuril class carriers, and to train pilots in take off and landing techniques under test conditions, where fuel consumption is not an important factor. Further the addition of a landing pad suggests that the original flight deck is unable to handle either the weight of the aircraft or the thrust of its engines, or both, in take off or landing.

It has been suggested that Soviet naval planners could have argued the case for the Moskva class in 1957/8 firstly on the basis of the U.S. Navy's already existing Regulus cruise missile programme and secondly on the basis of their projection that the U.S. Navy would achieve an operational SLBM system in the mid to late 1960s. They could have cited the fact that the U.S. Navy was not ordered to proceed with the development of Polaris until December 1956 and the apparent caution of the Eisenhower administration in providing funds for the SLBM programme as evidence that a counter to Polaris would be required in the late 1960s. More likely they used the evidence of their own SLBM programme projections to suggest


[3] See Ball, D.J. 'The Strategic Missile Programme of the Kennedy Administration 1961-1963' unpublished Ph.D. thesis A.N.U. June 1972, p.66-71 for an account of the administration's attempts to restrain Navy and Congressional demands for additional Polaris funding, at least until the initial units had demonstrated that the system worked.
that an American equivalent would take approximately ten years to develop. Either way, on this account, it must have come as a considerable shock to the Soviet leaders when the Polaris programme in fact delivered its first operational submarine in late 1960, some three years earlier than the Americans originally intended. The original Polaris A-1 missile, like the Soviet SS-N-6 Sawfly, had a relatively short range of 1,200 nautical miles, suggesting that it would operate in the Barents Sea area, which was also the most likely operational zone for the SSG and SSGNs carrying Regulus missiles. By the early 1960s however the USN was producing the Polaris A-2 and A-3 missile, and the cruise missile programme had been cancelled. The significantly longer range of the A-2 and A-3 enabled total coverage of the Soviet Union from an enormous area of sea space. It was possible to estimate the relatively small number of vessels required to hunt cruise missile firing submarines in the Barents Sea - western commentators have suggested that perhaps 6-8 Moskva class vessels were originally intended. However the numbers required to cover the enormous areas of distant sea space, far removed from land based air cover, must have appeared quite beyond

3 The Polaris A-2 has a range of 1,500 nautical miles (1,725 statute miles) and A-3 2,500 nautical miles (2,880 statute miles). See Maps p.284a below for sea space from which these vessels can operate.
5 The anti-aircraft armament of the Moskva, two twin SA-N-3 Goblet launchers and two twin 57 min dual purpose guns, suggests that it was to operate under at least partial air cover.
the means of the Soviet Navy. Moreover, unlike the Regulus, the Polaris missile was an underwater launch missile, and hence its vector the SSBN did not have to surface. It was therefore less vulnerable to Soviet ASW forces. The Moskva programme was cut, but not in time to cancel the first two vessels for which long lead time items must have been in hand. The American decision to refit the George Washington class SSBNs, which originally had carried Polaris A-1, with Polaris A-3 missiles, removed from the USN the last of the SSBNs forced to use the Barents Sea as a launch area.

The American decision to cancel the Regulus programme and to develop the longer range Polaris A-3 and A-3, suggests that the task-specific Moskva class must have appeared as a vessel without a viable role in the early 1960s. At this time the programme was cut.

(b) Guided Missile Cruisers

It is quite probable that approval for the Kynda class guided missile cruisers, the first of which was laid down in mid 1960 was given in 1953/4. The Kynda's probably stemmed from the same round of discussions which led to the cancellation of the majority of surface unit programmes of the Stalin era. The course and exact timing of these discussions must remain a matter of conjecture, yet it is clear that the Navy, perhaps reluctantly, accepted, as an alternative to the high cost surface units, smaller surface vessels equipped with long range missiles.

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1 Polaris A-1 was officially retired from active duty when the USS Abraham Lincoln (SSBN-602) returned to the United States on 14 October 1965 for her initial overhaul and refit to A-3. F.B.M. Facts, p.2.
2 Polaris and Poseidon Chronology, p.11.
3 No Soviet source credits Stalin with initiating the development of a missile armed navy, although Khrushchev draws our attention to the fact that under Stalin there was almost total ignorance, outside the design teams immediately involved and members of the Politbureau, as to the latest technical developments. Khrushchev mentions in particular the officers serving with fleet who were ignorant of missile carrying aircraft. Khrushchev, The Last Testament, p.29.
The Kynda and Kresta I classes are examples of this new type of vessel. Both are modest in size and are fitted with ground force surface to surface missiles (SSM), and (SAM) adapted for naval use. The adaptation of ground force missiles to naval service had the advantage of being relatively inexpensive, because there were no major development costs, and enabled proved missiles to be brought into fleet service rapidly. As we shall see, in the case of the single Sverdlov conversion dating from this period, the adaptation was not always successful. None the less the SS-N-3 (Shaddock) and SA-N-1 (Goa) missiles provided the Soviet Navy with a long range missile and air defence missile for immediate use, while work was continuing on the development of naval missiles.2

The major disadvantage of the long range missile was the need for a form of mid course guidance when operated at over-the-horizon range. This guidance is provided by aircraft as a rule, but this raised problems of co-ordination, as all operational Soviet aircraft are at present land based. Guidance may also be provided by ship borne helicopters, as with the Kresta I and later vessels (with attendant problems of helicopter vulnerability to attack by aircraft), by satellites (where coordination is a major difficulty) or submarines, such as the W 'canvas bag' conversions. If the submarines are not in sight of their target however they cannot perform their function, and if in sight of it may well be fully occupied in surviving attacks by enemy ASW ships, aircraft and helicopters.

1 Details of the missiles used by the Soviet Navy will be found in Appendix I, p.195-6 below.

2 Although the SS-N-3 Shaddock has an equivalent in the land forces (Janes Weapon Systems 1973/4, p.42) and the SA-N-1 Goa is used by both the Navy and Army (Janes Weapon Systems 1973/4, p.88-89) it is by no means clear that the SS-N-1 Strela/Scrubber and SS-N-2 Styx have ground force equivalents. The SS-N-1 and 2 are probably first and second generation naval missiles which in the case of the former were found to be unsatisfactory. The Navy adapted the longer range ground force Shaddock until such time as a later generation naval cruise missile was developed.
### TABLE III
GUIDED MISSILE CRUISERS - KHRUSHCHEV 1953/4 - 1959/60 PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kynda</td>
<td>4</td>
<td>4,500</td>
<td>SSM</td>
<td>1 ship laid June 1960</td>
<td>35 knots</td>
<td>Geared Steam turbines</td>
<td>Although a helicopter pad is provided there is no helicopter embarked. Hence the Kynda must rely on external target location and mid course guidance if its SS-N-3 missiles are to be used at full range. Missile launchers can be elevated and trained through 250°.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SAM</td>
<td>2 twin launch for SA-N-1 Goa 30 reloads guns 4-76mm dual purpose guns ASW 2 T2-barrelled MBU's 6-533mm torpedos tubes (2x3)</td>
<td></td>
<td></td>
<td>Janes 1974-5 however reports no SAM reloads but this is probably a misprint.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>standard 6,000 full load</td>
<td>2 twin for SA-N-1 guns 4-57mm (2x2)</td>
<td></td>
<td></td>
<td></td>
<td>Sources: Breyer, Guide to the Soviet Navy. Janes Fighting Ships 1974/5, p.522-3.</td>
</tr>
</tbody>
</table>
A comparison of the armaments of Kynda and Kresta I reveals an increase in the number of SAM launchers and a reduction in SSM launchers. The increase in SAM obviously provides for a greater capability against air attacks while the decrease in SSM launchers may be offset by the large number of SSM missiles carried by Kresta I. However the Soviet designation of these vessels as large anti-submarine ships suggests that the SSMs were not intended to be the main armament but rather existed to provide an anti-surface ship capability to an ASW vessel, the primary function of which, like the Moskvas, was to counter the already existing cruise missile threat and the SLMB threat expected to emerge during the mid-to-late 1960s in the Barents Sea area. Of equal significance is the inclusion of a helicopter and hangar aboard the Krestas and the increase in ASW armament. The helicopter not only provides organic target location and mid course guidance, enabling the 300 mile range Shaddock to be used at maximum range, but it also can be used to detect submarines.

The Kresta was the first surface vessel, equipped for possible independent action at some distance from the shore. Its SAM armament provided it with a reasonable degree of protection from air attack, its SSM could be used against hostile surface vessels, including carriers, while its helicopter freed it from the need to rely on land based aircraft for SSM mid-course guidance and provided an on board submarine detection capability greater than that provided by hull mounted sonars. Kresta I may therefore be considered a vessel designed to meet a new task; that of countering missile firing submarines within a relatively restricted sea area.

1 Breyer, Guide, p.106 suggests that Kresta has larger magazines than Kynda for both SSM and SAM whereas Janes 1974/5, suggests that there is no reload capacity for SAM launchers, but this seems to be the result of a typographical error and may have been meant to apply to SSM system.

2 Janes Fighting Ships, p.553.
It is obvious that the Kynda programme faced difficulties. The first two units of the class were completed by August 1962 whereas the last two took until 1965 to complete, by which time work had begun on the lead ship of the Kresta Is. Khrushchev offers an explanation of this slow down.

We decided to build four cruisers ... They were good solely as show pieces, and very expensive show pieces at that. After the first one was finished - and the second one was almost finished - we had second thoughts about whether to build the other two at all. We exchanged opinions in the leadership and decided to go ahead as a concession to the military, which was in favour of these ships.

While Khrushchev may have been concerned at the expense of the Kynda's, it is likely that he was also annoyed that his naval advisers were urging on him more and more expensive vessels made necessary in part by the changing naval environment: in particular the emerging need for a system to counter the threat from aircraft carriers and cruise missile armed submarines capable of attacking the Soviet Union from greater distances and the emergence in the mid 1960s of an American SLBM threat. Undoubtedly he was under pressure to complete the Kynda class, a decision he may well have concurred in because the long-lead-time components must have been to hand.

Kresta I, with its ability to conduct operations independent of land based aircraft, probably stems from the reassessment of naval needs which occurred in 1957/8 when the possibility of a major missile threat from the Barents Sea area emerged.

1 Ibid., p.553.
3 e.g., the Douglas Skywarrior and Skyhawks and the North American Vigilante with ranges of 2,500, 1,700+ miles and 2,650 miles respectively.
In 1961-1962 one of the Sverdlov cruisers, the Dzerzhinski, had its number 3 turret removed and replaced with a surface-to-air missile the SA-N-2 (Guideline), which had first been reported in use ashore in 1957. Its adaptation to the Navy was not a success. Weapon system experts claim the difficulties are a result of the fire control and guidance system of the missile which must be gathered to the radar beam early in flight (within 6 seconds) or will not be acquired at all. The decision to carry out the modification was probably taken in the late 1950s.

(c) Destroyers

The Skory and Kotlin destroyer programmes were cut short. Six or so of the Skorys, and an unknown number of Kotsils, were modernised, initially to improve their anti-submarine potential. The Skory modification dates from 1958 and that for the Kotsils presumably occurred at the same time.

In the case of the Skorys the major changes affected the anti-aircraft (from 8-37mm in twin turrets to 5-57mm single) and the anti-submarine armament: the depth charge throwers were replaced by 2 16-barrelled anti-submarine rocket launchers. The number of torpedo tubes was reduced from 10 to 5.

The Kotlin modification was similar. The number of torpedo tubes was reduced to 5 and 2 16-barrelled A/S rocket launchers replaced the original depth charge projectors. There was apparently some modification in anti-aircraft armament, and a few Kotsils incorporated

1 Janes Fighting Ships 1974/5, p.640.
a helicopter pad. Both sets of modification must have involved alterations to the electronic equipment for the new anti-aircraft and anti-submarine systems.

The modernisation programme undoubtedly grew out of a reassessment of the future potential submarine threat to the surface navy. The A/S rocket launchers were first seen on the 'Tallin' class destroyer and therefore were presumably available in relatively large numbers, as only one unit of this class was completed.

The reassessment of the submarine threat would have been prompted by a number of considerations. By 1957/8 it must have been apparent that the post war developments in submarine technology were rapidly making the slow sinking side and stern projected depth charges obsolete. The modern submarine could dive deeper, because of improvements in hull design, while the nuclear powered boats could remain submerged for the duration of their patrol, and travel submerged at relatively high speeds when necessary.

Whether the Soviets foresaw an increase in NATO submarine activity in waters close to the Soviet Fleet areas, or whether they had decided that anti-carrier operations would of necessity bring them out onto the high seas, must remain a matter of conjecture. What is clear is that by moving from simple depth charge to A/S rocket launcher the Soviet Navy by-passed one stage in Western ASW development, the streamlined depth charge requiring mortar launch, and moved direct to a multiple rocket launcher system, which had originally been developed for short range rockets (350 - 200 metres), by the United States during World War II.

The first of the Kotlin SAM conversions also dates from this period. The prototype conversion, which occurred

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1 The simple depth charge and mine appear to have been the principle Soviet A/S weapons in the post war period. The Tallin is the only pre-1955 vessel to be equipped with any other A/S system.

in 1961-2, involved the removal of the main aft twin gun turret and its replacement with a SA-N-1 twin missile launcher. Unlike the Sverdlov conversion this was obviously successful. Not only did the SA-N-1 become the main surface-to-air missile of the navy but in the mid 60s a further six Kotlins were converted to Kotlin SAM.

Three major construction programmes date from this period. The first involved the construction of a small number of Kildin class missile destroyers, which were based on the Kotlin hulls and began rebuilding in 1957-8 at Nikolayev. Basically the Kildin was a Kotlin with a rear gun turret replaced by a single SS-N-1 missile launcher. At the same time work began on the Krupny class of missile destroyers. Powered by steam turbines these vessels carried two SS-N-1 missile launchers, one forward, the other aft. The third of the series, the Kashin class destroyer armed with two twin SA-N-1 systems, and powered by a gas turbine system, commenced delivery in 1962. Although the Krupny and Kashin class vessels may have stemmed from design decisions taken in the Stalin era they must have been reaffirmed by the new leadership, probably in the 1953/4 round of decisions which also ordered the building of Kildin on Kotlin hulls.

The Krupny and Kildin are both armed with SS-N-1 missile about which there is a great deal of confusion in the open Western sources.\(^1\) As the fullest commentary, that in *Janes Weapon Systems*, points out the Strela or Scrubber SS-N-1 and the SS-N-2 Styx missiles are both commanded by radio and dependent on ship board radar for target information. The variation - clearly recognised between Strela/Scrubber and Styx - is in size and range, and hence in the systems platform. Styx is launched from small patrol boats, the Komar and Osa classes, while

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kotlin 4</td>
<td>3,000 standard</td>
<td>SS-N-1 single launcher for SS-N-1 Strl ava</td>
<td>Began rebuilding on Kotlin hull 1957-8. Completed 1959-60 at Zhdanov Yard, Leningrad and Marty Yard, Nikolayev.</td>
<td>Cruising range 5,500 miles at 16 knots. Maximum speed.</td>
<td>Geared turbines.</td>
<td>The single SS-N-1 launcher replaced the after gun mountings of the Kotlin class. A.A. armament improved by replacing the 45mm guns on Kotlin with 34 units in at least the last 3 units of the class. SS-N-1 missile range of over 100 miles. Kotlin reported in Breyer, p.273 as carrying 6 SS-N-1 in magazine. See p.294 below for details of latest modification.</td>
<td></td>
</tr>
<tr>
<td>Kotlin 8</td>
<td>3,650 standard</td>
<td>SS-N-1 single launcher for SS-N-1</td>
<td>Laid from 1955 on. Completed 1959-60. Initial construction Zhdanov Yard, Leningrad and Marty Yard, Nikolayev, possibly also at Komsomol 7.</td>
<td>34 knots</td>
<td>Geared turbines.</td>
<td>The first ships built from the keel up as missile ships. The missile armament is double that of the Kildin - launchers forward and aft. Maximum number of missiles 16, 6 in each magazine. Breyer, p.272. A helicopter pad at the stern but no hanger. Possibly realised to be unsatisfactory while building and therefore only 6 completed. 6 of the units later converted to Kausin, see p.293 below.</td>
<td></td>
</tr>
<tr>
<td>Kotlin 6</td>
<td>2,850 standard</td>
<td>SS-N-1 twin launcher for SA-N-1</td>
<td>2 prototype conversion 1961-62, 6 later conversions 1966-67.</td>
<td>5,500 miles at 16 knots. Maximum speed.</td>
<td>Geared turbines.</td>
<td>An attempt to make up the shortfall in SAM armament to provide some protection for Kotlin and Kropy class SSN destroyers.</td>
<td></td>
</tr>
<tr>
<td>Kasin 10</td>
<td>4,300 standard</td>
<td>SS-N-1 twin launchers for SA-N-1</td>
<td>Dates for laying down not known but probably 1956-60. Laid from Zhdanov Yard, Leningrad and Mosenko Yard, Nikolayev.</td>
<td>35 knots</td>
<td>Gas turbines.</td>
<td>The first class of warships in the world to rely on gas turbines for propulsion. Ships have a quick get away time and fast acceleration. Lat units produced class to have SAM system as main armament. A/S armament strong 6-barrelled launcher range of some 4,500 metres but no major new A/S device. e.g. variable depth sonar or helicopters. Soviet designation - large anti submarine ship therefore seems misplaced at least in the 1970s. Breyer, p.274 suggests a magazine capacity of 60 SA-N-1 missiles.</td>
<td></td>
</tr>
</tbody>
</table>

Strela/Scrubber, with a 17 metre launch rail, is carried by larger vessels, which can provide greater on-board aerial heights for guidance.

There is no evidence that this family of missiles is directly derived from missiles developed for other branches of the armed forces as was the case with SA-N-3. The Kotlin SAM and Kashin class destroyer are both armed with SA-N-1 missiles, which provided a much needed improvement in anti-aircraft capability for the Soviet fleet. It has been frequently observed that these vessels were probably intended to provide support for the SSM destroyers against air attack. There is a great deal of empirical evidence to suggest that this is indeed a prime function for these units, especially when Soviet surface vessels are on forward deployment. However, the Soviets describe the Kashin class as a Large Anti-Submarine Ship.\(^1\) While there is a relatively heavy A/S armament aboard the Kashin there are no modern detection aids, helicopters with dunking sonar, or variable depth sonar, incorporated. This suggests that whatever the original intention the Kashin was soon outmoded, at least as an anti-submarine vessel, and reverted to the role ascribed to it by Western commentators.

(d) Frigates

There seems to have been a complete hiatus in the construction of these vessels. Following the winding down of the Riga programme in 1958 no new vessel of this type began building until 1960/61.\(^2\) The planning decisions for the successor classes, the Petyas and Mirkas must have been taken earlier as these vessels incorporated a new propulsion system and were armed with the new 12-barrelled A/S rocket launchers. The Mirkas may well have been designed during the early 1960s with some alterations to the hull to

\(^1\) Janes Fighting Ships 1974/5, p.555.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (in tons)</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petya</td>
<td>20 I</td>
<td>950 standard</td>
<td>Guns 4-76mm (2x2) d.p.</td>
<td>1st ship built 1960-61 at Kaliningrad</td>
<td>34 knots</td>
<td>gas turbine and diesels</td>
<td>Breyer suggests there may have been problems with this class' sea keeping qualities, p.278. At least 2 of the Petya IIs have lost the rear gun turret and had V.D.S. installed (post 1972 alteration). Intended for A/S operations in restricted waters. Mixed propulsion system enables fast departures and acceleration and economic fuel consumption while cruising.</td>
</tr>
<tr>
<td></td>
<td>25 II</td>
<td>1,150 full load</td>
<td>A/S 4 16-barrelled rocket launchers until 1964 in I's also at Nikolayev</td>
<td>continued in production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Torpedoes 2 12-barrelled rocket launchers in II's.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Guns 4-76mm (2x2) d.p. in I only</td>
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<td></td>
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<td></td>
<td>A/S 4 12-barrelled rocket launchers in I's.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Torpedoes 2 forward 2 aft. Nikolayev</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Torpedoes 5-406mm I (1x5) 10-406mm II (2x5)</td>
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<td></td>
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<tr>
<td></td>
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<td></td>
<td>Torpedoes 5-406mm I (1x5) 10-406mm II (2x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirka</td>
<td>20</td>
<td>950 standard</td>
<td>Guns 4-76mm (2x2) d.p. in I only</td>
<td>Began building in 1964 and continued in production until 1969, at Leningrad and Nikolayev</td>
<td>33 knots</td>
<td>gas turbine and diesels</td>
<td>Presumably built to correct the poor sea keeping qualities exhibited by Petyas. At least one of this class mounts a V.D.S. (post 1971 alteration) see above comments on Petya.</td>
</tr>
<tr>
<td></td>
<td>total</td>
<td>1,100 full load</td>
<td>A/S 4 12-barrelled rocket launchers in II's.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Torpedoes 2 forward 2 aft. Nikolayev</td>
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<td></td>
<td>Torpedoes 5-406mm I (1x5) 10-406mm II (2x5)</td>
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<tr>
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<td></td>
<td>Torpedoes 5-406mm I (1x5) 10-406mm II (2x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

overcome Petya's poor sea-keeping qualities.  

The major innovation in the Petyas and Mirkas was in their machinery which combined gas turbines, enabling them to get underway quickly, and accelerate rapidly, with diesel engines for economical cruising. The A/S weapons systems were updated and consisted entirely of rocket launchers and torpedoes. Some of each class carry variable depth sonar systems (V.D.S.). There is no apparent difference in weapons systems between the two classes.

(e) Sub-Chasers

There does not appear to have been any dramatic cut in production of this type of vessel but rather a progression in design from the Kronstadt and SO-I to Poti and finally the recent impressively armed Grisha. Khrushchev specifically mentions this type of vessel among the coastal defence forces, which continued building during his term of office, apparently with his approval.

The continued support of the sub-chaser programme, taken together with the steps to improve the ASW capabilities of the Stalin era destroyers, clearly indicates a growing anxiety about enemy submarine penetration into coastal waters, threatening coastal communications and possible short-ranged amphibious operations.

(f) Light Forces

Amongst the vast array of light forces to be found in the Soviet Navy the most impressive to emerge from this

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1 Ibid, p.278.
2 The V.D.S. system is first reported on this class of vessel in Janes Fighting Ships 1971-2, p.631.
4 It is not intended to examine the development of the Soviet Navy's light coastal defence forces in detail. It is sufficient to note that over 375 of these vessels in various classes exist and to highlight the most important of these vessels. I have also omitted a detailed account of the development of mine-sweeping forces - in 1974/5 it is reported that 180+ ocean mine-sweepers are in operation with a further 120+ coastal and 48 inshore craft.
### TABLE VI  SUB-CHASERS CONSTRUCTION - KHRUSHCHEV 1953/1954 - 1959/1960 PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
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<th>Armament</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-I</td>
<td>100</td>
<td>215 standard 250 full load</td>
<td>Guns 4-25mm (2x2) A.A. ASW 4 3-barrelled rocket launchers possibly 2 depth charge racks with 24 charges</td>
<td>Built from 1957 to 1960</td>
<td>1,100 miles at 13 knots 29 knots max.</td>
<td>Diesel</td>
<td>A successor to the Kronstadt class intended for use in coastal waters. Hull made of steel. Some units modernised in 1965 losing aft. A.A. gun and incorporating 4 single torpedo tubes. 5-barrelled rocket launcher range of 1,800 metres.</td>
</tr>
<tr>
<td>Poti</td>
<td>70</td>
<td>550 standard 650 full load</td>
<td>Guns 2-57mm (1x2) A.A. ASW 2 12-barrelled rocket launchers 4-406mm torpedo tubes</td>
<td>Built from 1961 to 1968</td>
<td>28 knots</td>
<td>Gas turbine and diesel</td>
<td>A heavier unit carrying a heavier A.A. armament and a more efficient rocket launchers for ASW. 12-barrelled rocket launchers range of 2,300 metres. Gas turbine enables fast get away and acceleration: diesels for economic cruising.</td>
</tr>
</tbody>
</table>

Source:  
Janes Fighting Ships 1974/5, p.564.  
era were the Komar and Osa missile boats. The Komar was a modification of the light P-6 torpedo boat, armed with two single launchers for a SS-N-2 missile, while the Osa was designed as a missile boat with four launchers for the SS-N-2. Boats of both classes have subsequently been transferred to other navies.

These vessels are yet another component of the strong mobile coastal defence forces. Because of their size they have a restricted range and are probably unable to survive in heavy seas. Most certainly they are not high seas vessels. However this should not detract from their importance. They are relatively inexpensive vessels and they, and their equivalent, have enabled many of the smaller naval powers, to whom they have been transferred, to increase their coastal defence capacity dramatically.

The effectiveness of these vessels and their missiles has twice been demonstrated. On 21 October 1967 the Israeli destroyer Eilat was hit and sunk by missiles from Egyptian Komars, and India made use of the Osas in the December 1971 war against Pakistan, primarily against Pakistani merchant vessels.

The submarine programme

The submarine construction programme in the period 1953/4 to 1959/60 saw the appearance of four major submarine types: ballistic missile firing submarines, cruise missile firers, ocean-going attack submarines and medium and coastal range boats. During the course of this period nuclear propulsion was successfully incorporated in the first three of these types although units with conventional propulsion systems were still produced. Soviet spokesmen claim that the building of nuclear submarines began in the mid 1950s as a result of a re-examination of naval developments carried out by the
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement (in tons)</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range and Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Komar</td>
<td>80+</td>
<td>70 standard 80 full load</td>
<td>2-25mm A.A. (1x2) 2 single torpedo boats for SS-N-2</td>
<td>1959-61 from P-6 torpedo boats</td>
<td>400 miles at 30 knots max. speed 40 knots</td>
<td>diesels</td>
<td>Because of their size vessels of this class are only suitable for use in coastal waters and calm seas. SS-N-2 missile range 23 miles approx. Missile launchers are relatively exposed to sea.</td>
</tr>
<tr>
<td>Osa I &amp; II</td>
<td>200+</td>
<td>165 standard 200 full load</td>
<td>4-30mm A.A. (2x2) 4 launchers for SS-N-2</td>
<td>Built since 1960</td>
<td>800 miles at 25 knots max. speed 32 knots</td>
<td>diesels</td>
<td>The major difference between Osa I &amp; II is in the missile housing, the latter having a cylindrical mount. Both types however afford greater protection for the missiles than on Komar because the launchers can be sealed.</td>
</tr>
</tbody>
</table>

Central Committee of the C.P.S.U.¹ There is no need to doubt this claim because it ties in with the completion of the early units of the H class SSBN (Ballistic Missile Nuclear Powered Submarine) in 1958. However considerable work on nuclear reactor development must have occurred under Stalin, to enable the propulsion units to be completed and ready for assembly by the mid 1950s. The actual decision to build a series of nuclear reactors for SSBNs and other nuclear powered submarines must have been taken in the mid to late 1940s.²

(a) Ballistic Missile Submarines

It seems likely that the Soviet Navy gave considerable thought to the potential of ballistic missile firing submarines during the post-war Stalin era, an idea they may well have adopted from the Germans.³ However in the reassessments of the mid 1950s this project was given even greater priority, as can be seen by the conversion of the last seven of the Z class ocean-going attack submarines into missile firers. The conversion appears to have been relatively straightforward, requiring the extension of the fin so that two vertical launch tubes could be fitted to carry the 350 mile SS-N-4 missile. These were followed by the G class SSB and the H class SSBN which were originally designed to take 3 SS-N-4 missiles in the fin.

This programme provided the Soviet Union with an SLBM (submarine launched ballistic missile) capability by 1958. However the submarines were inferior in many important respects to the eventual product of the US Navy's Polaris programme. In particular they carried fewer missiles of

¹ Gorshkov's views have been examined on p.140 above see also Sorokin, A.I. We are from the Nuclear Submarines (Moscow, 1972) extracts translated by JPRS. Translations in USSR Military Affairs No. 861, p.34 of translation.
² Soviet scientists led by Kurchatov had recommended working on the development of a nuclear reactor in early 1943. The first experimental uranium-graphite reactor was successfully tested on 25 December 1946.
³ Golovin, I. 'Father of the Soviet Bomb', p.17;
shorter range, and the missiles had to be fired from the
surface. It may well be the case that development of
the Y class submarine and its missiles did not begin until
details of the American programme had filtered through to
the Soviet Union, for the Y class is in many respects
equivalent to the American SSBN boats.

The fact that major American cities are, in the main,
within a hundred miles or so of the coast meant that the
comparatively short range of the missile did not present
a major targeting problem for the Soviets. On the other
hand the requirement for surface launch within such a
short distance of the American coast made the submarines
extremely vulnerable to anti-submarine air patrols. In
addition the conventionally powered Z conversions and the
G units transitted most quickly and economically on the
surface. When submerged they needed to use the snorkel.
In either case the risk of detection while in transit
was high. Finally the Soviet Union had no forward bases
near the United States, therefore each patrol would need
to spend at least 1/3 of its total patrol time in transit.

It is significant that the Soviet Union continued to
build ballistic missile submarines with conventional
propulsion units along with nuclear reactor powered
vessels. There may well have been a financial constraint
on the Navy's building programme, forcing them to continue
with the less expensive but 'less satisfactory'
conventionally powered G class, which in fact outnumbered
the H class. But the G class would only be considered
'less satisfactory' if it were designed to carry SLBMs
for attacks on the United States. If it were intended
to provide an SLBM capability for the Baltic and Black
Sea fleets, areas where there were no naval powers capable
of mounting a major ASW operation against the Soviet fleet,
and where the Soviet Union controlled a significant section
of the coast, then it might be reasonable to use the less
expensive, but perfectly adequate G class SSB. Such an
SLBM capability would enable a sea-based nuclear attack
<table>
<thead>
<tr>
<th>Speed made good</th>
<th>Distance</th>
<th>Days in transit* (there and back)</th>
<th>Days on station* (assuming a 60 day patrol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 knots</td>
<td>3,900 nautical miles</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>(Z V submerged)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 knots</td>
<td></td>
<td>19</td>
<td>41</td>
</tr>
<tr>
<td>(G submerged)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.6 knots</td>
<td></td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>(G surfaced)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 knots</td>
<td></td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>(Z V surfaced)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 knots</td>
<td></td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>(H class SSBN submerged)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* to nearest day.
<table>
<thead>
<tr>
<th>NATO design. Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Dates &amp; Places</th>
<th>Speed and Radius</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z - V</td>
<td>7</td>
<td>2,100 tons surfaced, 2,600 tons submerged</td>
<td>2 vertical launchers for SS-N-4 ballistic missile range 350 miles, 10-533mm bow torpedo tubes</td>
<td>rebuilt between 1956 and 1957 at Zhdanow and Leningrad.</td>
<td>18 knots surfaced, 15 knots submerged, Range 13,000 miles surface cruising</td>
<td>diesel/electric</td>
<td>The first Soviet SSB. In conversion these submarines were fitted with an enlarged conning tower in which two vertical launching tubes were housed. The missiles had to be launched from the surface. Maximum submerged depth 460 feet.</td>
</tr>
<tr>
<td>G</td>
<td>22</td>
<td>2,350 tons surfaced, 2,900 tons submerged</td>
<td>3 vertical launchers for SS-N-4 ballistic missile range 350 miles, 10-533mm bow torpedo tubes (2 x 2)</td>
<td>began building 1958, 1st completed 1960 and last in 1962 at Kury Yards Severodvinsk and Novomorsk.</td>
<td>17-9 knots surfaced, 17 knots submerged, Range of 22,700 miles at surface cruising speed</td>
<td>diesel/electric</td>
<td>They were intended from the outset to carry ballistic missiles. Surface launch. With a maximum diving depth of 750 feet they had a greater chance of escaping detection and destruction than the Z-V class.</td>
</tr>
<tr>
<td>H</td>
<td>12</td>
<td>3,700 tons surfaced, 4,100 tons submerged</td>
<td>3 vertical launchers for SARK SS-N-4 ballistic missile range 350 miles, 0-533mm bow 4-400 mm aft anti submarine torpedo tubes</td>
<td>completed between 1958-1962</td>
<td>20 knots submerged</td>
<td>nuclear reactor</td>
<td>Nuclear power meant that this boat could proceed to its launch point submerged. It also enabled a higher submerged speed to be maintained for a virtually unlimited range. Use of N reactors also improves the habitability of the submarine. Boats of this class are of similar hull and reactor design to the K class cruise missile submarine.</td>
</tr>
</tbody>
</table>

on targets within Europe. However this would presuppose the basing of the G class submarine in the Baltic and Black Sea area, whereas recent research by R. Berman suggests that the G class SSBs are situated with the Northern and Pacific Fleet. If this were the case in the mid 1960s - and there appears to be no way of telling from open sources - then this hypothesis must be rejected.

The Soviet naval planners may have decided to use long-lead-time items, such as the propulsion units, which had been provided in earlier programmes. If this had been the intention it is difficult to see why the units were completed as SSBs instead of attack submarines. Attack submarines do not necessarily require the relatively high subsurface speeds and long underwater endurance which are highly desirable characteristics for an SLBM system, possibly having to deploy four thousand miles from base.

Again the decision to continue building SSBs may have been taken because of the lack of facilities for building nuclear submarines and their reactors. In the period 1958 to 1963 some 30 nuclear powered submarines of all types came into service at an average rate of about six a year. This rate of building was slightly increased in the next four years to produce the 27 E-II cruise

1 Berman, R. 'Soviet Naval Strength and Deployment', in MccGwire, ed., Soviet Naval Developments, p.113-117.
2 This argument accounts for the construction of 16 J class cruise missile submarines and the 56 F class attack submarines as well as the 22 Gs. What it does not do is explain the fact that between 1963 and 1967/8 the EII cruise missile submarine was the only nuclear powered submarine class to enter service.
3 Janes Fighting Ships 1974/5, gives the following numbers for nuclear powered submarines delivered between 1958 and 1963.

H class SSBN 12, N class SSN 12, EI class SSGN 5. These 30 boats were of similar hull design and have first generation nuclear reactor plants. See pp.537, 540 and 543.
missile submarines.\textsuperscript{1} Evidently a decision was taken to defer building all other units and to concentrate on the E-II, which used all available yards capable of building nuclear powered submarines. This decision could have arisen out of a positive assessment of the E-II as an anti-carrier weapon, to which other nuclear submarine programmes should defer, but this is unlikely.\textsuperscript{2} More plausible is the possibility that the nuclear reactors for the H class SSBNs were unsatisfactory and that it was decided to await the development of a new generation of reactors before proceeding. Moreover the SLBMs available at the time were the short range, first and second generation SS-N-4 and SS-N-5.\textsuperscript{3} By 1962/3 the SS-N-6, submerged launch, 1,250 nautical mile missile, must have been under development. It may have been decided to wait the development of the third generation reactors and the new missiles before proceeding further with the SSBNs.

In this respect it is interesting to note that the nuclear reactors and hull design of the H class SSBN have been equated with that of the E-I cruise missile submarine (SSGN) and the N class attack submarine (SSN)

\textsuperscript{1} Janes Fighting Ships 1974/5, p.540. Although Janes comments on the commonality of the reactors in E-I, N and H class submarines it does not include the E-II in this list. MccGwire, 'The Structure of the Soviet Navy' in MccGwire, ed., Soviet Naval Developments, February 1973, states that the E-II has a second generation nuclear hull/reactor unit, p.134.

\textsuperscript{2} Besides the objection that this involved putting all the nuclear reactor eggs in one SSGN basket it is unlikely that the Soviet Navy would have evaluated the E-II so highly. The E-II is a surface launch cruise missile submarine and the long range of its missile required mid course guidance. These issues are taken up below on p.350-352. The SLBM system has the advantage of being able to deter an attack or attack ground targets if the need arises. The missiles of the E-II are primarily an anti-ship weapon.

\textsuperscript{3} See Appendix at end of chapter for details.
none of which enjoyed long production runs. In all three cases there was a parallel construction programme of conventionally powered equivalents, the G SSBN, the W and J SSG, and the F SS, all of which delivered significantly more units than their nuclear counterparts. Moreover, the SSBN and SSN programmes stopped in 1962 and 1963 respectively and no follow-on classes appeared until 1967/8. The SSGN programme continued and delivered the E-II with the second generation hull/propulsion unit.

The second generation hull/propulsion units may still have been thought unsatisfactory for SSBN use, hence only the SSGN received them. Moreover, or possibly alternatively, there was the promise of the long-range submerged launch missile under development which could be coupled with the third generation hull/propulsion units to provide a more sophisticated SLCM system in 1967/8: the Y class. In this case it may have appeared pointless to develop an inferior SSBN based on second generation equipment. The hull/propulsion unit for the SSGN E-II was not used on a second generation SSN. This decision may have resulted from a cost-benefit analysis. In an attack submarine, dependent on close approach to target, a quiet conventional submarine has obvious advantages over a noisier and more expensive nuclear powered boat, and the long production run of F class vessels suggests that this was a successful submarine.

1 The N completed 13 units compared with its conventionally powered contemporary the F which ran to some 56 units. The E-I completed 5 units while the J class went to 16 units.
2 The first Y class SSBNs entered fleet service in late 1967 and early 1968 and the first V class SSN was delivered in 1967. Both have third generation hull/nuclear propulsion units.
(b) Cruise Missile Submarines

Until recently the Soviet Navy has been the only navy to maintain a large number of cruise missile submarines. Like the Kynda and Kresta I cruisers, submarines have been fitted with a variant of the Shaddock missile. Thus considerable economies have been made while increasing the combat potential of the submarines. These vessels could have a limited use against ground targets as well as against enemy surface ships.

The early conventionally powered cruise missile submarines (SSG) were conversions of the W class medium-range submarine. These early conversions showed a considerable amount of experimentation in the missile installations. The first units to appear, the W Twin Cylinder class, housed its missiles in containers attached to the hull.

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1 The French have a project under way to adapt the existing Exocet surface to surface missile (range 20 n.miles) for submarine launch and the US Navy Harpoon missile (range 30 n.miles) will come into service aboard surface ships, submarines and aircraft in 1975. Janes Fighting Ships 1974/5, p.626 and 635.

During the 1950s the US Navy produced the Regulus subsonic cruise missile which was first launched from a submarine on 6 March 1953. The Regulus I had a range of 500+ miles and had to be launched from a surfaced submarine. A follow on cruise missile, Regulus II was subsonic and had a range of 1,000 miles. It was fired from a submarine in September 1958. However on 12 December 1958 the programme was terminated, in favour of the Polaris underwater launched SLBM, bringing to a close the US Navy's initial cruise missile programme.


Janes Fighting Ships 1961/2, p.301.

2 The SS-N-3 is believed to have an infra-red terminal guidance system which as Herrick has observed offers a greater accuracy against sharply defined targets such as ships. Janes Weapon Systems, 1973/4, p.52. Herrick, Soviet Naval Strategy, p.123.

3 These containers appear similar to those used for the Shaddock missile in its ground forces role as a mobile cruise missile.
This created a tremendous amount of noise and drag from the hydrodynamically monstrous shape that resulted. In the subsequent W Long Bin class, the missiles were housed in a streamlined conning tower constructed on an extended hull.¹ Not until the J SSG and E SSGN class boats were the containers actually let into a smooth hull to be elevated for firing. Clearly the Soviet Navy was experimenting with cruise missiles and submarines and, having proved the utility of the basic concept, an improved hull design was developed.

All these vessels suffer two major disadvantages. Not only do they have to surface in order to launch their missiles, but because the missiles are housed in containers outside the pressurised hull, missile maintenance must be carried out on the surface. Thus even the E class SSGNs will find it necessary to surface from time to time, or else risk a reduced level of successful launchings.

The E class SSGN submarine occurs in two distinct classes, the E-I armed with 6 SS-N-3 missile launchers and the E-II which has 8 launchers for the same missile. As has been pointed out the significant difference between the two classes is that E-II was built with a second generation hull/propulsion unit and was the only submarine built on this equipment.

The conventionally powered J class, built at the same time as the E-I and E-II provided a relatively inexpensive class of SSGs and may have absorbed long-lead-time items at hand.² The long range of the SS-N-3 enabled the J class to fire its weapons outside a possible ASW perimeter provided reliable mid-course guidance was available. It is unlikely that conventional power was a disadvantage in this respect. The major problem with the Js, as with the

² It would seem that 16 units is in fact too small a number to suggest a complete programme and too large to be explained away as an experimental class. MccGwire suggests that 72 units of this class may have been originally planned. MccGwire, 'Procurement', p.79.
### TABLE X: CRUISE MISSILE SUBMARINE CONSTRUCTION - KHRUSHCHEV PROGRAMMES 1953/54 - 1959/60

<table>
<thead>
<tr>
<th>NATO class.</th>
<th>Construction</th>
<th>Speed/Radius</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>W Twin Cylinder</td>
<td>A single cylinder prototype began conversion in 1956 and the remainder were modified from 1958 to 1959.</td>
<td>17 knots surface considerably slower than W class submerged.</td>
<td>diesel</td>
<td>This conversion, purely experimental, never entered series production. It was designed to test the SS-N-3 at sea and served its purpose. It was a thoroughly messy conversion. The containers reduced submerged speed and increased noise.</td>
</tr>
<tr>
<td>J 16 2,000 tons surfaced, 2,500 tons submerged.</td>
<td>Began construction 1960, 1st vessel launched 1962, second completed 1963. Radius 15,000 miles at surface cruising speed.</td>
<td>16 knots surface, 16 knots submerged.</td>
<td>diesel</td>
<td>This was a logical continuation of W class conversions but the long gap between completion of the 1st and 2nd of the class suggests that it was overtaken by the nuclear powered E class.</td>
</tr>
<tr>
<td>B 5 4,000 tons surfaced, 5,000 tons submerged.</td>
<td>Completed 1960-62 Navy yard Komsomolsk</td>
<td>20 knots maximum</td>
<td>Nuclear reactor/steam turbines</td>
<td>The nuclear reactor/hull thought to be similar to that in H and N classes. A nuclear prototype. The SS-N-3 missile with which all the cruise missile submarines were fitted. Required extensive modifications.</td>
</tr>
<tr>
<td>K-11 20 5,000 tons surfaced, 5,000 tons submerged.</td>
<td>Built between 1953 and 1957</td>
<td>20 knots</td>
<td>Nuclear reactor/steam turbines</td>
<td>A second generation hull/nuclear reactor system. The hull is slightly longer than for the E-1 and an additional pair of missile launchers has been added.</td>
</tr>
</tbody>
</table>

**Source:**
Z-V and G SSBs, is that these vessels transit more quickly and economically on the surface, where they are vulnerable to detection and attack particularly by ASW aircraft.

Breyer reports a delay of three years between the completion of the first J class submarine in 1963 and the second in 1966.¹ This delay can be accounted for if we assume that the E-Is under construction between 1960 and 1962 were curtailed not only in favour of the E-IIIs with their more advanced propulsion system but also in favour of the Js which might have been produced only in very limited numbers but for dissatisfaction with the E-I. The Js were not only cheaper but, subject to the constraints of surface transit, capable of carrying out similar tasks, especially if some form of protection against air attack could be provided by SAM armed surface vessels.

(c) Attack Submarines

Z class submarine construction was halted after the 29th vessel had been completed in 1955.² Seven of the class were subsequently converted to SSBs in the period 1955-1957.

The follow on F class began building in 1958 at the Sudomekh and Leningrad yards where the Zs had been laid. It would appear that the Fs began delivery on schedule, for they are powered by a similar propulsion unit to that used in the G class SSB³ which also appeared in 1958. The F was the Soviet Navy's second generation post war patrol SS (attack submarine). Construction of the F class ran from 1958-1967 and produced 56 units. Obviously it was seen as a useful boat, hence the long construction run, but equally apparent is the fact that submarine construction facilities had to be shared with other units so this run of some 56 units spread over a decade.

² McCGwire, 'Procurement' suggests 36 Zs were originally intended under the original programme, p.78.
³ Janes Fighting Ships 1974/5, p.544. The propulsion unit is probably that in the J SSG.
### TABLE XI: ATTACK PATROL SUBMARINE CONSTRUCTION - KHRUSHCHEV PROGRAMMES 1953/54 - 1959/60

<table>
<thead>
<tr>
<th>NATO desig. Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction</th>
<th>Speed/Range</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>56</td>
<td>2,000 tons surface 2,300 tons submerged</td>
<td>10 21&quot; torpedo tubes o bow, 4 aft. 20 torpedoes carried.</td>
<td>Built between 1958 and 1967, Sudomekh Yard, Leningrad. (Breyer p.284 - dates for beginning of construction as 1956) 1st boat completed in 1958 - yearly output 6-8 boats.</td>
<td>20 knots surfaced 15 knots submerged. Range 20,000 miles surface cruising</td>
<td>diesel electric</td>
<td>Maximum depth 750 feet. cf. Z 450 feet. A follow-on to the Z class with a new propulsion unit common to the G class SSB. Intended for long range operations. A most successful class - still widely deployed.</td>
</tr>
<tr>
<td>N</td>
<td>13</td>
<td>3,500 tons surface 4,000 tons submerged</td>
<td>6 21&quot; torpedo tubes bow.</td>
<td>entered service 1958-63.</td>
<td>20 knots surface, 25 knots submerged.</td>
<td>nuclear reactor steam turbines</td>
<td>The number of free flood holes in the casing suggests a noisy boat. The hull design indicates a high speed capability when submerged - a hunter-killer submarine?</td>
</tr>
</tbody>
</table>

**Source:** *Janes Fighting Ships*, 1974/5, p.543-4.

The N class SSN also entered service in 1958. As has been noted above there was possibly some difficulty with the first generation nuclear reactor system which limited the production of these vessels compared with their conventional counterparts. However it should be noted that the attack submarine like the cruise missile submarine, is primarily an anti-surface ship weapon. In this respect the F class could well have been considered a more cost-effective means of carrying out the same task as the more expensive and perhaps unsatisfactory nuclear powered units. Moreover, the N is a noisy boat because of the number of free flood holes in its hull. This, together with a noisy reactor, may well have made the class less viable in combat conditions than the quieter running Fs.

(d) Medium and Coastal Range Submarines

The W class medium range submarine may have built to 240 units but some authorities claim that even so it fell short of the numbers originally planned. The R class, the second post-war generation medium range submarine, built to a total of only 20 boats. The small number of the second generation units actually delivered suggests a major reassessment of the utility of this type of vessel and that this reassessment may also have affected the tail end of the W class production. The twenty R class boats may well have been constructed on the basis of long-lead-time items already to hand before the programme was drastically cut.

1 Janes Fighting Ships 1974/5, p.543.
2 Authorities vary widely in their estimates of how many of these vessels were built and the time span over which they were produced. Janes suggests 240 were eventually delivered between 1951 and 1957 and this is MccGwire's figure as well. Breyer puts the total as low as 145 built between 1952 and 1959. MccGwire puts the number of Ws originally planned at 336.

3 MccGwire's figure for the originally planned number of Rs is 576 at a rate of 72/year - the same rate as the Ws in the final stages of construction. 'Procurement', p.78.
### TABLE XII: MEDIUM RANGE SUBMARINE CONSTRUCTION - KHRUSHCHEV PROGRAMMES - 1953/54 - 1959/60

<table>
<thead>
<tr>
<th>NATO desig. Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction</th>
<th>Speed/Radius</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>20</td>
<td>1,100 tons surface, 1,600 tons submerged</td>
<td>6 21&quot; torpedo tubes in blow</td>
<td>Began building 1958, completed 1961</td>
<td>17 knots surface, 14 knots submerged</td>
<td>Diesel electric</td>
<td>An improved W class design with a modernised superstructure. This would probably have been intended as a much larger class. <em>Janes</em> suggests it appeared in small numbers due to the advent of nuclear propulsion. A more likely explanation is that the Soviets reassessed the need for these medium range vessels - see text.</td>
</tr>
</tbody>
</table>

Source: *Janes Fighting Ships* 1974/5, p.545.  
This period also saw the virtual elimination of the small coastal range submarine which had featured so heavily in the pre World War II Soviet submarine fleet. The only units to fulfil this role, the Q class, were produced in relatively small numbers and the programme was evidently cut back.¹

The cut back in these units, the most numerous items in the original Stalin submarine construction programme, indicate quite clearly that these medium and short ranged boats, primarily useful for fleet area defence, were no longer regarded as appropriate in the late 1950s when strikes from long-ranged carrier based aircraft emerged as the major sea based threat to the Soviet Union, replacing the amphibious landings and short-ranged carrier attacks which Stalin's navy was designed to thwart.

**Naval aviation 1953/4 - 1959/60**

A variety of naval aircraft, among which were modern jet fighters and light bombers, took part in the 1951 Soviet Air Day display. These aircraft progressively replaced the obsolete piston-engined combat aircraft throughout the period from 1953/4 to 1958/9.²

The reorganisation of the Armed Forces, which resulted in the Navy coming once more under the control of a single Ministry of Defence, does not appear to have affected the naval air arm, which remained under Navy control throughout.

Whether this relationship would have remained unchanged in the event of hostilities is difficult to judge.

¹ The Q discussed earlier (p.106 above), would have required a considerable effort in the development of its hull/propulsion system and it seems incredible that so few of these vessels were actually intended. McCGwire 'Procurement' suggests 96 units were originally projected. *Janes Fighting Ships* indicates 13 were built in one year, which tallies with McCGwire's suggested construction rate. If this was so then clearly the decision to cut affected a programme in full swing.

Evidence from the Great Patriotic War would suggest that the Naval Air Forces might come under the command of the various army fronts but since 1953 naval aviation has acquired important roles other than that of naval base defence. Its aircraft have been progressively equipped with specialised equipment for anti-submarine warfare, for long ranged cruise missile attack and for maritime reconnaissance, so that it is unlikely that they could be used effectively for other than maritime activities. The only exception to this, fighters, were withdrawn from the naval air force in 1960 and transferred to the Air Force, which resubordinated most of them to the operational control of P.V.O. Strany.

All the aircraft which operate with the Naval Air Forces appear to be modifications of aircraft originally designed for use in the other branches of the armed forces which must mean great economies for the Naval Air Force and the Soviet Defence budget as a whole. The modifications generally involve a more elaborate set of navigation aids and the installation of specialised equipment in those units involved in maritime reconnaissance, anti-submarine warfare, and attack missile aviation.

The absence of aircraft carriers has meant that with the exception of helicopters all Soviet naval aviation

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1 Herrick, *Soviet Naval Strategy*, p.49, cites the History of the Great Patriotic War of the Soviet Union 1941-45 (Moscow, 1961) Vol. II p.44, 80, 81 and 86 for examples where 'Practically all fleet aviation was enlisted for the operations against the German ground forces'. See also Salisbury, H.E. *The Siege of Leningrad*, p.356 for the comment. 'Fleet air protection was weak. The fleet air fighter arm and its A.A. guns had been put under the Leningrad Air Defence Command. Admiral Tributs complained repeatedly that the warships...were poorly protected.' See also Salisbury, p.358 for an account of events on 21 August 1941 when Germany put 180 aircraft in the air to attack Kronstadt and the Soviets could only muster five fighters in defence.

has been shore based,\(^1\) hence the variety of missions that it has been able to accomplish have been limited. Whereas naval aviation can aid a fleet commander by providing reconnaissance, air borne early warning of air or surface attack, air defence against hostile aircraft, airborne strike against enemy ships and help in conducting an anti-submarine battle, (in addition to the more independent tasks of destroying enemy shipping in port or on the high seas, mine laying and hunting ballistic missile submarines) its ability to do so depends on its availability. Aircraft carriers can provide air support integrally combined with the fleet, operating within the same weather zone (though this may not always be an advantage vis a vis shore based aircraft) and under the close, direct control of the naval commander. This can ensure not only quick reaction and reliable support, but also confidence on the part of the naval forces that their interests will prevail with the air commander.

While shore based aircraft are able to provide most of the above services within a limited geographic zone, they do so according to a more standardised set of procedures, and may well be unavailable at the crucial time. To overcome this problem a large number of aircraft are required in each fleet area to provide a continuous on-station coverage. Shore based aviation is also constricted by problems of basing and overflight rights which may deny their effective use in times of tension. It also detracts from their availability when fleet units operate at great distances from shore.

The problems of defence against air attack can to some extent be offset by individual ship anti-aircraft capability, either in the form of missiles or dual purpose artillery, but these lack the flexibility afforded by aircraft.

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\(^1\) The Kresta I class which first appeared in 1967 was the first surface unit designed with helicopter facilities incorporated. Some of the modernised Kotelins had a helicopter pad provided.
In the period 1953/4 - 1959/9 Soviet Naval Aviation continued to replace piston-engined with jet aircraft and continued to draw on other branches of the air force or the civilian sector for its basic aircraft, which were adapted for maritime use. It also received a large number of medium range bombers (Badger) which were considered outmoded for strategic air use.

(a) Fighters

A range of Soviet fighters served in the Soviet Naval Air Force. As in the Great Fatherland War they were intended primarily for use in the defence of Soviet naval bases. The eventual transfer of these aircraft to the P.V.O. Strany in 1960 was in fact an organisational rationalisation.

The high speed, at altitude, of the fighters, together with their short range, meant that they were unsuited to the task of providing fleet protection, except in the immediate vicinity of the fleet areas. Whereas high speeds are no disadvantage in aerial combat what the jet aircraft lacked was the low speed capability which would enable them to loiter over the ships to be defended. Moreover the short range of these aircraft meant that protection could not be extended much beyond the fleet areas.

A representative fighter available to the fleet in the late 1950s the MIG-21 is credited with a maximum speed of 1,385 m.p.h. at 36,000 feet (800 m.p.h. at low altitude) and a range of 683 miles which could be extended to 1,120 miles with the addition of three external tanks.¹

(b) Bombers

In general the bombers serving with the Soviet Naval Air Arm have been used for carrying a variety of weapons systems including bombs, mines, torpedoes, depth charges, and, more recently, air to surface missile systems (ASM).

¹ *Janes All the Worlds Aircraft*, 1973/4, p.477-479.
Variants of these same bombers have also served in a reconnaissance and anti-submarine warfare role while others have been converted to tankers for in-flight refuelling.

A major advance in naval aviation came with the fitting of ASMs to the Badger bomber. Soviet naval commentators during the 1960s afforded Soviet naval missile aviation second place only to missile firing submarines in the hierarchy of forces available to the Navy. By 1960 two of these missiles, the Kennel and the Kipper, had entered the operational inventory and formed the basis for further development in this field. The ASM is a major anti-surface vessel weapon but it is difficult to credit Soviet claims that these weapons enable attacks to be made on carrier task forces outside the range of task force defences.

1 eg. Gorshkov 'Soviet Naval Science', p.18, where he refers to the 'strike capabilities of the submarine air forces'.
2 See Appendix at the end of this chapter for details of ASMs.
3 Sokolovsky, V.D., ed., Military Strategy (Moscow, 1962) translated by Dinerstein et al. for RAND (Englewood Cliffs, 1963) p.42. 'Attack carrier units can also be successfully combatted by long-range naval aircraft. These planes have air-to-ship missiles with nuclear warheads and can deliver strikes without coming within firing range of a carrier force's anti-aircraft defence.' In the second edition of Military Strategy (Moscow, 1963), translated by H.F. Scott, the existence of a radar picket and forward defences are acknowledged. 'but these forces and weapons can no longer reliably protect the attack carriers and other elements of the force from missile strikes from submarine and naval aircraft.'

This is retained in the third edition, published in 1968

A more recent formulation still makes the same claim: Anokhin, A.P., Col. 'Aviation in combat against naval strike forces', Morskoy Sbornik No. 6, 1970, p.33-36, translated USN, p.33. 'Today an aircraft no longer has to enter a ship's air defence zone, since the firing ranges of aircraft missiles exceed the range of shipboard weapons in destroying aircraft.' A positive judgement which is allowed to stand despite the fact that 'ship forces began to employ dispersed battle formations for protection by deploying air defence weapons of great distances from the warships being escorted. This deeply echeloned air defence system for ship formations includes fighter aircraft (from aircraft carriers), anti-aircraft missiles and artillery systems.'
<table>
<thead>
<tr>
<th>Name with NATO Designation</th>
<th>Speed</th>
<th>Range</th>
<th>Armament</th>
<th>Designer and Op. date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>TU-14 BOSUN</td>
<td>560 mph</td>
<td>2,980 miles</td>
<td>4 23mm. guns, maximum bomb or equivalent load 2.5 tons</td>
<td>Tupolev, developed 1948-49, seen 1951 Air Force Day Display</td>
<td>A medium reconnaissance and torpedo bomber. Solely used by the Naval Air Forces. 430 built. Replaced since 1961 by variants of the BADGER.</td>
</tr>
<tr>
<td>IL-28 BEAGLE</td>
<td>580 mph (cruise 500 mph)</td>
<td>2,485 miles with maximum bomb load 1,500</td>
<td>4 23mm guns 1.5 ton bombs torpedoes for mines</td>
<td>First appeared 1960</td>
<td>First operational jet bomber in Soviet Air Force. Military Balance 1973-74 gives a total of 40 in service - torpedo equipped light bombers.</td>
</tr>
<tr>
<td>TU-10 BADGER</td>
<td>Maximum at 35,000 feet 587 mph</td>
<td>With maximum weapon load 3,200 miles. At cruising speed with 3 tons of weapons 3,975 miles.</td>
<td>2 23mm. cannon Badger A, 0 tons internally. Badger B, 2 Kipper ASM missiles. Badger C, 1 Kipper AFM. No bombs. Badger D, 2 Kipper ASM.</td>
<td>Tupolev, appeared 1954. Badger D entered service in 1956 although naval versions not sighted until 1961.</td>
<td>There are at least 7 versions of this bomber serving with the Soviet Naval Air Force. Badger A - basic bomber, some used as tankers. Badger B - Kipper ASM, since 1961 official sightings. Badger C - Kipper ASM. Badger D, E, F - Early warning version and maritime reconnaissance. Badger G - Kelt ASM or bombs. Military Balance 1973-4 reported 300 Badgers with missiles, 150 in a tanker or reconnaissance role. About 2,000 are believed to have been built in all. The TU-104 airliner derived from same design.</td>
</tr>
</tbody>
</table>

even for the longer-ranged missiles which entered service in the 1960s. Not only are the missiles relatively slow and therefore liable to be shot down but the launching aircraft themselves are subject to detection by radar picket vessels, and counteraction by carrier based aircraft.

(c) Helicopters

The naval air force has made use of helicopters for a variety of purposes. In the period prior to 1960 these were mainly land based, though a limited number of modified Kotlins were built with a helicopter pad which enabled helicopters to land but did not make them an organic part of the vessel, for which a hangar and helicopter servicing facilities would be required on board. Their main use was for communications purposes and for coastal ASW. In the mercantile and fishing fleets they are used for ice reconnaissance along the Northern sea route. As with other sectors of the naval air force the helicopters are adaptations of craft used in other branches of the armed forces or from civilian services.

(d) Flying Boats

The Soviet Naval Air Force has continued to find a substantial role for amphibious aircraft in reconnaissance and anti-submarine roles.

The Be 6 or Madge flying boat was first seen in 1954. It has a speed of 240 m.p.h., a maximum range of 2,800 miles and can carry bombs, mines and torpedoes. It has now been replaced by the turbo-propeller flying boat, the Mail M-12.

1 Jane's Fighting Ships, 1963/4, p.421.
4 For details of the Mi-1 and Ka-15 see Breyer Guide to the Soviet Navy, p.334; and Jane's All the World's Aircraft 1963/4, p.302-3. The Ka-20 was the first of the Soviet helicopters in naval use specifically fitted out for ASW.
5 Ibid, p.332; and Jane's All the Worlds Aircraft, 1959/60.
6 Ibid, p.332; and Jane's Fighting Ships, 1974/5, p.624.
Auxiliary Fleet

It has been argued previously that the Soviet submarines constructed under the immediate post war programme were not intended for anti-sea-lines-of-communication operations in the Atlantic. This hypothesis is further sustained by the fact that the mid 1950s - when the threat from medium ranged carrier based aircraft emerged - there was no evidence of a construction programme to provide submarines with afloat support. During the 1950s the number of submarines based with the Northern Fleet in particular grew dramatically and must have placed a strain on the existing shore facilities. This strain, plus the need for dispersion of submarine forces, raised the requirement for submarine tenders, some of which could provide support to submarines on patrol at the perimeter of the submarine operating zone. This requirement was met by the conversion of Kolomna class freighter and Soldek class tankers to Atrek and Tovda class submarine tenders which entered service in the 1958-60 period. At least two former German Navy vessels, the ex Otto-Wunche and Waldemar Kophamel, were rehabilitated. By 1963 Janes Fighting Ships reports some 19 submarine tenders converted or restored.

If support for the diesel submarines had to be achieved by an interim policy of conversions and restorations the provision of afloat support for nuclear submarines would appear to have been a far more orderly process. The Don class submarine support vessels, built at Nikolayev from 1952-1962, entered fleet service at the same time as the

1 See p.109-10 above.
nuclear powered submarines and were followed from 1961 onwards by the Ugra class.\(^1\) Between 1957 and 1966 five Dnepr class submarine repair ships were delivered. They were followed by the Lama class (5 units) which may also be intended as missile supply ships for the surface navy.\(^2\) Not until 1960 when the Sofia, a conversion of a former merchant tanker,\(^3\) appeared did the surface navy gain its first large replenishment vessel. Previously the navy had had to make do with replenishment from the merchant fleet's tankers\(^4\) or from its own small fleet of oilers which in some cases had been taken over from the merchant fleet.\(^5\)

The Merchant Navy

While it is not the intention of this study to discuss in any detail the growth of the Soviet Union's merchant fleet it is appropriate to note that during the Khrushchev period a variety of merchant vessels began building at Soviet shipyards. In the period 1949-52, following the restoration of the shipyards, the Soviet Union concentrated on building the Sverdlov cruisers, the Skory destroyers and the submarines, which characterised the post-war Stalin naval construction programme. Units for the merchant marine were constructed either in recently-occupied Poland

\(^1\) Janes Fighting Ships 1974/5, p.570-1 for details. See also Breyer, Guide, p.312.
\(^3\) Janes Fighting Ships 1974/5, p.580.
\(^4\) Ibid.
\(^5\) Among the support vessels available to the Soviet Navy were the Kazbek class 16,250 dwt oilers - formerly Leningrad class merchant fleet originally built 1954-7, Altay class 5,500 tons standard oilers built from 1967 onwards. Uda class 7,200 tons full load oilers built since 1961, and the Konda, Khobi and Nercha class coastal tankers all built in the mid 1950s. The Khobi (800 tons standard 2,000 tons full load) was built in large numbers from 1956-1959 and were the standard oilers of the Navy.

and Hungary or Finland and Western Europe.¹

In 1953 some merchant construction occurred in the Soviet Union and this was increased throughout the period to 1960. Several of the yards which from 1949 to 1952 had been allocated to naval construction began producing merchant ships of various types. That this was the result of Government policy was revealed by Khrushchev in 1964 when he told a group of Swedish shipbuilders

I will be revealing no great secret to you when I say that we have freed our shipyards from the building of large naval ships - battleships and cruisers - since such ships will no longer represent a serious military force in the conditions of a future thermonuclear world war....We are now using the plants and shipyards for the construction of an oceangoing fishing and merchant fleet.²

Certainly in the Baltic and Black Sea area slipways which had previously been used for cruiser construction were used for large merchant ships.³ However in the North, at Severodvinsk, and in the Pacific, at Komsomolsk, the ways appear to have been used for nuclear submarine construction.⁴

From the evidence available to date this major reallocation of ship construction facilities from the Navy to the merchant marine has not as yet been significantly reversed.

¹For details of construction for the Soviet merchant fleet in the period 1945-1952, see Soviet Merchant Ships, p.6-8.
³Times and Soviet Merchant Ships, passim - see Chronology.
⁴McGwire, 'Procurement', p.74 and 75.
### APPENDIX TO CHAPTER V

**Missiles Available and About to Become Operational**

#### SURFACE TO SURFACE

### Strategic

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Launch Platform and launchers/platform</th>
<th>Range (estimated)</th>
<th>Operational Date</th>
<th>Other</th>
</tr>
</thead>
</table>

### Tactical

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Launch Platform and launchers/platform</th>
<th>Range</th>
<th>Speed (Mach)</th>
<th>Control</th>
<th>OP Date</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSN-1 Scrubber/Strela</td>
<td>KILDIN(1) KRPNY(2)</td>
<td>150 miles</td>
<td>0.9</td>
<td>Radio guidance</td>
<td>1958</td>
<td>Required mid-course guidance at maximum range</td>
</tr>
<tr>
<td>SSN-2 STYX</td>
<td>KOMAR(2) OSA(4)</td>
<td>26 miles</td>
<td>0.9</td>
<td>auto pilot (radio command)</td>
<td>1960</td>
<td></td>
</tr>
<tr>
<td>SSN-3 SHADDOCK</td>
<td>KYNDA(8) KRESTA I (4) J(4) EII(6)</td>
<td>300+ miles</td>
<td>0.9 -1.5</td>
<td>Radar tracked</td>
<td>1961-62</td>
<td>Requires mid-course guidance at maximum range. Also used as coastal defence missile.</td>
</tr>
</tbody>
</table>
## Appendix to Chapter V (contd.)

### Surface to Air

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Launch Platform</th>
<th>Range (Slant)</th>
<th>Speed</th>
<th>Control</th>
<th>Op Date</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>KAHIN (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KASHIN (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KYNDA (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KRESTA (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAN 2 GUIDELINE</td>
<td>1 SVERDLOV conversion (2)</td>
<td>25 miles</td>
<td>Mach 3.5</td>
<td>radar/radio</td>
<td>Reported ashore 1957</td>
<td>Although successful on land it was a failure at sea, probably due to need for radar to acquire missile within first 6 seconds of flight.</td>
</tr>
</tbody>
</table>

### Air to Surface Missiles

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Aircraft and No. of Launchers</th>
<th>Range</th>
<th>Speed Mach</th>
<th>Control</th>
<th>Op Date</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-1 Kennel</td>
<td>BADGER B (2)</td>
<td>60 miles</td>
<td>0.9</td>
<td>beam riding radar or radio command possible passive or active homing radar</td>
<td>1958</td>
<td>Missile must be launched from below 25,000 feet and at reduced speed. Possible derivative of coastal defence missile the SAMLET from the German KOMET.</td>
</tr>
<tr>
<td>AS-2 Kipper</td>
<td>BADGER C (1)</td>
<td>130 miles</td>
<td>1.0+</td>
<td></td>
<td>1960</td>
<td>No restrictions on missile launch.</td>
</tr>
<tr>
<td>AS-3 Kangaroo</td>
<td>BEAR B + C (1)</td>
<td>450 miles</td>
<td>1.5+</td>
<td>radar guided</td>
<td>1961</td>
<td>Very similar to a fighter aircraft. Gives Bear a long-range stand-off capability.</td>
</tr>
<tr>
<td>AS-4 Kitchen</td>
<td>BLINDER B (1)</td>
<td>200 miles</td>
<td>2+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:
CHAPTER VI

INTRODUCTION

In the period 1946 to 1953 the Soviet Navy's traditional role, protecting the Soviet land mass from sea based attacks and supporting the ground forces, remained unaltered. More significantly it was assumed that the previous zones of operation, the restricted seas and coastal waters, would continue to be the major areas of operation for the post-war fleet. During the 1950s however it became obvious that fulfilment of the traditional role implied an ability to operate on the high seas if only in a sea denial capacity. The requirement for high seas operations was necessitated by the introduction of strike aircraft of increasing range to the attack carriers of the major naval powers and the development of submarine launched missile systems. Unacceptable damage could be inflicted on the Soviet land mass by sea based strikes launched from waters beyond the traditional zones of operation of the Soviet fleet.

Soviet ship construction of the 1950s concentrated on missile armed surface ships, submarines, both diesel electric and nuclear, and aircraft. The cut back of the previous programme, the emphasis on smaller surface vessels and missile armament, and the relocation of submarines to the Northern Fleet indicated a navy attempting a sea denial strategy in the Barents and subsequently Norwegian Seas.

To fulfil its role in Soviet strategic thinking the Soviet Navy required an ability to attack aircraft carriers at their launch points, if not before these were reached, to locate, track and destroy missile armed submarines, in addition to supporting ground forces and defending the coast. The disruption of the sea lines of communication implied an oceanic as opposed to coastal waters capability. In addition the Soviet Navy had acquired a submarine launched ballistic missiles system capable of inflicting direct damage on the United States. Despite the drawbacks of the initial SLBM systems, prior to the 1960s, no other arm of service was able to carry out this prior to the 1960s.
In the light of these increasingly important defensive and offensive missions it was now publicly conceded by the Soviet Defence Ministers that the role of the Soviet Navy would be of immeasurably greater importance in a subsequent war.

This chapter seeks to provide evidence that the increased importance of the Navy was recognised by military and political leaders, albeit in a restricted and purely functional way, that the Navy had important new missions assigned to it, which would require operations outside of the traditional zones of operation, and to critically evaluate the Navy's ability in 1958/59 to carry out the missions which had been claimed. In addition attention is drawn to the initial forward deployments undertaken by the Soviet Navy in the Mediterranean and Norwegian Seas, following the introduction of longer ranged aircraft to the attack carriers of the United States Navy.

We also note the use of the Navy in a series of crisis situations not directly involving the Soviet Union. Despite the qualitative growth of the Soviet Navy it was not able to assert control of the sea outside its own waters and remained far less flexible than the United States Navy in such situations.
CHAPTER VI

Changing Missions of the Soviet Navy 1953/4 - 1959/60

The missions of the Soviet Navy from 1945-1953 have already been described. Briefly they were to ensure 'command of the coast'. In addition it was suggested that the original Z class long-range submarine was able to combat aircraft carriers either in an advanced position along the Greenland-Iceland-United Kingdom gap or, more plausibly, in the North Cape-Bear Island-Spitzbergen gap.

In the period 1953 to 1960 the Soviet Navy responded to the introduction of cruise missile submarines into the US Navy and the deployment of longer-range nuclear-weapon-carrying aviation aboard the aircraft carriers of the USN and RN. The Soviet Navy devoted greater attention to the anti carrier role, improved the ASW capability of existing surface units, and designed vessels with considerable ASW potential which did not enter the fleet until the mid to late 1960s. The introduction of an SLBM capability laid the foundation for its future role as a major part of the Soviet strategic forces. The coastal defence units¹ were strengthened by the addition of missile equipment and short ranged powerfully armed light naval forces² continued to be produced so that at no time was the defence of the coast downgraded in Soviet naval thinking. Rather, these other missions were added to the role of the Navy.

¹ The first of the widely used missiles for coastal defence was probably the Salish cruise missile (range 60 miles approx.) which, like its successor, the longer ranged Samlet (120 miles) and the A-S Kennel missile are all derivatives of the German Komet. These were succeeded in the late 1950s and early 1960s by the SS-N-3 Shaddock.
² Missiles were probably introduced to the Coastal Artillery and Rocket Troops in 1955 or 1956.
Khrushchev, The Last Testament, p.29.
Khrushchev, op.cit., p.31
Evidence for this changing mission structure can be found in the speeches of naval officers and others, in retrospective articles on the development of the Soviet Navy and, most convincingly, in the naval construction undertaken and initiated in this period, reviewed in the previous chapter.

In his first Navy Day address, that of July 1955, Admiral Gorshkov claimed 'we have a strong navy for the defence of the State interests at sea.' Although it was premature to be talking in this way in 1955 Gorshkov was indicating his hopes for the future.

Zhukov, proceeding from a more circumscribed military outlook, observed to the Twentieth Party Congress

In building up the navy, we proceed from the fact that in a future war combat at sea will be of immeasurably greater importance than it was in the last war.

The role of the Navy in a future war was commented on in all the Navy Day celebrations. The comments took the form of vague general assertions as to capabilities.

Armed with modern devices for combat at sea, our navy is not only capable of defending the states coastal borders but can operate jointly with the air forces to destroy enemy naval forces on the seas and oceans, and can also strike mighty blows at targets in other continents.

An article in *International Affairs* (Moscow) made the point that

Rockets with nuclear warheads fired from submarines make vulnerable not only the territories of islands but also continents, to a considerable depth from the coastline.

Moreover

the new rocket weapons have radically changed the nature of naval warfare. Missiles with nuclear warheads sharply diminish the advantages of aircraft carriers and the surface fleet in general.

Hence 'Different weapons will now be dominant on the high seas. The traditional factors of domination are being replaced by new ones.'

Malinovsky, the new Defence Minister, claimed in early 1959 'Our Navy has become entirely up-to-date and is capable of accomplishing any strategic tasks in its province'. After reviewing claims made about the USN by Western spokesmen he warned

some people across the ocean ought to pause and give thought to the fate of their own coasts and extremely extended communications, the vulnerability of which has now become monstrously apparent...America's traditional invulnerability has now been ended for all time.

The greater role which Zhukov had envisioned for the Navy appears to have involved four separate missions.

1) The disruption of lines of communication at sea.

2) The defensive mission of attacking enemy aircraft carriers by means of missile firing vessels and aviation which were entering service.

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2 Malinovsky became Minister of Defence following Zhukov's dismissal on 26 October 1957. Previously Malinovsky, a military professional and one of the wartime 'Stalingrad Group' had been 1st Deputy Minister of Defence and commander of Ground Forces. Kolkowicz *The Soviet Military*, p.134 and 367.

3 *Pravda*, 4 February 1959, p.4-5.
3) The radically new mission of launching ballistic missiles against the United States.

4) The traditional mission of supporting the ground forces and defending the coast.

In his February 1967 *Morskoy Sbornik* article, Gorshkov draws attention to the search for 'new forms and methods' to be applied by submarines in 'the fight against enemy sea transport'. He categorises as one of the fleet's most important missions

the disruption of oceanic lines of communication, the special arteries feeding the military and economic potentials of these countries (the United States' European allies).¹

What Gorshkov and Malinovsky do not spell out is how this disruption of oceanic communications was to be achieved, or what was required to achieve it. Whereas in the past disruption of enemy transportation had involved operations in coastal waters, what was now required was an ability to disrupt in the distant waters of the Atlantic. The Soviet Navy did not have this ability in 1959/60.

Gorshkov is also explicit when considering the threat from aircraft carriers. In the post-war period, following the introduction of long ranged, nuclear weapon carrying jet aircraft in the mid 1950s,² carrier strike forces were equipped 'to deliver nuclear strikes against strategic objectives deep within the territory of the Soviet Union'.³ While claiming that the carrier's role as primary strike force was waning in the light of the technological development of the 1950s Gorshkov admits 'carriers were, at that time, powerful, and would, for some time to come,

² The A-3 series of Skywarriors entered service from 1954 onwards. Capable of speeds in excess of 600 M.P.H. they had a range of over 2,000 miles. In 1955 the A-4 Skyhawks entered service. They were capable of speeds in excess of 650 M.P.H. and had a range of 1,700 miles.
still be able to pose a serious threat to our motherland'.  

The means of combatting carriers was at hand in the developing 'strike capabilities of the submarine and air forces'.  

As to the other sea based nuclear threat, missile firing submarines, Soviet spokesmen appear to be understandably reticent.

During the 1950s, when the US Navy appeared to be developing a submarine and surface ship cruise missile force, the Soviet Navy had no effective means of carrying out large scale ASW operations in the Barents and Norwegian Sea area. It was not until the mid to late 1960s that the vessels designed to counter this threat, and that posed by a predicted short range SLBM system, appeared in the operational inventory. By this time however the Americans had dropped the cruise missile programme in favour of the Polaris SSMN system. The underwater launched missiles and the increasing range of subsequent generations of the Polaris missile conferred an almost complete invulnerability on these submarines. Soviet naval forces, designed to counter a less sophisticated submarine launched missile threat were rendered obsolescent.

As a result of decisions taken in the mid 1950s the Navy

along with the Strategic Missile Forces (created in late 1959)...had become the most important weapon available to the Supreme Command, one which could exert a decisive influence on the course of an armed struggle.  

In the late 1950s it is probably true that the Navy's ballistic missile submarines were, in fact, the prime weapon system available to the Soviet Supreme Command capable of delivering nuclear strikes on United States territory.

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1 ibid., p.17.  
2 ibid., p.18.  
3 ibid., p.19.
Khrushchev made frequent references to the size and destructive power of the Soviet Union's intercontinental ballistic missiles (ICBMs), but in fact it was the Navy's Z conversions, and such units of the H and G classes of submarines as existed, armed with small numbers of 350 mile range SLBMs, which presented the most reliable means of exerting 'a decisive influence' directly on the United States. The Long Range Air Force was not rated highly by Khrushchev because of its slow speed, vulnerability to anti-aircraft defence systems and inability to return to base, and it is doubtful if it was envisaged as an intercontinental force.

Gorshkov's claims are supported by Major General M. Cherdenichenko.

Under the new system (in the period 1954-1959) the Navy had a number of important missions: encounters with enemy fleets at sea and at bases primarily using assault aircraft (missile carriers), missile launching ships and submarines; disruption of lines of communication on seas and oceans; and destruction of enemy ships in coastal regions.

According to Cherdenichenko primary emphasis was given to the development and improvement of submarine and aviation tactics to take account of the new weapons, missiles and nuclear torpedoes, which they carried. Primary targets for

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1 For a reconstruction of the Soviet test programme and eventual missile deployments see Ball, Strategic Missile Programme, p.92-105. Ball cites U.S. Department of Defense statements made in April and August 1964 implying that at the end of 1961 the USSR had about five operational ICBMs, p.102.


2 For Khrushchev's assessment of the bombers available to the Long Range Air Force in the late 1950s see The Last Testament, p.39 and p.43.
the new weapon systems were listed as shore targets, surface ships and submarines.\footnote{Cherednichenko, M. (Major General) 'Post war development of the art of war' Voyenno-Istoricheskiy Zhurnal, No. 6 1970 translated JPRS Translations in USSR Military Affairs No. 628, p.39. For a similar account see Sokolovsky, V. (Marshal of the Soviet Union) and Cherednichenko, M. (Major General) 'Aspects of Soviet Military development in the post war period', Voyenno-Istoricheskiy Zhurnal No. 3, 1965, JPRS Soviet Military Translations, No. 193, p.11 and 17.}

The equipment for these claimed missions was under development. First generation missiles did not enter fleet service during the late 1950s and it was not until the 1960s that

the Navy is characterised by the rapid development of submarines armed with various purpose missiles. Nuclear powered submarines are armed with ballistic and homing missiles and torpedoes. The underwater fleet has become the principle force of the fleet, its main striking force. At the same time long-range naval aviation with missile armament continued to develop. Fast missile and anti-submarine vessels appeared in the Navy along with coastal missile installations.\footnote{Sokolovsky and Cherednichenko 'Soviet military development', p.17.}

Any assessment of the Soviet Navy's ability and preparedness to carry out the missions which it claimed for itself in the late 1950s must be based on the forces available to the Navy, the characteristics of these forces, their distribution between the four fleet areas, the areas in which fleet exercises were conducted and the nature of those exercises. Unfortunately, it is difficult to be precise about any of these factors. Yet allowing for the gaps in our knowledge it is possible to arrive at some overall estimate. Particular attention must be given to the submarine forces and naval aviation, which, as we have seen, were acknowledged to be the primary force of the Soviet Navy. Moreover the task can be somewhat
simplified by concentrating on the Northern Fleet, which, because of access to the Atlantic Ocean, must be counted as the Fleet which would be primarily involved in cutting sea communications between North America and Western Europe, delivering nuclear strikes on the United States and combatting the aircraft carriers of the Royal Navy and the US Navy's Second Fleet.

Using figures taken from *Janes Fighting Ships* 1958/59 and 1959/60, modified to take into account later information, the size of the total Soviet Fleet in the late 1950s would appear to be as follows:

**Estimate of Total Units Available to Soviet Navy circa 1st January 1960**

**Submarines**

- Torpedo attack
  - 475 *Janes* 1958/9
  - 430 in 1960 (a)
  - Of which 350 of post war origin (b)
  - Including perhaps 100 coastal defence submarines
  - 240 W class and 22 Z class and the lead units of the R and F classes. 6 or so of these submarines were fitted with cruise missiles — the Twin Cylinder W conversion.
  - 3 N class SSNs possible by 1959.

- Ballistic missile 7 Z-V SSB
  - Lead boats of H class SSBN and G class SSB possibly a total of 7 by late 1959.

**Cruisers**

- 25 of which 14 were post war Sverdlovs and
- 11 were pre World War II vessels

---

1 Even here access to the Atlantic would have to be fought for in the North Cape-Bear Island-Spitzbergen region and subsequently in the Greenland-Iceland-United Kingdom gap.
Destroyers
150 of which 70 were post war Skorys.
34 were Kotlins and approximately 50 were
pre World War II vessels. At least 4 Kildin
destroyers were available.

Escorts
80 post war construction Riga and Kola class.

Sub-chasers
340 Kronstadt and SO-I class.

Missile patrol
50 possible - Komar conversions from P-6
torpedo boats and early units of Osa.

Motor torpedo and gun boats
500 with the fleet areas.

Amphibious warfare
120 - coastal operations only
(mean tonnage estimated at 350 tons) (c)

Minesweepers
150 ocean going
160 coastal and inshore.

Naval aviation
3,500 aircraft of which perhaps
2,500 were short ranged jet fighters. (d)
Of the remainder possibly 50 long range Badger
bombers fitted with 2 early generation Kennel ASMs.

(a) figure from 'The Soviet Naval Threat: Reality and

(b) from material provided to U.S. Senator Proxmire by
Admiral Zumwalt C.N.O. on 2 June 1972. Congressional
Record - Senate - 12 June 1972, p. S9188.

(c) Blechman, B. The Changing Soviet Navy (Washington,

(d) Based on Breyer Guide, p.181. Armour, 'Soviet Naval

Sources: I have used Blechman, p.6-9 to provide sub-
headings and my own figures from the
construction programme 1953/4 - 1959/60.
Whereas all these forces could have been used for coastal defensive and offensive operations, where they would have enjoyed a protective umbrella of land based fighter aircraft, it is noteworthy that a vast number of them were suitable for this role only. Of the surface ships only the cruisers, destroyers and some of the escorts possessed the requisite range and sea keeping qualities, although not the anti-aircraft capability, which would enable them to operate on the high seas.

Of the attack submarines available to the Soviet Navy in late 1959 perhaps as many as 270 could have been used outside coastal waters. Of these, 240 were medium ranged W class boats (13,000 miles at 8 knots surface cruising). The rest were long ranged Zs, Fs (20,000 miles surface cruising) and no more than 3 N class SSns. Two independent observers indicate that in 1957-8 the distribution of these long and medium range boats was as follows.\(^1\)

---

Long and Medium Range Submarine Distribution between Fleet Areas 1957-8

<table>
<thead>
<tr>
<th></th>
<th>North</th>
<th>Baltic</th>
<th>Black</th>
<th>Pacific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long and Medium range submarines</td>
<td>110</td>
<td>40</td>
<td>60</td>
<td>70</td>
<td>280</td>
</tr>
</tbody>
</table>


---

1 Distribution of other units in the fleet areas 1957-8

<table>
<thead>
<tr>
<th></th>
<th>North</th>
<th>Baltic</th>
<th>Black</th>
<th>Pacific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cruisers</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>28 a)</td>
</tr>
<tr>
<td>Destroyers</td>
<td>35</td>
<td>45</td>
<td>30</td>
<td>30</td>
<td>140</td>
</tr>
<tr>
<td>Frigates</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>25</td>
<td>70</td>
</tr>
<tr>
<td>Coastal Subs</td>
<td>-</td>
<td>90</td>
<td>70</td>
<td>60</td>
<td>220</td>
</tr>
</tbody>
</table>

a) probably based on the current assumption that 17 Sverdlov class had or would be completed.

The most significant point about these 1957-8 figures is that they show a major reallocation of submarines to the Northern Fleet since 1953, when only 30 submarines of all classes were stationed there. This major reallocation can be explained not only in terms of ease of access and proximity to the Atlantic supply routes but most importantly because of the Northern Fleet's proximity to the launch areas used by aircraft carriers in NATO sea exercises since the early 1950s.¹ The authors of *Military Strategy*, first published in 1962 also drew attention to the continuing use of the Norwegian Sea for NATO naval exercises.²

In his retirement speech Admiral Wright, the American Supreme Commander, Atlantic, indicated that there was increasing evidence of Soviet submarine and aircraft activities in waters off the Norwegian coast in the 1958/9 period. Although he described this activity as area familiarisation, such familiarisation, and exercises designed to test coordination between the submarine and air forces, would be essential for the Soviet Navy's anti-carrier operations off the Norwegian coast.³

The ability of these submarines to counter an aircraft carrier task force or to attack convoys crossing the Atlantic is easy to exaggerate. The 6 W class Twin Cylinder SSGs were noisy and slow when proceeding submerged and hence liable to detection by task force or convoy ASW defences.⁴ If they or any other conventionally

¹ See p.72-3above, and also Bulganin's speech to the 19th Party Congress in October 1952 where he complains of exercises conducted off 'the Northern shores of Norway to the Danish island of Bornholm' which were characterised as 'clearly aggressive and provocative'. Trans. *Current Soviet Policies*, Vol. I ed. Leo Grulio (New York, 1953), p.187.
powered submarine attempted a more rapid surface transit
they, and the Kildin class missile armed destroyers,
risked attack from the air, particularly once they passed
beyond the range of effective land based fighter protection.

The short range aircraft, which comprises the bulk of
the carrier attack planes in the early 1950s, required a
carrier task force to launch aircraft from the sea space
to the North of Norway, that is at the western perimeter
of the Northern Fleet's traditional combat zone and within
range of shore based aircraft. The introduction of the
longer range Skyhawks and Skywarriors to carrier service
meant that carriers could attack major Soviet cities such
as Leningrad from sea space in the Norwegian Sea to the
west of Trondheim Ford. This was well beyond the reach
of the Soviet land based fighters. In fact a Soviet naval
force attempting to destroy such a task force would have
to transit approximately 800 miles along the Norwegian
coast line, without air cover, before reaching the task
force.

Only the few available N class SSNs could reach the
attack carrier launching zone submerged and at reasonable
speeds. But even these may have been vulnerable because
of the noise generated by their hull shape and first
generation nuclear propulsion systems.

It is unlikely that the naval air forces would have
had any greater success. Prior to 1960 only the Kennel
missile, range 60 miles, fitted to the Badger bomber was
available to the Soviet Navy. The limited number of
Badgers available to the Northern and Baltic Fleets, flying
without fighter escort, was unlikely to penetrate the task

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1 See p.115a above.

2 Skywarrior range 2,500 miles, Skyhawk range 1,700+ miles. Ships and Aircraft, p.172.

3 The distance from a point in the Norwegian Sea 100
miles west of Trondheim Ford to Leningrad is approximately
800 miles.
forces' anti-aircraft screen which, by 1960, consisted not only of ship borne radar and defence systems on forward picket duty, but also airborne early warning aircraft,¹ and carrier based fighter aircraft.²

The introduction of longer ranged attack aircraft, and the variety of early-warning and anti-submarine systems available to a carrier task force, had clearly altered the requirements of a successful anti-task force operation. At the very least a reliable anti-aircraft system was required to protect surface transit forces and at best an underwater transmitting force was highly desirable. The improved capabilities of carrier taskforces were undoubtedly one element in the major reassessment of Soviet naval requirements which occurred in the mid to late 1950s and accounts for the limited number of SSM ships delivered. Not until 1962 when the Kashin class SAM armed destroyers appeared did the Soviet Navy possess a reliable anti-aircraft capability. The N class SSN gave a limited number of units capable of submerged transit but it was not until the appearance of the E-II SSGN class in 1963 that an adequate underwater transmitting force became available. The requirement for surface launch was still a major handicap even then.

In the late 1950s it was unlikely that the submarines attached to the Northern Fleet could have disrupted convoys on the trans-Atlantic routes. Whereas it might have been possible to overwhelm the ASW forces of a carrier

¹ The Tracker E-1B carrier borne early warning aircraft was delivered to the Navy in 1958 range 2,000 miles. Morison and Rowe, Ships and Aircraft, p.171.
² The Crusader F-8A fighter, which was also available in a reconnaissance version, had speeds of over 1,000 M.P.H. and ranges of 1,500 miles for the slower versions to 1,000+ miles for faster types.
task force by a massive surge deployment of all available submarines (something between 60 and 70 boats),¹ such surge deployments are not applicable in an anti-commerce operation. Disruption of commercial traffic requires a fairly constant presence on station in the path of the convoy routes, preferably at some considerable distance from the land bases of hostile ASW aircraft.

For the Soviets, this would have implied an ability to keep submarines, surplus from the anti-carrier role, on station in the mid Atlantic. A generous estimate would give the Soviets a capability of up to 25² submarines on mid Atlantic station over an extended period. Moreover, the overwhelming majority of these vessels would be W class medium range vessels, the on-station time for which would be quite low. There is no evidence that the Soviets took up this option.

Amongst the negative evidence available to substantiate this point is the absence of reports of Soviet submarine transits to the Atlantic ocean. Since NATO provides anti-submarine coverage of the area north of Norway and between Greenland and the United Kingdom, it is unlikely that exercises designed to test Soviet ability to establish a submarine blockade would have passed undetected. In September 1970 the Supreme Allied Commander Atlantic Admiral Holmes claimed that prior to 1960

The sight of Soviet ships on the high seas was exceedingly rare except for occasional transfers of units between the Baltic and Northern Fleets. These transfers were conducted in haste and left the impression

¹ The assumption is that roughly one third of the total number of units will be undergoing repairs, crew training or some other form of activity which keeps them out of action.

² This rounded approximation is based on German operating experience during World War II adjusted to allow for the greater transit distances involved for units from the Northern Fleet. The fact that the W submarine would have a more limited on station time because of its shorter range makes this notional figure too high in all probability.
that the Soviets felt somewhat uncomfortable outside the waters of their own fleet areas.\textsuperscript{1}

Gorshkov's review of the tasks of the Soviet Navy in February 1963 acknowledged that 'cruising in the Arctic by our surface ships and submarines has been a more or less routine matter for a long time',\textsuperscript{2} a claim that he did not advance for any other region. The article as a whole reads as a demand that his fleet should in future exercise on the high seas under realistic conditions.

Moreover the Soviet Navy's lack of submarine tenders, submarine rescue ships and support vessels suggests that no forward deployment of submarines had been planned. Support vessels for attack submarines did not appear until 1958-60, and these were conversions and restorations of merchant freighters, tankers and captured German vessels.

There was one significant out of area deployment of submarine forces during this period. In late 1958 a number of $W$ class medium range submarines, conventionally armed, were based at the Albanian port of Valona.\textsuperscript{3} These submarines, which never exceeded twelve units,\textsuperscript{4} remained until June 1961 when the Soviets lost their base rights due to Albanian adherence to the Chinese camp in the Sino-Soviet dispute.\textsuperscript{5}

\textsuperscript{1} Holmes, E.P. Admiral 'The Soviet Presence in the Atlantic' NATO Letter Vol. 18, September 1970, p.6-11.
\textsuperscript{3} New York Times, 8 April 1959, and Times, 20 April 1959.
\textsuperscript{4} New York Herald Tribune, 15 November, 1960.
The submarines for the Albanian base were drawn from the Baltic Fleet.\(^1\) Their presence occasioned some other Soviet naval activity in the region, primarily by fleet transports, a few destroyers and a fleet hydrographic vessel.

It is possible that while the Soviet navy was occupying the Valona base facilities Albania received four W class submarines, together with twelve P-4 torpedo boats, 4 sub chasers and a variety of minesweepers\(^2\) as part of a naval arms agreement. Such vessels were still in Albania after the Soviets had withdrawn from the region. If these vessels were in fact Albanian property then this would reduce to eight the number of Soviet submarines in the region.

Robert Weinland has exhaustively studied the *Rapport Annuel sur le Mouvement des Navires a Travers les Detraits Turcs*, issued by the Turkish Ministry of Foreign Affairs\(^3\), which gives 'details regarding the movement of foreign vessels of war through the Turkish Straits', under Article 24 of the Montreux Convention.

While it would serve no useful purpose to repeat his analysis here, the raw figures of transits between the Black Sea and Mediterranean for the period 1954-1961 are relevant.

\(^1\) Article 12 of the Montreux Convention reads: 'Black Sea Powers shall have the right to send through the Straits for the purpose of regaining their base, submarines constructed or purchased outside the Black Sea, provided that adequate notice of the laying down or purchase of such submarines shall have been given to Turkey. Submarines belonging to the said Powers shall also be entitled to pass through the Straits to be repaired in dockyards outside the Black Sea on condition that detailed information on the matter is given to Turkey. In either case, the said submarines must travel by day and on the surface, and must pass through the Straits singly.'


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*B-M = Black Sea to Mediterranean
*M-B = Mediterranean to Black Sea

Source: R. Weinland, op.cit.
The data, incomplete as a record of total Soviet naval presence in the Mediterranean because they do not cover transits through the Gibraltar Straits (the major entry point for submarines), do indicate broad changes in the levels of deployment. Clearly there was an upsurge of activity dating from 1957 until the end of the period, the increase being quite dramatic in the case of naval auxiliaries.

Not only did the vessels come and go more frequently but the mean length of stay for surface combatants also appears to have increased at this time.

Table II: Mean Length of Stay for Major Surface Combatants in the Mediterranean 1954-1961

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In the period 1954 to 1957 Soviet naval activity in the Mediterranean consisted primarily of deployments of small numbers of cruisers and destroyer units making port visits. Because of the limited duration of these sorties no auxiliary deployment was necessary.

Soviet naval units paid port visits¹ to Yugoslavia and the port of Durres in Albania in May and June of 1954. In May-June 1956 a Soviet cruiser and two destroyers visited Split and Durres. The destroyers also called at Alexandria in June while a year later Durres was visited by a cruiser and destroyer from the Black Sea Fleet and in September

a cruiser and destroyer from the Baltic Fleet visited Split and Latakia. During October 1957 a separate Black Sea contingent of a cruiser and two destroyers visited Yugoslavia.

The period from 1958 to 1961 saw a sharp increase in the level of activity although there is no evidence of any Mediterranean port visits during this time. As the tables above show, auxiliaries account for most of the increase. Although the number of combatants stayed relatively low, they did stay longer in the area, and this in part accounts for the increase in the number of auxiliary vessels. The auxiliaries most in evidence in this period were transport and replenishment vessels which were involved in the establishment of the Soviet naval base in the Gulf of Valona. Possibly the Albanians were in no position to offer anything more than a sheltered port and storage facilities so the Soviets had to bring in their own supplies. The reduction in activity in 1961 is explained by the fact that the Soviets were forced out of the base in the middle of that year.

The establishment of the Soviet naval base at Valona, primarily for a submarine force, can be interpreted as a Soviet response to the threat posed to the southern USSR by the introduction of long range aircraft aboard the aircraft carriers of the Sixth Fleet. From launch areas in the Eastern Mediterranean the Skywarrior could reach Odessa, Sevastopol, Rostov and possibly Kiev and Baku; that is the major agricultural, industrial and oil producing regions of the USSR. Moreover the Sixth Fleet was a direct obstacle to Soviet ability to control the Black Sea outlets, in the event of war occurring.

1 Soviet proposals for a nuclear free zone in 'the Balkans and Adriatic region' were more concerned with the establishment of missiles in these regions as agreed by NATO governments in December 1957.
In 1960 some 20 vessels exercised in a region between the Ionian Sea and Crete.\textsuperscript{1} These included a cruiser and two destroyers from the Black Sea Fleet, additional submarines from the Baltic and submarines from the Valona base. This exercise area could be an excellent choke point for disrupting Sixth Fleet activities in the Eastern Mediterranean.

The Soviet squadron's operations were subject to a number of handicaps, not the least of which was the deterioration of political relations between Moscow and Tirana. Valona is situated just inside the Adriatic Sea and the submarines based there would need to transit the Strait of Otranto, one side of which is dominated by Italy from the nearby Taranto naval base. Operations in the Ionian Sea would be subject to close observation from the established British base at Malta.

While the anti carrier role was the primary mission of this squadron the hydrographic vessels and Lentra class auxiliaries equipped with electronic detection devices carried out basic data gathering functions in the region and closely observed the naval exercises of the NATO forces.\textsuperscript{2}

By the 1950s the Soviet Union's SLBM force comprised 7 Z conversions and no more than 7 units of the H and G class. It is possible that all of these units were situated in the North where they would be able to transit most rapidly to firing zones off the American east coast, but it is more reasonable to assume that some were based in the Pacific.

It is doubtful that any of these boats were kept on station at this time. On February 4, 1959 Rear Admiral Charles Weakley, executive officer in charge of anti-submarine warfare at the Pentagon, told a New York Times reporter that United States forces had never positively

\textsuperscript{1} Times, 19 September, 1960.
\textsuperscript{2} Ibid.
identified a Soviet submarine in or near United States coastal waters and specified that this included distances of 1,000 to 1,500 miles from the shores of the United States. ¹ In May 1959 a Soviet submarine was sighted in the waters off Iceland and photographed.² Such a sighting was not coincidental. The US Navy had maintained, at irregular intervals, an anti-submarine barrier in the Iceland-Faeroe Islands gap composed of ASW aircraft and submarines.³ In the summer of 1961 the US Navy was to take over existing defence installations from the US Air Force enabling the previously intermittent patrols to be carried out on a continuous basis.⁴ Moreover the United States had deployed surveillance and detection systems off the American coastline since the early 1950s.⁵ By 1960 it is probably that the highly classified CAESAR system was in operation.⁶

Given the state of the ASW art in the late 1950s and, more significantly, the state of the Soviet SLBM art at the same time, it is doubtful that the Soviet system posed a major threat to the United States. Soviet F.B.M. submarines appear to have remained within Arctic waters, rather than conduct regular patrols off the American coast. They would therefore have to transit during period of crisis. Not only were the majority of F.B.M. submarines available conventionally powered, transiting most economically and quickly on the surface,

⁴ Ibid.
⁶ Studies for the CAESAR system were begun by Western Electric Company in 1956. The system's reliability was demonstrated during the Cuban crisis of 1962 following which it was expanded and upgraded. Defense Market Survey April and September 1967 cited in SIPRI Yearbook of World Armaments and Disarmament 1969/70 (London, 1970) p.148-9.
but they also had to pass across the restricted seas to the north of Norway and between Greenland and the United Kingdom. During periods of tension these could, even in the 1950s, have been heavily patrolled by ASW aircraft and ships. The fact that submarines had to surface in order to launch their short range missiles was a further handicap. In effect it required a submarine to surface within range of ASW aircraft patrols off the American coast. A regular patrol could either force a hostile F.B.M. submarine to remain submerged, and hence render it unable to fire its missiles, or else attack a submarine once it had surfaced, forcing it to resubmerge or to risk being sunk.

It is possible that, faced with such a situation, the Soviet Supreme Command may have chosen to use the SLBMs against European targets. This could hardly have served as the rationale for such a force in the first instance as it could legitimately be claimed, by those seeking to introduce economies into the area of military expenditure, that this was a mere duplication of ground force capability. The Soviets may now have a 'triad' of nuclear retaliation forces but it is unlikely that during the middle to late 1950s such a duplication of effort would have been tolerated.¹

The argument in favour of the original SLBMs must therefore have been that they provided a vehicle for conducting nuclear strikes on the United States. In the event that judgment may have been revised, at least until the deployment of the second generation SLBM, which was not only longer ranged but was also capable of underwater launch.²

¹ See Chapter 4 for the impact of Khrushchev's policies on overall military spending.
² The SS-N-5 has been credited with a range of 800 miles and is a dived launch missile. *Janes Fighting Ships 1974/5*, p.639, and *Janes Weapon System*, p.157.
Soviet Naval Visits and the Soviet Use and Evaluation of Navy in Crisis

In the period from the end of the war to June 1956 Soviet naval units paid few visits to non-communist countries. The exceptions were the visits to Portsmouth, in 1953, for the coronation review, in 1955 and in 1956 when a Soviet visit was occasioned by the Bulganin and Khrushchev visit. Soviet vessels had also visited non-communist Baltic states.

In June 1956 two Black Sea fleet destroyers visited Alexandria. Undoubtedly the visit was considered appropriate following the successful arms deal of the previous year, which had included the supply of naval units, some of which were transferred in May and June 1956. Soviet-Egyptian relations had improved post-1954 when the Soviet Union attracted a favourable press in Cairo and Damascus because of its support for the Arabs against Israel. Egypt and the Soviet Union had entered a series of trade agreements, which resulted in increasing Egyptian economic dependence on the Soviet Union, through Soviet purchases of Egyptian cotton. The arms agreement of 1955 increased Soviet influence in Egypt, strengthened the hand of Arab countries opposed to the establishment of the Baghdad Pact, thus weakening the impact of the alliance on the Soviet Union, and offset the trade deficit which had run against Moscow.¹

By mid 1956 the Soviet Union had substantial political, economic, security and military interests in Egypt. Whether Nasser's decision to nationalise the Suez Canal in July 1956 was made with this commitment in mind is not certain; however, the Soviet government expressed its support for the Egyptian move in the diplomatic activities occasioned by the nationalisation.²

¹ See Ra'anana The USSR Arms the Third World, p.13-34 and Macintosh Strategy and Tactics, p.179-183.
During the Suez crisis of October-November 1956 Soviet moves must have cast some doubt in the minds of the Egyptians as to the degree of support the Soviet Union was willing to provide. Advisers received instructions not to become involved in the fighting and the Il-28 bombers provided by the Soviet Union were withdrawn, first to upper Egypt, and eventually to Syria.

Bulganin's letter to Eden of 5 November 1956, displayed considerable Soviet disquiet over the Anglo-French invasion but did not commit the Soviet Union to any specific course of action. More interesting, for our purpose, was Bulganin's letter to President Eisenhower, on the same date, in which he pointed out that the Soviet Union and the United States, as permanent members of the Security Council and the major military powers, bore 'special responsibility for stopping the war' and put forward a proposal for close cooperation in halting aggression.

The United States possesses a strong navy in the Mediterranean zone. The Soviet Union also possesses a strong navy and powerful aviation.

The joint and immediate use of these means by the United States of America and the Soviet Union, on a decision of the United Nations, would be a reliable guarantee for ending aggression against the Egyptian people, against the countries of the Arab East.

This proposal was simultaneously introduced to the United Nations Security Council in a Note from Mr. Shepilov, the USSR's delegate on the Council. The Note reiterated the obligations of the United Nations and the Soviet Union and called for the dispatch of 'naval and air forces, military units, volunteers, instructions, materiel and other aid' and declared the Soviet Union's readiness to send 'the necessary air and naval forces'.

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The costs of this proposal, which was rejected by the United States, would have been minimal to the Soviet Union and, with United States cooperation, but only with that cooperation, quite within the Soviet Union's capability. Without that cooperation the task was beyond Soviet means and nothing more was heard of the suggestion.

The Soviet naval visit to Latakia, Syria, in September 1957 occurred at a time of pressure on the Soviet-leaning Syrian regime. On 7 September Mr. Dulles spoke of the 'apparently growing Soviet Communist domination of Syria and the large build-up there of Soviet-bloc arms' and expressed concern over border incidents, propaganda and subservise activities direct against the governments of Syria's neighbours. He then reminded his audience of Eisenhower's message to Congress on 5 January 1957 in which the President successfully sought authority to help the nations of the Middle East defend their independence.

The Soviet vessels, a Sverdlov cruiser and a destroyer escort, which had been visiting Yugoslavia, arrived in Latakia on 19 September and remained until 2 October by which time it appeared as though the immediate cause for concern, accusations that the United States, Britain and Turkey intended to invade Syria, no longer applied.

Such a limited naval presence, while not in itself a major military commitment, implied support for the Syrian regime and as such may be seen as a clear example of the Soviet use of a naval presence for diplomatic effect.

No Soviet vessels appeared in the Mediterranean during the Lebanese and Jordanian interventions of 1958 which

1 Ibid, p.294-295.
followed the overthrow of the Iraqi government in July 1958. In a letter to Eisenhower, 19 July 1958, proposing a summit conference to discuss the crisis in the Middle East,¹ Khrushchev reminded the Americans

that the Soviet Union, too, has atomic and hydrogen bombs and an air force and a navy, and also ballistic missiles of all kinds, including intercontinental missiles.

The only overt military response was a series of exercises in the Transcaucasus and Turkestan military districts.²

Even Khrushchev's call for a summit conference, and his reminder to the American President of Soviet military might, came after the British and American landings had stabilised the position in Jordan and Lebanon respectively. It was not until some weeks had passed that the first Soviet submarines and the accompanying tender were sent to Albania.³

In the Far East the Soviet Union had protested at the Nationalist Chinese 'piracy' which had resulted in the interruption of shipping to mainland China. She had also blamed the United States for condoning such actions,⁴ but the complaints and protests were not accompanied by any military activity. During the offshore islands disputes of August 1958 the Soviet Union acted with considerable caution. No doubt to the chagrin of the Chinese Communists, Khrushchev spoke of the conflict in the Far

⁴ Korovin, E. 'U.S. Violation of freedom of the seas' International Affairs (Moscow) March 1955, p.57-65. See also New Times 1954, No. 22, p.19; No. 27, p.21-22, and No. 46 'Stop the Piracy'.
East as an American diversion to draw attention away from the real crisis spot in the Middle East. Indeed it appears as though Khrushchev was reluctant to interrupt his holidays for he did not enter the fray until 7 September.

Earlier in 1958, there had been an attempt to establish a long range radio station on the Chinese mainland, to establish Soviet facilities in Chinese ports for the refueling of Soviet submarines, and to provide an opportunity for Soviet sailors to enjoy shore leave. This was rejected out of hand by the Chinese, who, at the height of the Sino-Soviet polemics in 1963, accused the USSR of making 'unreasonable demands designed to bring China under military control'.

It would appear that the Soviet Union indeed sought to restrain the Chinese. Soviet Pacific Fleet vessels remained in their home area throughout the crisis and not until late August, almost a month after the initial crisis moves, did the Soviet Union acknowledge the Quemoy issue as a major international incident. On 7 September 1958 Khrushchev wrote to Eisenhower pointing out 'An attack on the Chinese People's Republic...is an attack on the Soviet Union'. but this was only after the crisis appeared capable of resolution and one day

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5 For an exhaustive study of naval movements, see Howe, J.T. Multicrises, p.163-282.
after American-Chinese talks had been proposed by Chou En-lai.¹

In the course of his letter Khrushchev complained to Eisenhower about the United States' assuming the role of world gendarme. The gendarme's night stick was the US Navy.

The practice of rushing United States warships from one place to another has in general become frequent of late (Lebanon). Indeed, it can be almost unmistakably determined where the next blackmail or provocation will occur by the movement of American naval units.²

This theme was taken up by the Soviet press which also reiterated his call for the return home of the American fleets.³

Despite this concern Khrushchev queried whether 'such dispatching of warships now in one direction, now in another' still made sense 'at least with respect to countries possessing modern weapons'...

It seems to us they (US military officers) cannot but know that the heyday of surface navy powers is over. In the age of nuclear and rocket weapons of unprecedented power and rapid action these once formidable warships are fit, in fact, for nothing but courtesy visits and gun salutes, and can serve as targets for the right type of rockets.⁴

This reaction to the movements of the Seventh Fleet shows on the one hand a healthy respect for naval power and at the same time an attempt to diminish its significance.

¹ Statement by Premier Chou En-lai, 6 September 1958, in Documents 1958, p.179-182.
It neatly illustrates the frustrations of Soviet naval policy under Khrushchev. The political significance of a large surface naval fleet was obvious, but, because of the Premier's fascination with the new military innovations and the desire for military economy, it had to be denied by stressing the vulnerability and alleged irrelevance of the surface navy in general nuclear war. No matter how much the Soviets concentrated on building a navy capable of effecting a sea denial strategy, the United States continued to demonstrate that command of the sea was not irrelevant, and in so doing placed the Soviet Union in the embarrassing position of either initiating a conflict at sea, with the attendant risk of escalation into nuclear war, or doing nothing.
APPENDIX I  -  Soviet Naval Aid to the Third World  
1956-61.  

Mention has already been made of the Soviet Union's approaches to the third world countries during this period. One aspect of this approach can be seen in the supply of arms, especially to those areas where the threat of Western encirclement could be broken by exploiting the regional rivalries and anti-imperialist nationalism, which had been ignored by the West.

The fact that naval equipment from the Stalin era was part and parcel of overall arms agreements had three implications. First, the Soviet Union felt itself over-equipped in some units. Second, because of their early post war design these units could be dispensed with without fear of giving away any technological secrets. Third, naval arms aid could add to the reputation of the Soviet Union as a significant military power in the third world areas where such arms were sent.

Such a distribution of arms also introduced the Soviet Union into strategically important areas such as the Middle East and, later, into the Indian subcontinent and South East Asia, thus marking the beginning of efforts to break the West's monopoly in these areas. Incidental to this was the general increase in influence in third world areas.

By 1960 the Soviet Union had supplied naval vessels to Egypt, Syria and Iraq in the Middle East, and had begun the transfer of units to Indonesia. All such supplies continued into the 1960s.

With the vessels went specialist instructors, as was the case with other Soviet arms. A not unwelcome by-product of this activity was the openly expressed anxiety of some Western commentators at the equipment of navies in sensitive areas with Soviet vessels. The instruction units would also certainly have gained some knowledge of areas outside the Soviet base areas.
### Soviet Naval Arms Aid to the Third World 1956-61

<table>
<thead>
<tr>
<th>Egypt</th>
<th>Syria</th>
<th>Iraq</th>
<th>Indonesia</th>
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<tr>
<td><strong>DESTROYERS</strong></td>
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<tr>
<td>2 Skory class 11 June 1956 to Alexandria. Dec. 1959 report of 16 of these vessels transferred or to be transferred 2 delivered to Alexandria Jan. 1962</td>
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<td>4 Skory class destroyers purchased from Poland and transferred to Indonesia in 1959.</td>
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<tr>
<td><strong>SUBMARINES</strong></td>
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<td><strong>CORVETTES</strong></td>
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<td><strong>TORPEDO BOATS</strong></td>
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<td><strong>MINESWEEPERS</strong></td>
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<td>T43 type delivered 1956.</td>
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*Source: Janes Fighting Ships 1963/4.*
successfully carry out such a task is doubtful. Other tasks were more pressing. Soviet submarines needed to transit to the Atlantic to cut the sea lanes of importance and NATO point defence ASW was improving throughout the post war period. The further the anti SLOC mission was from the Soviet front line the more difficult it would become.

The Soviet deployment of W. class torpedo attack submarines to the Mediterranean in the late 1950s was a direct attempt to counter the Sixth Fleet's carrier strike force. Soviet Naval activity increased in the Norwegian Sea. Exercises here involved surface vessels, submarine and shore based naval aviation and were designed to test Soviet ability to launch coordinated attacks against carrier task forces operating off the Norwegian coast.

The Soviet political leadership claimed that it now possessed a strong navy but its use of naval forces in diplomatic crises not directly involving the Soviet Union was extremely cautious and low level. Soviet vessels frequently did not put in an appearance until after the event and Soviet leaders confined themselves to verbal attacks on the "gendarme role" of the United States Navy.

Despite Soviet claims that the large surface navies had passed their zenith, events indicated otherwise and the United States in particular continued to demonstrate that while it maintained command of the sea there was little that the Soviet Navy, primarily a sea denial force, could achieve.
CHAPTER VI

CONCLUSION

During the 1950s there was a growing awareness, in the political and military leadership of the Soviet Union, that the role of the Navy would be of far greater importance in future conflicts than it had been in the past. This realization stemmed in large part from technological advances which altered both the future offensive and defensive missions of the Soviet Navy in a variety of ways. By the late 1950s only a few SSBS and SSBNs were available to the Soviet Navy. Despite the difficulties of access to the open seas, the problems inherent in surface transit for the diesel electric boats of the ZV and G0lass and the fact that the first generation SLBMs had limited range and required surface launching these SLBMs were the main strike force available to the Soviet Union against the United States land mass. By 1960 the Soviet operational ICBM force was barely in existence and the Long Range Air Force was considered inadequate to the task.

The defensive missions of the Soviet Navy, destroying sea based attack forces at or prior to their launch points, meant that the Soviet Navy had to extend its perimeter of operations beyond the coastal waters and enclosed seas. Such an extension of operations could only be undertaken with difficulty for the Soviet Navy had no forward bases in the new zones of operations and no attempt had been made to provide the large auxiliary fleet required by a Navy which was to find itself increasingly operating beyond home waters. Moreover during hostilities the surface ships and transiting submarines would lack reliable air protection beyond the effective operational range of shore based aircraft. The installation of surface to air missiles on surface vessels could provide a point defence capability but had little impact on the offensive capability of the fleet.

Although interdiction of the enemy sea lines of communication remained a mission for the Soviet Navy whether or not it could
CHAPTER VII

INTRODUCTION

It is impossible to fully understand the particular development of the Soviet Navy without an appreciation of the changing strategic environment, the military debates occasioned by such change and the political-economic context within which naval development has occurred. The significance of these factors is particularly important in the early 1960s. As we have seen Khrushchev was committed to a basic re-orientation of Soviet production away from emphasis on heavy industry towards an increase in consumer goods. He also adopted an interventionist stance on military matters, in particular over the implications of nuclear weapons and their delivery systems for the force levels and equipment of the various branches of the armed forces.

In January 1960 Khrushchev announced major cuts in all the traditional branches of the armed forces. These cuts occasioned widespread military debate and opposition and eventually in 1961 the cuts were suspended. The economies were being attempted at a time when increased importance was being attached to the Strategic Rocket Troops,(the ICBM delivery programme was about to commence,) and to the air and missile defence programmes.

Although there was a continued interest in the development of the SLBM programme and in coastal defence operations the role of the Navy in a future war was judged by many non-naval officers to be uncertain. Zhukov had made the point, in the 1950s, that the Navy would be of greater significance in the future but in the early 1960s military leaders were far more conditional in their assessments. In particular the non-naval military and political leadership dismissed the importance of surface vessels and the naval leadership fought a campaign to defend the new missile equipped vessels entering service at the time. Even among the naval leadership the major surface vessels, large attack carriers, battleships and artillery firing cruisers
were said to have lost their importance and the submarine, 
and in particular the nuclear powered missile firing submarine, 
was considered to be the basis of naval fighting power.

During the early 1960s the SSBNs, of the United States 
Navy in particular, replaced the attack carrier task force as 
the major sea based threat to the Soviet Union. The first 
generation Polaris system operated in seas beyond the coastal 
region and posed additional problems of location, tracking and 
destruction. Moreover if these boats were to be successfully 
countered before their missiles were launched they would need 
to be located and tracked during peace time. In the period 
1960-1964 such public discussion as occurred on the new sea 
based threat appeared designed to reassure the public. In 
the non-naval writings there was an apparently unintended 
confusion between ballistic and cruise missile submarines. 
The most realistic proposals for countering the SSBNs involved 
ICBM strikes against their home ports and the navigation and 
communications infrastructure.
CHAPTER VII

The Khrushchev Navy 1960-1964

The Military Debates

The period from 1960 to 1964 was characterised by a high level of debate over fundamental military questions concerning the likelihood, utility, nature and duration of a future war. Other questions, on the need for military superiority in strategic weapons, the possibility of limiting wars which may occur, the size of the armed forces, the relative positions, in order of importance, of the branches of the armed forces and the nature of political military relations were widely discussed. The debates were conducted not only within the military profession but also between the military and the political leadership.

The military debate occurred within the context of Khrushchev's efforts to reorganise the Soviet economy. Fundamental to the change was an increased emphasis on the consumer sector in the effort to hasten the Soviet Union's 'development along the path of communism'. This involved a major reassessment of Soviet economic priorities which previously had laid emphasis on heavy industry.

The military debate also involved issues which features strongly in the intensified polemic with the Chinese.

The occasion of these debates on military fundamentals was undoubtedly the increasing availability of nuclear weapons and the development of limited numbers of first generation intercontinental ballistic missiles (ICBMs) as delivery units.

The Soviet ICBM programme was facing difficulties. By April 1958 some 10 ICBM test launches had been carried out, of which six were successful, but in April 1958 tests were stopped completely until March 1959. Only in May 1961 did a series of tests begin which, by their frequency and
Footnotes to Page 228

1 The major documents of the debate are:


2 The characterisation of the discussion as a debate is unfortunate because it suggests an open dialogue. In fact the analyst of the 'debate' spends much of his time noting nuances, omissions and changes in emphasis from one speaker to another. This is not to deny that differences were specifically aired in public. Of course participants in the 'debates', used to playing the signalling game, are attuned to the subtleties.
Footnotes to P 228 cont.

3 This change in emphasis can be seen quite clearly in most of Khrushchev's speeches devoted to Soviet internal development. It reached a climax in the campaign for the development of 'big chemistry' at the Plenary Sessions of the Communist Party Central Committee on 13 December 1963 and 14 February 1964. See Pravda, 15 December 1963 and 15 February 1964 for the text of Khrushchev's speeches.

4 For a discussion of the wider context within which the military debate occurred see M. Tatu, Power in the Kremlin from Khrushchev to Kosygin, translated Helen Katel (New York, 1970).

5 In fact the Soviet Union, by the beginning of 1960, had very limited numbers of ICBMs.
regularity, suggested that the production of operational models was not far off. The Institute for Strategic Studies judged that the May 1961 programme involved the use of missiles with storable liquid propellant.

In January 1963 United States Secretary of Defense McNamara indicated that the Soviet Union had begun the hardening, and dispersal of its missile sites, although the great majority of missiles were still in 'soft' configurations.

Using retrospective information released by American Defense officials it appears that by 1961 the Soviet Union probably had only about five ICBMs, and in April 1961 may not have had a single ICBM operational that could have hit the U.S. By October 1962 only about 30 SS-7 ICBMs were operational. At the end of 1964 the USSR had between 100 and 150 ICBMs in the operational inventory.¹

By mid-1962 it was claimed that tactical nuclear weapons had been introduced to all branches of the armed forces.²

The political attempts to establish a détente with the West and the acceptance of a series of limitations on the testing of nuclear weapons³ brought sharp denunciation from the Chinese. Criticism of Khrushchev's efforts in this sphere also occurred within the Soviet leadership, particularly in relation to the U-2 affair.⁴

The U-2 affair brought home to a wider circle of party and military personnel within the Soviet Union the fragility of the strategic bluff which Khrushchev had initiated and nurtured.⁵ Powers' U-2 was intercepted on 1 May 1960, but Khrushchev, in the subsequent revelations, admitted that this had by no means been the first such flight. He referred to an incursion into Soviet air space in 1956 which had not previously been made public⁶ and indicated that such intrusions had not been unique. Clearly the veil of secrecy so important for the strategic bluff to remain a credible tool in foreign policy had been
Footnotes to Page 231


2 'The principal fact is that the process of equipping the army and navy with atomic nuclear weapons has been completed'. S.G. Gorshkov, 28 July 1962, speech marking Soviet Navy Day. Moscow in Polish to Poland 2100 GMT 28 July 1962, FBIS 30 July 1962, USSR National Affairs, p.CCl.

Gorshkov's claim was probably an over-estimate but there was no doubt that the main firepower of the ground forces and the navy had shifted to tactical missile weapons which would deliver nuclear weapons.


3 On 25 July 1963 agreement was reached on the halting of tests in the atmosphere, underwater and in outer space and on 17 October 1963 the UN General Assembly endorsed a US-Soviet sponsored statement calling on all states to refrain from orbiting nuclear weapons in space.

20 June 1963 also saw agreement on the need to establish a 'hot line' between Washington and Moscow.


4 M. Tatu, op.cit., p.53-68.


damaged, and was known to have been damaged, prior to the Soviet Union's exaggerated and belligerent statements on the alleged range and power of its ICBMs. Moreover, Khrushchev had to retreat reluctantly, under pressure of the critics of detente, from the 'Spirit of Camp David', and denounce the US President for his role in the U-2 affair.

The Soviet naval leaders do not appear to have played a major role in the broader debate during this period. Rather they appear as a beleaguered group trying to maintain their position in a situation where the Navy's claim for consideration was not strong.

By April 1964 the American Department of Defense was making public its estimates of the extent of the USSR's missile capability and it appears that the highest levels of the US Defense fraternity were aware of the state of Soviet missile forces 1961-1962. Moreover, the Kennedy Administration continued the accelerated rate of procurement for Minuteman and the submarine launched ballistic missile system (SLBM).

In these circumstances the Soviet Union continued to direct its major defence effort to the production of ICBMs and to the global missile system (FOBS). The 'Griffon' and 'Galosh' systems were claimed to be capable of providing a ballistic missile defence when they came into operation in 1962 and 1964 respectively. Thus the newly formed Strategic Rocket Forces (SRF) and the air and

2 D.J. Ball, 'Strategic Missile Programme of the Kennedy Administration', p.105.
missile defence programme continued to attract the finances and attention in the context of an effort to increase expenditure on domestic consumption programmes.

The Role of the Navy in a Future War.

In this situation the Soviet Navy found that doubts were being raised as to the actual role of the Navy in a future conflict, which, according to Soviet military doctrine of the period, would inevitably take on the character of a global missile war once the super-powers were involved.¹

Thus Khrushchev, after pointing to the availability of powerful rocket equipment, claimed in January 1960:

The Air Force and Navy have lost their previous importance in view of the modern development of military equipment. This type of weapon is not being reduced but replaced.²

Admiral V.A. Kasatonov, Commander of the Black Sea Fleet, did not seek to take up the broad question of the importance of the Navy at the Supreme Soviet but focused on the 'Fundamental qualitative changes' occurring in the Navy, i.e. the increasing importance of the submarine which Khrushchev had also indicated.³

Malinovsky, Minister for Defence, indicated in October 1961 that the power of the Navy had grown and that it was now 'a truly modern Navy capable of undertaking any active operations assigned to it far beyond our territorial waters,' a view that the collective authorship of Military Strategy supported but with the

qualification that 'these operations will hardly be decisive for the outcome of the war'.

After a brief summary of operations during the Great Patriotic War - support of the Ground Forces in coastal operations and protection of maritime communications - the authors state:

A future world war may confront the fleet with more responsible tasks. The world's oceans may prove to be military theatres.

In the second edition this formulation had undergone a minor but important change.

In a future world war the fleet may have more important responsibilities. The world's oceans will be the theatres of military operations for the Navy.

In August 1964 Marshal Sokolovsky, joined by Major-General Cherednichenko, claimed that:

It is fully possible that if the imperialists should unleash a nuclear missile war, no application will be found in it for the traditional forms of military action - attack and sometimes defence in the ground theatres, as well as the action of fleets in the naval theatres - even though their content and methods of conduct are being changed substantially in comparison with past wars.

According to Military Strategy the main aim of the Soviet Navy's operations, assuming such operations to be necessary, was to defeat the enemy navy and to sever his maritime communications "by conducting 'operations on the high seas'":

4 V.D. Sokolovsky and M. Cherednichenko, 'The Revolution in Military Affairs', p.15.
In addition the need may arise for missions to deliver missile-nuclear strikes on coastal targets joint operations with units of the ground forces, naval transport, and protection of one's own naval communications.1

Particular emphasis was given, by the joint authors, to the task of destroying the sea based nuclear weapons systems of the major adversary. In the first edition the destruction of enemy carrier attack forces 'from the first minutes of the war' was held to be one of the most important tasks of the navy, while the defence against US Polaris submarines was seen to be 'an important naval task'.2

The second edition of Military Strategy reflected a growing preoccupation with methods of combating the Polaris submarine. An additional paragraph was included in the text explaining methods of combating the SLBM.3 This increased concern was further reflected in the Sokolovsky Cherednichenko article of August 1964 where 'the primary task of military actions in the ocean and sea theatres' was said to be 'the destruction of the missile armed submarines'. The disruption of enemy carrier strike units was described as 'an extremely important task'.4

Other important tasks included defence against the enemy's amphibious operations and carrying out their own amphibious operations in cooperation with the army.5

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3 Fast, H.S. translation Military Strategy, 2nd and 3rd edition indicates no change in the wording describing the anti-SLBM system. However, L. Goure, Notes on the Second Edition, p.88 claims the second edition characterised Polaris defence as 'the most important naval task'.
4 Sokolovsky and Cherednichenko, 'The Revolution in Military Affairs', p.18.
5 Scott, H.F. translation, p.312.
6 Scott, H.F. translation, p.263.
The uncertainty over whether a future war would be of sufficient duration for the navy to perform a role, and the doctrinal assertion of the secondary nature of naval operations, which as we have seen were judged to be 'hardly decisive' on the outcome of the war, must have left the navy in a precarious position so far as funding was concerned. Obviously the Strategic Rocket Forces, whose mission was decisive for the outcome of the war, would have first claim to defence resources, to be followed by the strategic defence forces. The ground forces, while not decisive in the sense of the SRF, played the important role of seizing and holding territory, after inflicting the 'final rout' on the enemy troops, which was essential for victory, at least on the Eurasian land mass.

The Navy does not appear to have had such obvious functions assigned it. Indeed, Soviet experience and Party dogma asserted that in the past enemy navies had inflicted only marginal damage on the USSR. The lack of attention given the SLBM systems in the first edition of *Military Strategy* suggests that the high ranking army officers who wrote the book considered that the Soviet Union had little to fear from enemy navies.

However, it was still necessary to determine the type of naval force required for whatever tasks might arise. That is, what sort of equipment was necessary for the anti-carrier and anti-Polaris active defence task. This question related specifically to the place of the surface vessel in the Navy.

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1 'It is fully possible that the war will even end during this (the initial period marked by the nuclear exchange) period since further military actions may very well not be needed after the exchange of nuclear blows'. Engagements, battles and operations ... in the ... sea theatres of military action will be conducted on the basis of utilising the results of the strikes by strategic nuclear weapons for the purpose of completion of the rout of the enemy.

Sokolovsky and Cherednichenko, 'Revolution in Military Affairs', p.16.

2 Ibid, p.17.
The Role of the Surface Navy

Khrushchev's report to the Fourth Session of the Supreme Soviet, 'Disarmament is the Path toward Consolidating Peace and Ensuring Friendship among Peoples', contained a number of pronouncements and announcements which affected all branches of the services. The armed forces were to be reduced by 1,200,000 men to a total of 2,423,000, the Navy and Air Force were judged to 'have lost their previous importance in view of the modern development of military equipment', and 'In the Navy, the submarine fleet assumes great importance whereas surface ships can no longer play the part they did in the past.'

There were three reasons given for these reductions and reassessments: the alleged increase in firepower available to the armed forces because of the acquisition of 'the necessary quantity of atomic and hydrogen weapons', a process not completed until after 1962, the doctrine that any future war between the major powers would be a global nuclear missile war, and the 'fact' that we already possess so many nuclear weapons both atomic and hydrogen, and the necessary rockets for delivering these weapons to the territory of a potential aggressor that should any madman launch an attack on our State or on other socialist states we should be able literally to wipe off the face of the earth the country or countries which attacked us.

The following day the Minister of Defence, Marshal Malinovsky, addressed the Supreme Soviet. While agreeing with the First Secretary's premise 'that a future war...

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1 Moscow Home Service 0800, GMT 14 January 1960, BBC SWB SU/233/C/16, 15 January 1960. Khrushchev made much firmer remarks on the Air Force in the same paragraph of his speech. 'Almost the whole of the Air Force is being replaced by rocket machinery. We have by now cut down sharply - and, it seems, shall continue to cut down and even discontinue the manufacture of bombers and other obsolete equipment'. Ibid.

2 Ibid.

3 Ibid.
will be waged with the massed use of nuclear arms; and that a reduction in armed forces manpower was 'a quite sound and timely measure' he seriously qualified the main thrust of Khrushchev's address of the previous day.

The rocket troops of our armed forces are undoubtedly the main type of armed forces: we understand however that it is not possible to solve all tasks of war by one type of troops.1

This line of argument was developed by Gorshkov on 23 February 1960 from a naval viewpoint.

The primary branch of the armed forces possessing the most firepower is rocket troops. From this, however, it does not quite follow that the necessity for the remaining branches falls away. Victory in modern war can be achieved only with the utilisation of all means of armed combat. The geographic features of our country - which is washed by many seas and oceans - dictate that the Navy, in particular, will occupy an important place in the system of the Soviet Armed Forces. Furthermore, of course, it ought to be kept in mind that in modern war at sea, surface ships can no longer play as important a role as they played in the past. On the other hand, the significance of submarines, which are an exceptionally effective means of combat, is sharply growing.2

Gorshkov's claim that the Navy will occupy an important place in the system of the Soviet armed forces because of the geographical features of the Soviet Union was repeated on May 9, 1960.3

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3 'The geographic position of the USSR and our allies dictates an important place for the Navy in our defence system'. Gorshkov, S.G. 'Great Victory', Sovetskiy Flot, 9 May 1960, cited Ullman Despair and Euphoria, p.125 fn.34.
He also moderated Khrushchev's views on the utility of surface vessels. While admitting that surface vessels would no longer play *as important a role as they played in the past*, this stopped short of the First Secretary's formulation that 'surface ships can no longer play the part they did in the past'. Gorshkov, in fact, was supporting the position adopted by Admiral Kasatonov, the Commander of the Black Sea Fleet, in his speech to the Supreme Soviet.

Kasatonov supported the reduction of the size of the armed forces because such a reduction could be achieved 'without any loss of defence potential' but on the question of surface vessels he significantly departed from Khrushchev's view.

The classes of major surface vessels, on which, until recently, conceptions about naval power was based, have lost their importance.\(^1\)

By specifying 'classes of major surface ships', i.e. aircraft carriers, battleships and artillery carrying cruisers, Kasatonov was omitting the new missile carrying surface ships which were building, the Kildin and Krupny class destroyers and the Kynda missile cruisers, as well as those guided missile ships, the Kashin destroyers and the Kresta cruisers, which by 1960 had been approved. It was these vessels, together with the missile armed submarines and aircraft, which constituted the basis for Kasatonov's claim that 'fundamental qualitative changes have been and are taking place in the Navy'.\(^2\)

While attempting to dissociate these new vessels from Khrushchev's all-embracing comments on the surface fleet, the naval leadership did not dissent from Khrushchev's appraisal of the submarine which 'assumes great importance'.\(^3\)

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2 Ibid.
3 Khrushchev, op.cit., p.C/16.
Gorshkov had claimed 'the significance of submarines...is sharply growing' and Kasatonov unequivocally stated that the basis of the fighting power of the Navy has become the submarine. This has substantially increased the war potential of the Navy.

Khrushchev repeated his general sweeping attack on 'military ships' in March 1960. He condensed all his scorn into one paragraph. Military vessels were categorised as militarily 'obsolete', 'out of fashion' and 'good targets for missiles'. Their only use was 'to make trips for state visits'.

In other statements of this period naval spokesmen continued to emphasise that it was only the large ship classes which had lost their former significance; they avoided mention of the missile vessels and stressed that submarines were now the fundamental combat force of the fleet. This fact was used to bolster the claim that 'the combat capabilities of the fleet have essentially broadened'. In addition, the claim that geographic features gave a special importance to the Navy was repeated from time to time. Not only was the Navy attempting to protect its new classes of surface vessels from the First Secretary's condemnation, but naval spokesmen, with varying degrees of aggressiveness, were attempting to create a recognition of the growing combat capabilities of the fleet. They hoped to overturn what was possibly a prevailing view in higher military councils in the early 1960s: that in the past enemy navies had only inflicted marginal damage on the Soviet Union and that this situation still obtained.

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1 Gorshkov, S.G., 'Faithful Guard of the Security of the Homeland'.
On Navy Day 1960 Admiral Gorshkov endorsed, but in a manner sufficiently qualified to indicate the Navy's position, Khrushchev's speech to the USSR Supreme Soviet.

Comrade Khrushchev stressed among other things that submarines were becoming very important in the Navy, while surface ships could no longer play the role they had played in the past. The large surface artillery ships and aircraft carriers, which only recently embodied the idea of naval might, now represent the yesterday of navies.1

Gorshkov did not specifically endorse the surface missile armed ships which were under construction at the time. Once again they were placed beyond criticism by contrast with 'the large artillery ships'. He did point to

the development of rocket weapons (together with) radio electronic and other types of modern equipment (which) greatly restricts the fighting capacity of aircraft carriers and further claimed

Those tasks which until recently were considered to be the privilege of an aircraft carrier navy can now be carried out to greater effect by other means.2

Although it is not specifically claimed that these 'other means' include missile firing surface vessels the construction plans of this period suggest that they formed at least a part of the 'other means'.

Gorshkov, in his effort to promote the Navy as a branch of the armed forces, stressed the importance of submarines:

(The)navy which most fully answers the demands of...modern warfare must be based on submarines. It is precisely in this direction that the navy of the Soviet Union is now

2Ibid.
developing. Its fighting potential has grown considerably, first and foremost because of an increase in the striking power of its submarines. This has produced a navy which 'is capable of solving successfully the extremely complicated problem of sea warfare'.

Gorshkov commented specifically on the issue of reduction in the armed forces.

The reduction of the Navy means not only the reduction in the number of its personnel and the scrapping or laying up of some of its vessels. Serious work must still be carried out, the final aim of which is to achieve a further increase in the combat readiness of naval forces.

This involved attention to training of servicemen in ships and units and to the structure of the Navy so that both should accord with existing technical equipment.

As is well known, far-reaching changes have been and will continue to take place in the Navy, beyond all comparison with the changes which about 100 years ago... marked the transition from sailing to steam ships.

By July 1961 the Soviet Union had reversed its policy on troop cuts and increased the publicly acknowledged defence expenditure by R.3,144 million or approximately one third of its previously acknowledged outlay.

This reversal was explained in terms of growing East-West tension over Berlin, the question of a German peace treaty and the defence policies of the new Kennedy administration. It is not unreasonable to suggest that

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1 Ibid.
2 Ibid.
Khrushchev's critics within the military seized on these issues to add weight to their arguments against the troop cuts, which appear to have been very unpopular, despite the verbal endorsement they received at the Supreme Soviet session.  

In speeches celebrating Navy Day 1961 Gorshkov and Marshal Grechko both placed importance on the surface ship. In part they may have been emboldened by Khrushchev's retreat from his position at the January 1960 session of the Supreme Soviet, but an equally important factor was certainly the beginning of missile ship deliveries to the fleet units. The original classes of these vessels, the Kynda, Kresta I and Krupny, all appeared in very small numbers suggesting that a radical reassessment of these vessels was undertaken in the late 1950s. It is unlikely that Gorshkov and Grechko would have expressed whatever doubts they shared about the utility of the new vessels in their speeches delivered at the first major public appearance of these ships.

Gorshkov characterised his navy as 'wholly modern' and 'capable of performing any operational task' and continued:

Its combat opportunities have grown considerably, as a result of an increase in the striking power of atomic submarines, surface vessels, the naval air force and rocket weapons.

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1 Marshals Konev, Sokolovsky and Timoshenko, the First Deputy Minister for Defence commanding the Warsaw Pact forces, the First Deputy Minister for Defence, Chief of General Staff and Commander of the Byelorussian military region respectively, refused to endorse Khrushchev's 14 January 1960 proposals for troop cuts. They were all subsequently removed from their posts and given lesser positions in a reshuffle of the military high command which occurred in April or May 1960. Tatu, Michel, Power in the Kremlin, p.70-73.

2 To be discussed in Chapter 8.

Marshal Grechko on the following day claimed:

The basic fighting power of the Soviet Navy consists of up-to-date atomic powered submarines armed with rockets for various purposes, surface ships, the fleet air arm and coastal units equipped with rocket weapons.¹

TASS reported that the Leningrad Naval Review involved not only 'veteran ships of the Soviet Navy' but also 'modern cruisers, destroyers, submarines, patrol vessels and minesweepers equipped with the most up-to-date weapons, including rockets', and highlighted 'rocket carrying boats for the destruction of large surface vessels'. The same report announced that 'for the first time...rocket carrying cruisers, destined for the destruction of large surface ships, such as aircraft carriers and cruisers' were now with the fleet and that these vessels were 'capable of making long voyages'.²

Besides the obvious highlighting of the new surface vessels the speeches of Navy Day are interesting because of Marshal Grechko's remarks.

Grechko was one of a number of officers closely identified with Khrushchev through wartime and post-war service in the Ukraine.³ He had replaced Marshal Konev as the First Deputy Minister of Defence, in charge of the Warsaw Pact Forces, after the reshuffle of positions which occurred in March-April 1960, as a result of Konev's failure to endorse the January announcement on troop cuts. Grechko, however, was not a creature of Khrushchev. He had taken a hard line over the detente policy in the

³ M. Tatu, op.cit., p.70-73.
aftermath of the U-2 affair, and was a supporter of the military's claim that its needs should be afforded a high priority in the development of communism.

Grechko's assessment of the role of the new surface warships which were about to enter service, may well have reflected Khrushchev's own views of these new vessels, for Khrushchev himself had noted in his report to the Supreme Soviet in May 1960 that the Navy's forces were 'in the process of converting to missile weapons, and strictly speaking, have already made the change-over'.

As Ullman has noted, Grechko's reference to surface ships suggests that sections of the Army leadership were prepared to recognise the increased significance of surface vessels, and hence accepted, at least in part, the budgetary claims of the Navy for these vessels especially in the post reassessment atmosphere of July 1961.

The TASS report of 30 July 1961 highlighted the role of these rocket-carrying cruisers: 'the destruction of large surface ships such as aircraft carriers and cruisers'.

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1 Prior to Khrushchev's departure to the Paris summit Grechko stated - 'we are convinced that at the Conference N.S. Khrushchev will know how to defend with honour the cause of peace, and how to unmask and undermine the designs of aggressive circles. We wish Nikita Sergeyevich success in the difficult Paris talks'. Pravda, 7 May 1960.

2 '...to build Communism does not mean to be concerned only with the development of the nation's economy, but to be concerned in every possible way with the strengthening of the Motherland's defensive capabilities and to raise the military readiness and might of the armed forces'. Grechko, A.A., Vysokoe prizvanie (A High Calling), Voenizdat, Moscow, 1962) p.5, cited in R. Kolkowicz, The Soviet Military and the Communist Party (Princeton, 1967) p.266.

3 Khrushchev, N.S. Concluding Remarks to the Supreme Soviet Session of 7 May 1960, Krasnaya Zvezda, 8 May 1960, cited R.W. Herrick, Soviet Naval Strategy, p.77. BBC SWB USSR 328/C.13, 1960, puts the statement more generally: 'We are going over to rocket weapons. Actually we have already gone over'.

4 Harlan Ullman, Despair and Euphoria, p.128-131.
and noted that the new vessels were capable of 'long voyages'. No mention was made of the fact that the new vessels, the Kildin and Krupny class missile destroyers, had a very limited wartime capability outside the range of shore based aviation.

Khrushchev made his position clearer in May 1962 when he told the All-Union Conference of Railroad Transport Workers of his recent visit to the Leningrad shipyards:

> And the naval vessels are very good too! More than once in the past we criticised the naval comrades for shortcomings in the development of the navy and demanded that it be modernised. **This criticism was not wasted** (emphasis added). What I saw were vessels that completely correspond to the modern development of the navy, the modern development of naval science and technology.

Khrushchev 'observed both civilian and naval shipyards, both surface and submarine shipbuilding' and confessed that he 'returned from Leningrad in a very happy mood'.

> While in Leningrad Khrushchev must have seen among other things the missile firing surface ships of the Kynda, Krupny and Kashin (SAM) classes.

By May 1962, if not by May 1960, the Navy seemed to have won endorsement for a programme of construction, including surface vessels, which corresponded to 'the modern development of naval science and technology' not only from sections of the Army but also from the First Secretary of the Communist Party. There was thus a measure of agreement on the development of what might be termed a 'balanced fleet'.

The debate, however, was by no means concluded. One of the claims put forward by advocates of a large ocean-going navy, at least since Stalin's pre-war construction programme, was that the Soviet Union as a nation 'washed by

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many seas and oceans' needed a strong navy. Gorshkov had claimed in 1960:

> The geographic features of our country...dictate that the Navy in particular will occupy an important place in the system of the Soviet Armed Forces.¹

This argument was refuted in the important *Military Strategy* edited by Marshal Sokolovsky which criticised Stalin's pre-war construction programme, based as it was on cruisers, battleships, and probably aircraft carriers,

> No consideration was given to the fact that two of our fleets were based in closed seas (the Baltic and Black Seas) while the Northern and Pacific fleets faced great difficulties in reaching the open seas. In this situation the main emphasis should have been on a submarine fleet and naval aviation.²

As has previously been indicated, the changed political map of Europe had done nothing to alter these basic geographic facts of Soviet naval life.³ The comments in *Military Strategy* not only denied that geography imposed a special importance on the Soviet fleet but directly opposed the view of the naval leadership that surface vessels played or should play a significant role in the Soviet Navy. The implications of geography could not be altered even by the fact that the new surface vessels of the 1960s 'completely corresponded to the modern development of the navy'. The authors of the Sokolovsky volume, none of whom was a naval officer, represent a significant group opposed to Grechko's apparent sanctioning of the surface vessels.

> It is also highly probable that the views expressed by these writers were shared by Malinovsky, the Minister of Defence. His speech to the 22nd Congress of the C.P.S.U.

¹ S.G. Gorshkov, 'Faithful Guard....', Sovetskii Flot, 23 February 1960.
³ p. 82 above.
noted the 'marked changes' which had occurred in the Navy and described it as a 'truly modern Navy capable of undertaking any active operations assigned to it far beyond our territorial waters' - a hollow claim as was indicated by events in the Caribbean a year later. Malinovsky continued:

Submarines for various purposes constitute the Navy's main force. In conditions of rocket nuclear warfare, they are incomparably more effective than surface vessels.

Given the previous assertion that a world war, should it be 'unleashed by the imperialist aggressors, will inevitably assume the character of a nuclear rocket war', Malinovsky was providing little comfort for those naval leaders who advocated a more balanced fleet. The invidious comparison with submarines was the only mention of surface vessels in the whole speech. Missile firing submarines were afforded an additional paragraph:

Nikita Sergeyevich Khrushchev reminded the over-zealous admirals of the West that modern military technology makes it possible to take under fire the vital centres and to destroy the naval vessels of any aggressors from submarines by means of ballistic and self-guided rockets.

One cannot help but wonder whether the over-zealous admirals were confined solely to 'the West'. For Malinovsky at least, modern military technology had made it possible to accomplish the major naval missions of war from one basic type of vessel: submarines. The only other branch of the Navy to be specifically mentioned was the 'naval rocket-carrying air force' which was called on 'to carry out military operations in cooperation with submarines'.

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2 ibid, C/13.
3 ibid, C/9.
4 ibid, C/14.
5 ibid, C/13.
Malinovsky's view on Gorshkov's claim for an 'important place in the system of Soviet Armed Forces' for the Navy was reflected in the fact that the Navy occupied the last place in the listing of the branches of the Armed Forces.

Malinovsky's speech highlighted the need for 'the combined action of all types of armed forces' and claimed that a future war would be fought with 'mass armed forces in all their millions,' a notable advance on his more cautious modification of Khrushchev's views in January 1960. The main firepower of the armed forces 'is now their rocket detachments and tactical operation units armed with nuclear and other rockets.' The motorised infantry had more than quadrupled in firepower since 1945 and the number of tanks in the 'modern motorised infantry' was increasing.

Such a view of a future war involving 'mass armed forces in all their millions' implied a need to develop the ground forces both in numbers as well as in quality of equipment. It presented a dramatic departure from the tone of discussion of January 1960 and was no doubt connected with Khrushchev's retreat from his earlier position. The implied demand for a larger slice of the defence budget for the ground forces meant that the Navy would find it particularly difficult to gain approval for the construction of large numbers of surface vessels which were not only expensive but, to paraphrase Malinovsky, incomparably less effective than submarines.

Khrushchev's address to the 22nd Congress also highlighted the role of the missile firing submarine without mentioning the new surface vessels.

The USSR is a continental Power. Those who wish to unleash war against us will be compelled to conquer the water. This is why we are building a powerful submarine fleet armed with target

1 ibid, C/10.
2 ibid, C/12
seeking rockets, so that it may be possible to shoot down in the ocean ships which approach the frontiers of the socialist countries. The Soviet submarine fleet with atomic engines, armed with ballistic and target seeking rockets, is standing alertly on guard over our socialist achievements. It will reply with a crushing blow against the aggressors, including their aircraft carriers, which in case of war will be quite a good target for our rockets launched from submarines.¹

Not only did Khrushchev evaluate the role of the missile firing submarine in terms which implied there was little else for any other branch of the Navy to do, but he also implied a primarily defensive role for the Navy, that of denying the control of the sea to those who sought to invade, or launch sea based nuclear strikes against, the Soviet Union. Moreover, Khrushchev claimed that the primary task, destruction of aircraft carriers, had been solved by missile firing submarines.

Admiral N.V. Isachenkov, Chief Naval Engineer, and responsible for the Navy's ship and submarine building programme, sought to interpret Khrushchev's claims with regard to submarines so that they included surface ships as well, by using the more ambiguous term 'warships':

Armed with homing missiles, Soviet warships have the capability of destroying at sea, from hundred of kilometres away, the merchant vessels and warships, in particular aircraft carriers which, as was correctly observed by Nikita Sergeyevich Khrushchev at the XXIInd Congress of the CPSU, make good targets for our homing missiles.²

Rear Admiral V. Prokofiev was far less subtle in his critique of the Khrushchev/Malinovsky position on the navy:

Soviet naval thought opposes the one-sided exaggeration to an extreme of any particular arm (of the Navy). Naval combat operations will develop over enormous ocean and coastal areas and will require the cooperation of all forces as well as comprehensive combat support for the main striking force—submarines. Surface ships in particular will have to solve a large number of tasks, which in contemporary warfare conditions have become exceptionally complex.

The Rear Admiral affirmed the position of the submarine as 'the main striking force' and yet clearly saw a large number of complex tasks for surface vessels, one of which was the combat support of submarines. In other writings the need for combat support for submarines, when it was raised at all, was assigned to naval rocket-carrying aviation.

Khrushchev's uncharacteristic accolade to naval vessels in May 1962 had been preceded on 29 April by the elevation of Gorshkov to the rank of Fleet Admiral which corresponded to the combined arms rank of General of the Army and Marshal of an Arm of Service, i.e. to four-star rank.

That year Admiral of the Fleet S.G. Gorshkov addressed the Northern Fleet on Navy Day. He described the Northern Fleet as comprising

- the most modern submarines with mighty rocket weapons. It is a fleet of the latest rocket carrying attack aviation, surface carrying rocket ships and other contemporary weapons which make it possible to crush any aggressor if he attempts to violate the northern sea frontiers of the USSR.


2 Pravda, 29 April 1962. The rank of Admiral of the Fleet was specially created for Gorshkov. Before 1962 there was a gap between Admiral (3-star) and Admiral of the Fleet of the Soviet Union (5-star).

3 Moscow Tass in Russian to Europe, 17.36 GMT 9 July 1962, FBIS USSR National Affairs CC/19, 30 July 1962.
Gorshkov described the Army and Navy as equipped with the latest military technology, weapons and ships (all of which)...fully meet the demands of conducting military action in the nuclear rocket era.1

Gorshkov was at pains to stress the suitability of his new vessels to the demands of the new age, for they were the end product of the very same military technology which had enabled the Army to move into the nuclear age.

Nonetheless Gorshkov acknowledged that 'main attention' was still directed to the submarine programme, especially to the nuclear powered boats which were 'the backbone of our submarine fleet'.2 At this stage, he must have been referring to the N-class attack submarines, the H-class Fleet ballistic missile submarines, and the early E-class SSGN, although others were undoubtedly being planned and developed at the time.

Gorshkov also mentioned in this talk the new concept of the 'sea-air force' and the fact that surface missile ships were continuing to be built.

The most significant of the 1962 Navy Day statements, however, was to appear in the Pravda article which marked the occasion. Gorshkov repeated the claim that 'atomic submarines were the foundation of our Navy', and then added 'on a level with submarines in the armament of our Navy are surface ships carrying missile weapons and the latest equipment'. He further reported that naval missile aviation was being perfected and that coastal units were being 'armed with missile weapons ASW weapons, torpedoes, mines and artillery'.3

The statement that missile armed surface vessels were on a level with submarines marks the high point for claims by naval spokesmen on behalf of the surface fleet.

1 ibid.
Another significant observation made on Navy Day 1962 was that:

The might of the Navy is now determined in the first place not by the number of pennants, but by the quality of the vessels, by their being equipped with modern military weapons. ¹

In a June 1963 discussion with Harold Wilson, Khrushchev claimed that the Soviet Union had discontinued production of surface vessels because of their total vulnerability. ²

The speeches for the 1963 Navy Day continued to emphasise that missile armed atomic submarines formed the basis of the Soviet Navy. ³ This said, however, Admiral Isakov went on to claim that 'our naval forces can solve any operational problem' and that:

This situation has been achieved as a result of the radical rearming of the navy, and the equipping of submarines and surface craft with long range rockets. ⁴

Isakov then repeated Gorshkov's claim of the previous year that naval strength was determined by qualitative features and not by the number of pennants and concluded 'today we possess a most modern navy'. This new Soviet Navy based on submarines and surface vessels and equipped with nuclear propulsion, rocketry and new electronic and computing equipment, 'has put an end to the undivided domination of the high seas by the traditional sea powers'. ⁵

Gorshkov's contribution to Navy Day celebrations declared that the Soviet Navy was an ocean-going navy.

¹ ibid, FBIS USSR National Affairs 30 July 1962, p.CC/22-23.
² Times, 11 June 1963, p.12, New York Times, 11 June 1963, p.1. The sources for this comment do not make it clear whether Khrushchev was referring to all surface vessels or merely to the artillery firing vessels.
³ For example, Vice Admiral V.A. Grishanov, Moscow Home Service 0630 and 1700 GMT 27 July 1963, BBC SWB SU/1313/B/3.
⁴ Isakov, interview, p.B/4, emphasis added).
⁵ ibid.
capable of fighting the enemy at great distances from its bases and destroying surface ships and submarines as well as launching blows directly at enemy land targets. Emphasis was placed on the technical advances that had been made in the Navy and the power of nuclear missiles. No attempt was made to distinguish between the submarine and the surface ship as carriers of these weapons 'just as aircraft carriers replaced battleships, the first are increasingly losing their value as compared to the new rocket forces of the modern navy'.

During his Scandinavian tour of mid-1964 Khrushchev told a meeting of Swedish shipbuilders:

We have freed our shipyards from the building of large naval ships - battleships and cruisers - since such ships will not represent a serious military force in the conditions of a future thermo-nuclear world war...

Khrushchev returned to this theme, an attack on the large artillery firing vessels of the Stalin era, at a Kremlin address to the graduates of the Military Academies:

Ten years ago (i.e. in 1954) the question arose of the need for rearming our navy which was based at the time on cruisers, destroyers and other vessels, mostly surface ships. These weapons had become in many ways obsolete for waging war in present day conditions...

Gorshkov also looked back to 1954 as marking the beginning of a decade 'which has been marked by revolutionary changes in naval construction...changes which are unprecedented in significance in naval history'.

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4 Pravda, article by Admiral Gorshkov, Text of report, Tass Russian for Abroad 22.40 GMT 25 July 1964 and in English 8.15 GMT 26 July 1964, BBC SWB USSR 1616/C/2.
Whereas Khrushchev, in his remarks to the graduates, stressed the role of nuclear powered submarines in the post-1954 naval construction programme, Gorshkov claimed that the naval forces as a whole were the most modern in the world, and pointed to the advanced engineering principles 'contained in the designs of our submarines, aircraft and surface ships'. For the future Gorshkov looked to

our advantages...being reliably consolidated by building even more up-to-date submarines, surface vessels and aircraft, as well as a vast arsenal of new technical means of naval warfare.\(^1\)

Gorshkov was, however, under no illusion as to the primacy of the 'qualitatively new nuclear-missile submarine and naval air arm' which he alleged 'alters the balance of sea power in favour of the Soviet Union.'\(^2\)

The material cited above suggests that, from 1962 at least the division between Khrushchev and the navy was nowhere near as wide as is sometimes suggested.\(^3\) Even in January 1960, when Khrushchev made his most sweeping attack, it is possible that he was referring to artillery firing vessels. Certainly in the report 'A Cruiser is Struck from the List', the context suggests that only these vessels were the object of his scorn. In this, as has been indicated, he was supported by the Soviet Admirals. There was divergence over the question of positive support for the new generation of missile-armed surface vessels. Khrushchev had said that these vessels were 'very good' after his visit to the Leningrad shipyards. In general, however, he avoided mention of the surface fleet except to pour scorn on Stalin's building programme. However, he placed great emphasis on the submarine fleet and in particular, the nuclear powered vessels, which led some Soviet naval spokesmen to warn against 'one-sided emphasis' on any branch of the navy.

\(^1\) ibid.
\(^2\) ibid.
\(^3\) for example, R.W. Herrick *Soviet Naval Strategy*, p.67-91.
One interesting point, frequently overlooked in assessing Khrushchev's relations with, and views on, the Navy, is the attempt in October 1961 to blame Marshal Zhukov for the navy's shortcomings. Izvestia claimed that Zhukov had deemed the Navy archaic and had opposed the introduction of modern weapons. While the charge may or may not be correct, this campaign was obviously undertaken to shift the responsibility for the current weaknesses in the state of the navy onto the shoulders of the former Minister for Defence. Khrushchev thereby sought to avoid any internal naval criticism and was able to claim that all that was best in the navy originated post-1954. It is true that Khrushchev viewed the uses of the Navy in a specifically nuclear war context but there is little or no evidence at this time of the naval leadership making any claims or preparations for a wider role.

Soviet Public Evaluation of Polaris 1960-1964

The appearance of the work Military Strategy in 1962 gave another opportunity for debate - this time about the missions of the Navy. As we have seen, the authors claimed as the main aim for fleet operations the defeat of the enemy navy and the severing of his maritime communications. In addition, the navy may be called on to deliver missile nuclear strikes on coastal targets, conduct joint operations with units of the ground forces, provide naval transport and defend the Soviet Union's own coastal sea lines of communication.

The main mission of (NATO) naval forces in a general nuclear war is to win naval supremacy, in conjunction with strategic offensive forces and tactical air forces, by delivering nuclear

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2 The role of protecting state interests at sea had been mentioned but never defined and in the context in which it had been used it suggested a wartime requirement.
strikes on enemy missile installations, on naval and air forces in bases or at sea, and on other military and industrial targets.

... The basic naval power of the coalition is provided by the US Navy, and to a lesser extent by the British Navy, which have substantial means for delivering nuclear weapons.¹

It was also suggested that 'the main striking power of the American and British navies is provided by carrier aviation.'²

The most striking aspect of this account of the 'Imperialist States' naval forces is the omission of any reference to the 'Polaris' system. The listing of major components of the American and British naval forces includes 21 attack carriers, five submarines armed with Regulus missiles, 15 nuclear submarines armed with torpedoes and 27 ships with guided anti-aircraft missiles.³ It is possible that this omission is deliberate. It effectively removes the anti-Polaris role from the list of naval concerns, for the navy is specifically charged with countering the enemy navy, presumably as itemised above. The Polaris system had previously been described in some detail, so it is not likely that the authors omitted reference to it by mistake. The Polaris missile carried by nuclear powered submarines ranked only after the Minuteman missile in importance. It was noted that

The ability of these submarines to cruise submerged for a prolonged period and to launch missiles while submerged assures high mobility and good concealment and makes them practically invulnerable to enemy ballistic missiles.⁴

¹ ibid, p.186.
² ibid, p.187.
³ ibid, p.186-7.
⁴ ibid., p.174.
Despite the realistic assessment of the Polaris system, which was coupled with an acknowledgement of the development of longer ranged missiles for the nuclear-powered submarines, a subsequent resume of the imperialist powers' naval equipment and the missions assigned to them in a future war still gave priority to the attack carriers.1

In the chapter 'Methods of Conducting Warfare', the Polaris system is specifically mentioned. Here the reader is assured that counter to the claims of the foreign press (and perhaps even to the impression previously given earlier in the book).

these weapons are also vulnerable. Homing missiles launched by submarines and surface ships are an effective weapon against missile carrying nuclear submarines.

Missile carrying aircraft can also fight nuclear submarines by taking advantage of certain of their weak features, particularly the lengthy preparations required to launch missiles. In addition, strikes by the Missile Forces can destroy submarine bases.2

This optimism mirrored that expressed on a number of public occasions and suggests that at least in non-naval circles there may have been some confusion between the Polaris SLBM and the Regulus cruise missile. Malinovsky claimed in his address on the occasion of the 44th Anniversary of the Armed Forces:

Our country's submarine fleet is equipped with various types of missiles that can destroy enemy ships hundreds of kilometres distant from the shores of the socialist camp and that can reduce the enemy naval and land bases to dust. Nor will the submarines equipped with Polaris missiles on which the imperialists have placed such hopes be spared from destruction and they too will find graves in the depths of the sea.3

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1 Ibid, p.348.
2 Ibid., p.409.
A newspaper commentator, Yury Zhukov, attempted to diminish the extent of the effort that would be required to combat the Polaris system, and the threat that the system posed, by pointing out that the United States Navy had 'only nine Polaris armed atomic submarines in operation'. Zhukov chose to overlook the fact that the nine would eventually rise to a total of forty-one units, capable of operating in regions as distant from the Soviet Union's own fleet areas as the Indian Ocean. Zhukov claimed that it was difficult seriously to consider these nine vessels will be able to attack all of Eurasia with impunity. Especially since the Soviet atomic submarine fleet is not napping and has long been prepared against the eventuality of the need to neutralise the aggressors.¹

The vagueness of Zhukov's reassuring formulation leaves it open to doubt whether he was claiming the existence of a fleet of atomic powered hunter-killer submarines to neutralise Polaris or whether he had in mind 'a retaliatory blow to the homeland of the aggressor'. What is certain is that by deliberately omitting any reference to the full extent of the Polaris programme he was contributing to the broad public campaign of reassurance and confidence in the ability of the Armed Forces to combat the Polaris system.

Boris Teplinsky, in similar vague and reassuring vein, reminded his readers of Khrushchev's warning to the militarists who boast that they have Polaris submarines...(that they) would do well to remember that we are not empty handed either.²

Gorshkov himself contributed to this public campaign when he claimed:

¹ Yury Zhukov, 'Caution! An Aggressor is Hiding under Water'. Pravda, 11 February 1963, p.3.
Like submarines with ordinary engines, American atomic submarines have been spotted more than once by the forces of the Soviet Navy in various regions of the oceans.

On a more realistic note he observed 'these submarines no less than ordinary ones are in need of bases', implying that this was at least one weak point in the Polaris system.

Malinovsky returned to the theme of the Soviet Navy's ability to counter the threat in February 1963.

Present day submarines are capable of fighting successful actions against aircraft carriers and missile carrying surface ships, and destroying his military installations on land...

Along with submarines, naval missile carrying and anti-submarine aircraft have also become a very important arm of our navy. These planes have the ability to hunt down at sea and destroy both enemy surface ships and submarines.

...I must declare with full responsibility that this will not yield the Pentagon chiefs the military advantages they are counting on. Our navy, in cooperation with missile forces and air force is capable of coping equally well with land and underwater missile bases.

In the non-military writings of the time another line was adopted on methods to counter 'Polaris'. There was an attempt to denigrate the system as such, thereby reassuring the wider periodical and newspaper reading public. It was claimed for example that the missile itself was unreliable, and that the nuclear submarines which carried the missile were liable to breakdowns. R.W. Herrick has also pointed to the fact that the submarines were alleged to be noisy, at a disadvantage vis a vis aircraft in respect of speed, and highly vulnerable to underwater explosions.

1 S.G. Gorshkov, 'Short Sighted Strategy', Izvestia, 19 May 1963, p.3.
In addition to this attempt to reassure through denigration, a variety of apparently non-naval solutions to the problem posed by 'Polaris' appeared in the Soviet Press. On the occasion of the 43rd Anniversary of Great October, Kozlov told the Moscow Soviet that the establishment of the Holy Loch base as a 'send off point for American atomic submarines equipped with nuclear armed rockets' would 'distinctly heighten the danger for Britain itself should a conflict break out.'\(^1\) This warning was repeated in a TASS statement on 11 December 1960 which ridiculed Prime Minister MacMillan's statement that in the event of a possible 'provocation' by Polaris submarines outside British territorial waters, 'counter measures should apply to these boats only and not to their base in Britain'.\(^2\) The TASS release characterised as naive people who held that a state attacked by a missile firing submarine should strike back only at the place in the ocean where the submarine was thought to be and not at its supply base. Rather, the release pointed out,

> The Soviet Union holds a different view on this score. And so did the British Government in past conflicts when...it struck back not only against the enemy submarines but also against their bases.\(^3\)

Besides indicating that 'strikes by Missile Forces can destroy submarine bases',\(^4\) pronouncements such as the one above provided support for those domestic opponents of overseas fleet ballistic missile submarine (FBMS) bases in the host countries, who argued that the establishment of such bases decreased the security of the country.

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\(^3\) ibid.
The destruction of bases and the FMBS tenders would, however, have no effect on the ability of the Polaris boats at sea or on station to launch their sixteen missiles. There is an indication that at least some members of the Soviet Institute of World Economy and International Relations recognised the second strike role of the Polaris system:

The Naval Command (US) urges that the spotlight be directed at its Polaris missile atom-powered submarines which are being hailed as the specific retaliation weapon and, hence, a deterrent.1

The Soviet Union could launch missile strikes against the fixed and highly vulnerable land based navigation and communications facilities in an attempt to counter the submarines already at sea. It was held that the Polaris submarines were by no means an isolated autarkic system of weapons capable of operating independently in the ocean depths. On the contrary, their efficiency depends entirely on the work of surface bases and installations.

In particular they needed 'an extensive communication system and control and navigation stations'.2

If such stations transmitting orders and navigation instructions were knocked out, the submarine missile carriers would find themselves in the position of the mythical Cyclops. Blinded, they would have either to stop operating, or strike blows in the dark.3

The implied threat of a holocaust on the territory of any country which allowed the establishment of Polaris submarine support, communication or navigational facilities

1 Sheinin, Y. Disarmament or 'Balance of Terror', International Affairs (Moscow) August 1961, p.26. emphasis added.
3 ibid, p.60.
on its territories was a continuing theme of articles and statements throughout this period.¹

This campaign blended with the more positive attempt to establish nuclear free zones especially in the Mediterranean Sea and the Indian Ocean. The nuclear free zone proposals met with a degree of success, particularly among the nations of the neutralist Third World, but as a whole the effect was not sufficient to inconvenience the Polaris effort. It is probable that there was a great deal of propaganda behind these essentially non-naval 'solutions' to the Polaris problem. Not only did the USSR, until the mid-1960s, have too few ICBMs to use on the Polaris infrastructure but, more importantly, the Polaris systems of the early 1960s were primarily to be employed against 'soft' targets, i.e. in a counter city role. This implies that the navigational accuracy available from the submarines' internal inertial navigation system, upgraded by periodic correction from external fixed site systems, is sufficient for the task. Hence the submarine is not continuously dependent on external navigation stations, as had been claimed. Nor, in the counter city role, is the submarine entirely dependent on communications. Langer has correctly observed:

¹ See, for example:
  Malinovsky, Address to 44th Anniversary of the Armed Forces, Pravda, 23 February 1962, p.4.
  Y. Shvedkov, op.cit., p.56-61.
For counter city warfare all that is really required is a single message that gives the code to unlock the firing mechanisms on the missiles. Even if all further communications are cut off, the local commander can then proceed to hit preassigned targets. It is of course preferable that more detailed command and control should be possible, but it is not absolutely essential. Moreover, for the purpose of 'deterrence' it does not matter much how great a delay there can be in receiving such a message. The certainty that no matter how greatly a communications network is damaged, eventually such a message will get through (although it may involve the submarine in surfacing or sending up an aerial) is quite sufficient.  

The Strategic Rocket Forces were apparently attempting to claim the major role in the task of combatting the submarines at the expense of the navy. They may not have been aware of the high level of autonomy the Polaris system possessed, for the Soviet Union at that time had no equivalent weapons system.

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CHAPTER VII

CONCLUSION

The military debate occasioned by the availability of a new generation of tactical weapons and the initial deployment of Soviet ICBMs had important implications for the Navy. The developments were of particular significance because of the limited functional orientation which the rest of the armed forces and the politicians brought to their consideration of naval affairs. During the period 1960-64 the Navy was a beleaguered service: non-naval officers held that its role in a future war was uncertain and naval operations would be hardly decisive. Within this context of uncertainty there was general agreement that the Navy would play its major role in countering sea based strikes against the USSR and that this could best be carried out by submarines.

The Navy therefore had two major tasks which were reflected in a number of statements and articles by senior naval officers in the period: to establish the importance of the naval contribution in a future war and to protect, to the extent possible, the new missile armed surface fleet. Naval spokesmen emphasised the importance of the submarine fleet, and in particular the nuclear powered missile armed boats, which were seen as the basis of the navy's fighting power. This reorientation it was claimed substantially increased the war potential of the Navy. Although the naval spokesmen did not particularly single out the SLBM component of the submarine arm this was not true of other military figures who rated the SLBMs second to the ICBMs in their accounts of Soviet military might. Naval spokesmen limited their criticisms of surface vessels to battleships, artillery firing cruisers and attack carriers which were consigned to the "yesterday of navies".

By mid 1961, following the introduction of the first classes of missile armed surface ships a variety of figures commented positively on their contribution to Soviet naval power. Despite this endorsement it was apparent that among
non-naval leaders the submarine fleet was regarded as the primary force of the navy, with which naval officers by and large agreed, and that its combat capabilities were excessively exaggerated.

Having to some extent re-established the importance of the Navy, by emphasising the major re-orientation brought about by the development of the qualitatively new submarine fleet, many naval writers turned their attention to the campaign against extreme one sided exaggeration of any branch of the service. Submarines, acknowledged as the main striking force of the navy, needed combat support, not only from naval aviation but also from surface ships if they were to successfully carry out their role.
Overview of Naval Construction

The design decisions of the mid 1950s resulted in a shift away from conventionally armed large surface ships and submarines, which had been the basis of the immediate post war construction programme, to a force of vessels and aircraft armed with long range cruise missiles. These missile armed vessels, which were considerably lighter than their predecessors, required shore based air support, and hence had a restricted operational radius, during a future conflict against a major sea power equipped with aircraft carriers.

Towards the end of the 1950s submarines, including some armed with SSM, and aircraft armed with ASM began to conduct coordinated exercises off the Norwegian coast designed to test the capability of these systems against the high value attack carriers of the USN and its major European allies. These exercises, conducted outside the range of Soviet fighter protection, confirmed that a major reassessment of Soviet naval requirements was a matter of some urgency.

During the late 1950s and early to mid 1960s decisions were taken which had the effect of downgrading the long range missile equipped surface ships and substituting vessels equipped with SAM. The SAM equipped vessels, together with improvements in shipboard AA artillery, increased the probability of Soviet surface vessels being able to survive in a hostile maritime-air environment without fighter support. The horizon range SSM's entry into service aboard the Kresta II and subsequent surface vessels circumvented the problems of mid course guidance and high altitude flight paths, but, as we shall see, at

*This section has not been footnoted. Relevant footnotes may be found in the detailed ship type sections.
The ASW capabilities of surface ships were significantly increased during this period by the inclusion of single helicopters and hangars aboard the missile cruisers and destroyers which were designated anti-submarine vessels by the Soviets. These vessels were also equipped with new sonar equipment and improved ASW weapons including an ASW missile system aboard the Moskva and Kuril classes. In his "United States Military Posture for F.Y. 1977" statement the chairman of the U.S. Joint Chiefs of Staff revealed that the Kara class cruiser also carried an ASW missile. Previously it had been thought that these vessels together with the Kresta II and Krivak destroyers had carried a horizon range SSM which had been given the NATO designation SSN-10. It is now apparent that all these vessels are ASW vessels (which has always been their Soviet designation).

Some commentators have also persuasively argued that the Kashins and Kildins, which previous Western opinion had held were armed with SSN-11s, are in fact ASW vessels and that the SSN-11 (NATO) although outwardly resembling the SSM on the OSA II is an ASW weapon.

This information and argument suggests that from 1966 onwards all major Soviet surface vessels have been ASW ships, as the Soviets have consistently maintained. Indeed the only new surface ships currently under construction with an SSM capability are the small 800 ton vessels of the class Nanuchka. The dramatic change in emphasis from SSM to ASW armament suggests a possible attempt to provide a strategic ASW capability, although such vessels appear more suited to a tactical ASW role, offering the possibility of a sanitised area surrounding high value vessels.
some cost to the security of the launch platform.

The tactical ASW capabilities of surface ships were significantly increased, primarily by the inclusion of single helicopters and helicopter hangars aboard the missile cruisers and destroyers, which were designated anti-submarine vessels by the Soviets. ASW capabilities were also increased by the deployment of new sonar equipment and improvements in ASW weapons, including the introduction of an ASW missile system aboard the Moskva and Kuril classes. These two classes themselves suggested a possible attempt to provide a strategic ASW capability, although such vessels appear more suited to a tactical ASW role, offering the possibility of a 'sanitised' area surrounding groupings of surface ships.

The development of surface units for coastal defence operations has been subject to an important change in recent years. The original post-war programme had seen the construction of three broad types of vessels for coastal operations, frigates, submarine chasers and numerous torpedo boats, which were to be partially replaced by the Komar and Osa missile boats. It would appear that the recent Grisha and Nanuchka missile corvettes are to replace these vessels. Both are considerably lighter than the artillery armed frigates, enabling the Nanuchka to be built on ways at Petrovsky, the former site of missile boat construction. Horizon range SSM provides the Nanuchka with greater hitting power than the frigates against surface warships while its larger size provides a more stable platform for its missile systems than the missile boats. Protection against aircraft is provided by the SA-N-4 system common to both classes and shore based aviation.

The anti-submarine capability for coastal areas is provided by the Grisha armed with two 12-barrelled A/S rocket launchers and four A/S torpedo tubes. This represents a diminished A/S armament over the former Mirka and Petya class frigates which were also provided, after modifications, with variable depth sonar (VDS).
ASW Armament of Recent Soviet Frigates and the Grisha Corvette

<table>
<thead>
<tr>
<th>Rocket Launchers</th>
<th>Torpedo Tubes</th>
<th>VDS</th>
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</thead>
<tbody>
<tr>
<td>Petya I</td>
<td>4 16-barrel</td>
<td>5-406mm</td>
</tr>
<tr>
<td>Petya II</td>
<td>2 12-barrel</td>
<td>10-406mm</td>
</tr>
<tr>
<td>Mirka I</td>
<td>4 12-barrel</td>
<td>5-406mm</td>
</tr>
<tr>
<td>Mirka II</td>
<td>2 16-barrel</td>
<td>10-406mm</td>
</tr>
<tr>
<td>Grisha</td>
<td>2 12-barrel</td>
<td>4-406mm</td>
</tr>
</tbody>
</table>

(Janes Fighting Ships 1974/5, p. 563)

Submarines in all three major categories, SSBN, SSGN and attack continued in production subject to the hiatus between 1963 and 1967 in SSBN and SSN already discussed. The number of nuclear powered units increased substantially in all categories. Conventional power has been used only in the construction of medium range SS.

Improvements in SLBM technology permitted the retrofitting of longer ranged missiles capable of submerged launch into existing units of the H and G class. There was no second generation hull/propulsion system adopted to the SSBN role but in 1967 the first of a new generation SSBN, complete with new missile system, appeared; the Y-class submarine. Missiles for the Y-class, 16 per boat, have a range of approximately 1,500 miles and are submerge-launched. The follow-on D class SSBN, equipped with a new 4,800 mile missile, has recently entered service, possibly in two versions; the first equipped with 12 launchers and the second with 16 launchers.

The construction of SSGN's, which had taken precedence over new SSBNs and SSNs during the period 1963-67, continued, but at a slower rate than previously. The new C class SSGN was equipped with an underwater launch horizon range missile, and is apparently to be used in operations against aircraft carriers and other high value surface units.

The Soviet Navy introduced a new SSN, the V-class, the production rate of which has been quite low, probably due to the demands of the SSBN programme. In all the Soviet
Navy has 12 N-class vessels and possibly 14 V SSNs together with a single unit A and it is unlikely that these 27 vessels are sufficient for Soviet requirements, given their possible roles of counter enemy SSBN and protecting own SSBN. The recently observed modification of EI units, involving the removal of missile launchers from three of the class, could represent a Soviet attempt to make good this lack, at least until such time as the current SSBN programme is completed, or slowed, as a result of reaching the upper limits agreed to under the SALT I agreements. This would allow the release of facilities for additional SSN construction.

From Khrushchev to Brezhnev - Kosygin

The present force structure of the Soviet Navy is very much a product of the Khrushchev period, given a minimum ten-year lead-time between design decisions and the entry of vessels into service. As we have seen the former Premier and First Secretary was a radical innovatory interventionist in military affairs and his interventions had a dramatic impact on the Navy.

The collective leadership which replaced Khrushchev has not shown the same inclination to intervene publicly in military affairs. Undoubtedly they are concerned with the economic impact of military programmes and have intervened, from time to time, but at Politburo-level. The mystery surrounding the fortnight gap between Malinovsky's death, following a prolonged illness, and the appointment of Marshal Grechko as Defence Minister; the impact of the 1967 Basic Law on Military Service, not only on the period of service and training of enlisted men but on the revised set of retirement ages of senior officers; the continuing problems arising out of the issue of the military's role in defence policy making have all been discussed by others. \(^1\)

The important point is not that the politicians have met resistance to their programmes from the military but that this resistance has, by and large, been contained behind closed doors. Thus the evidence available for such rifts
Footnote to Page 269

1 For a brief account of the evidence suggesting that the initial preference of the politicians for the new Defence Minister was Party Secretary Ustinov, a man whose career has been in the administration of armaments production, see Gallagher, M.P., and Speilmann, K.F., Soviet Decision Making for Defense (New York, Washington, London, 1972), p.41-42.


For an account of its impact on the lower levels of the officer corps, see Erickson, J., Soviet Military Power (London, 1971), especially p.13-40.

Gallagher and Speilmann, op.cit., report that after a check on some 30 top level officers at least 20 are continuing in service despite having passed the age of obligatory retirement.

The politicians' desire for a rejuvenated officer corps has, for whatever reason, apparently been stalled by the military.

The problem of the role of the military professional in defence policy making has been given an additional twist by the Soviet military's recent adoption of a wide range of analysis and management techniques, designed to provide more and better information on a wide range of procurement, and command questions. See Holloway, D. 'Technology, Management and the Soviet Military Establishment', Adelphi Paper No. 76, (London, April 1971).
is purely circumstantial.

The politicians may have come under criticism from the military over their handling of the political side of the Czechoslovakian invasion.¹ The 1967 Middle East War also appears to have caused some rumblings within the government, which may have been reflected in the military.² More recently it has been suggested that the military may have opposed Brezhnev's apparent agreement at the Vladivostok summit that forward based systems should not be taken into account during SALT II negotiations on the grounds that such weapons 'are not suitable for a significant attack on the Soviet Union'.³

Despite these possible differences of opinion, recent years have seen the importance of orderly and regular procedures stressed and new techniques of analysis introduced into military policy planning.⁴ This is, at least in part, a reflection of the belief that Khrushchev's 'subjective' style of leadership unduly affected the substance of military policy.


² Nikolai Yegorichev, the first secretary of the Moscow City Party was removed from office, according to Western reports, because of his outspoken opposition to Politburo policy on the Middle East. Whether Yegorichev was urging the Politburo to take firmer action or whether he was demanding to know how the Soviet Union had become immersed in the Middle East and suffered a loss of prestige when the Egyptians, heavily armed with Soviet equipment, were routed is not at issue. Sections of the armed forces could have been in support of either view. Wolfe, T.W., Soviet Power, p.339. Dornberg, J., Brezhnev (London, 1974), p.214, suggests that the major impact of Yegorichev's demotion was to undermine the power base of Shelepin.

³ Zorza, V. 'SALT and the Military', International Herald Tribune, 12 December 1974, p.6. The quotation is attributed to Dr. Kissinger.

⁴ Holloway, op.cit., for an excellent survey of these techniques, their introduction and impact on Soviet military-political relations.
The introduction of the new analytical techniques has not necessarily given rise to the dominance of the military professionals in defence policy, but has rather improved the quality of their advice to the political leadership. This may have resulted in a strengthening of the professionals' case. Lieutenant-Colonel Ivanov claims

the more the political leadership relies on conclusions based on military science (as opposed to military philosophy or the leader's own subjective notions?) the more effective and effectual will be the decisions they take, and the greater will be the unity of political and military leadership.1

It would be naive to suggest that there is a simple, direct connection between the fruits of analysis and the outcome of defence decision, yet it is probably true that analysis has strengthened the position of the military professional against the subjectivism, hare-brained scheming, hasty conclusions and rash decisions for which the new leadership condemned Khrushchev.

In areas where there is evidence of apparent conflict between the political leadership and the military, the politicians have been flexible. Grechko, the military heir-presumptive to Malinovsky rather than a civilian, was made Defence Minister. Senior officers have not been forced into retirement under the provisions of the military service law, either because of direct pressure from the military to safeguard their colleagues, or because of an assessment that rejuvenation, to the extent desired, was not possible within a limited time span.

Moreover, the present political leadership has done much that would tend to satisfy the armed forces. The military budget allocation was substantially increased in 1967, enabling the major surge in Soviet missile deployments.2

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1 Ivanov, V., 'The Scientific principles of leading the defence of the socialist fatherland', K.V.S. 1969 No. 16, p.12, cited in Holloway, op.cit., p.36.
which began in 1966. The present leadership has given consistent support for the expansion of strategic forces so that the Soviet Union now occupies a position of rough parity (some would maintain superiority) vis-a-vis US strategic forces.

It is difficult at this stage to be sure of the political leadership’s attitudes towards the Navy. We know that Brezhnev had a significant association with Gorshkov dating to the war years. Gorshkov was deputy commander of the Novorossiysk defence region and commander of the Azov sea flotilla. His naval units played major roles in the battles for the Caucasus and on the Black Sea in 1942 and 1943 where he and Brezhnev first met. (At the time Brezhnev was political commissar of the Carpathian Military District). Their paths crossed again when Brezhnev became chief political commissar of the Navy in March 1953, a week prior to the abolition of the separate navy ministry. Gorshkov at the time was chief-of-staff of the Soviet Navy.

Wartime acquaintances may not count forever, and there is an increasing tendency to suggest that Gorshkov and Brezhnev may have had a recent series of disputes. Brezhnev's biographer suggests that following the mining of North Vietnamese harbours Gorshkov advocated sending in minesweepers to clear the ports. Brezhnev rejected the idea. There is also a great deal of Gorshkov's 'Navies in War and Peace' series which can be used as urging a greater role for the navy in the face of the political leadership's indifference.

1 SIPRI Year Book 1975, p.89, and Ball, D.J., Strategic Missile Programme, p.100-104.
2 Dornberg, Brezhnev, p.87, 123 and 125.
3 Ibid, p.265.
We shall be in a better position to judge this question when the results of the early 1970s decisions affecting naval procurement become clearer. Unfortunately we are not likely to see the results of these decisions until the 1980s, although there will undoubtedly be straws in the wind prior to that date. 'Navies in War and Peace' may be the first such straw and certainly future assessments of the design decisions of the early 1970s would be well advised to compare the fruits of the programme with Gorshkov's stated requirements.  

The Kuril Class: Aircraft Carriers

The construction of two units of what may prove to be a much larger class of aircraft carriers seems at first to contradict earlier pronouncements by Soviet spokesmen. Khrushchev told the XXII Congress of the CPSU that carriers made good targets for missiles and Gorshkov had relegated the attack carrier to the yesterday of navies. 

The implied reversal is probably more apparent than real. Firstly, the Soviet designation for the Kuril class is not aircraft carrier, but rather anti-submarine cruiser (Protivo lodochny kreyzer) as is the Moskva class.

1 See in particular the last article in the series 'Some Problems in Mastering the World Oceans'.
2 Khrushchev, N.S., Speech to the XXII Congress of the CPSU. Khrushchev's memoirs indicate that this may have been another example of Khrushchev's self confessed sin of public boasting. In a critical review of Stalin's post war construction programme he states: 'A navy without aircraft carriers is no navy at all' (p.20). Later in justifying the cancellation of the surface navy he claims: 'Carrier based aircraft can easily sight and sink surface ships', (p.30). His own assessment of carriers appears to be higher than his public pronouncements while in office indicated. - 'Aircraft carriers, of course, are the second most effective weapon in a modern navy. The Americans had a mighty carrier fleet - no one could deny that. I'll admit I felt a nagging desire to have some in our own navy, but we couldn't afford to build them. They were simply beyond our means. Besides, with a strong submarine force we felt able to sink the American carriers if it came to war'. (p.31)
Secondly, Soviet comments on aircraft carriers have by and large been limited to the role of aircraft carriers as a 'primary strike weapon'.

In a 1967 article Gorshkov conceded that the carriers of the Western naval powers had posed a serious threat to the USSR in the 1950s and early 1960s. But their status as 'primary strike force in the armed struggle at sea had no future' because of the allegedly superior 'strike capabilities of submarine-air forces'. In 1967 Gorshkov wrote with apparent conviction: 'Time has confirmed the correctness of these views'.

None of this is a rejection of aircraft carriers. It merely suggests that carrier aircraft can no longer be considered a primary strike force in a nuclear war, either against land targets, where they have been superseded by SLBMs, or against another fleet where the major strike will be carried out by missile-armed submarine-air forces. Left innocent by omission are the reconnaissance, anti-submarine warfare and fleet protection roles of carrier based aircraft. The role of carriers as a primary strike force in limited wars and interventions such as Korea, Vietnam and the various Middle East crises has been recognised by Khrushchev and Gorshkov.

Recent Soviet evaluations of aircraft carriers have stressed these general purpose roles although there is some evidence that the role of the carrier, as a nuclear force,

1 Gorshkov, 'The development of Soviet naval science', p.17.
2 This coincides with the official view of the United States, where carriers have been listed among the General Purpose Forces, rather than the Strategic Forces, since 1962.
3 See p.224 above for Khrushchev's comments on carriers during the Quemoy crisis.
is still highly regarded. An article on American proposed sea control ships warned that claims 'that attack carriers are becoming extinct...are being uttered only for the purpose of making the concept of small carriers more attractive'.

A recent book on helicopter and aircraft carriers comments:

Although at present attack carriers are technically excluded from the list of strategic offensive nuclear forces, they are capable of launching nuclear attacks on major ground objectives in enemy rear areas, including military-industrial and administrative-political centres and army and naval shore installations.

Nonetheless primary attention is being given to the general purpose non-nuclear roles of ship based aircraft in Soviet literature. The ability of sea control ships to acquire and maintain supremacy at sea, their use in the ASW defence of large ship formations, convoys or carrier task forces, and as a means of conducting naval air operations beyond the range of shore based aviation, together with the ability to bring pressure to bear on small countries, are highlighted and in general positively evaluated by Soviet commentators. The use of carriers to move amphibious troops to landing regions and provide support aircraft for an amphibious landing has been frequently mentioned in recent writings. Teplinsky notes without comment that:

The (US) Navy believes that the freedom of sea communications and the maintenance of control over the world ocean cannot be achieved without attack aircraft carriers...

(U)nder conditions of 'normal' war they supplement

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1 Shiltov, V., op.cit., p.4.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Aircraft</th>
<th>Construction Data</th>
<th>Range &amp; Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kuril 2</td>
<td>30,000 tons</td>
<td>20,000 tons</td>
<td>SSM</td>
<td>25 fixed wing VSTOL Frensham type</td>
<td>Kiev - laid 1966-70</td>
<td>probably 30+ knots</td>
<td>From information available it would seem that the 'Kuril' class has no aircraft catapults, arresting cables or mirror landing aids. Aircraft landings may prove difficult without these aids. The forward section is taken up with missile armament leaving a flight deck of approximately 600 feet. The inclusion of a number of side mounted guns - possibly for point defence - may present difficulties for underway replenishment. As these vessels are still undergoing sea trials and have not been observed in exercises or in deployment it is difficult to be precise as to their intended role - see text. Expected in service late 1975. Possibly 6-8 of these vessels are planned provided they prove satisfactory. Sonar systems probably include VDS in connection with the ASW rocket launcher. Soviet designation: Anti-submarine cruiser.</td>
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<tr>
<th></th>
<th></th>
<th>SAM</th>
<th>2 twin SA-N-3 GOBLET SA-N-3 Launchers</th>
<th>25 Hormone A, ASW Helicopters or Hind A</th>
<th>Minek - under construction both at Minsk, Nikolayev</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASW</td>
<td>2 32-barrelled MBUs</td>
<td>1 twin ASW rocket launcher</td>
<td>20-57mm guns (14x2)</td>
<td>total of 40-50 aircraft expected</td>
<td></td>
<td></td>
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</tbody>
</table>

**TABLE I:** AIRCRAFT CARRIER CONSTRUCTION - POST 1960 PROGRAMMES

**Sources:**
the power of overseas groupings of land based aircraft (while) in many regions carriers can form the main or in some cases the only representatives of US air power.¹

He concludes:

...a tremendous role - one which largely determines the success of any naval actions - is played by aircraft. All recent practical measures testify that naval air power is being allocated particularly crucial importance for the fulfillment of the long term strategic task of winning dominance at sea.²

Gorshkov's appreciation of the role of United States aircraft carriers in wars in the 'third world' has already been noted.² He has also acknowledged that aircraft carriers are the most prestigious warships for port visits or displays of naval might.³ There is no direct reference to future carrier construction for the Soviet Navy in Gorshkov's recent series of articles, although he does claim

The utilisation of the achievements of science and production together with the introduction of scientific methods in determining the most advantageous mix of weapons and equipment characteristics, taking into account economic factors, has permitted naval development to approach its vital requirements to the maximum degree without copying naval construction in the Western countries and while following our own national path most commensurate with the specific tasks facing the navy and the conditions for carrying them out.⁴

The significant differences between the navies of the Soviet Union and Western states are also attributed to the geo-military position of the Soviet Union vis-a-vis

¹ Teplinsky, op.cit., p.78.
² Ibid., p.79.
³ See Gorshkov, 'Navies as a weapon in peacetime', passim.
the United States. ¹

This suggests that at present the Commander-in-Chief of the Soviet Navy does not contemplate the inclusion of large attack carriers in his fleet. Yet the question of large carriers is probably not finally resolved, even within the Navy. Soviet commentators on the US Navy, while acknowledging the high costs of construction, maintenance and operation of carriers, and their vulnerability, note that

the principal role in acquiring supremacy on the seas and in operations against an enemy's shores, will still be played by the CVAs, as long as they continue to exist.

Moreover, 'the concept of the small carriers is in no way meant to cast doubt upon the continued need for attack carriers'.²

Perhaps the most important factor in determining whether or not the Soviet Navy will eventually construct a series of attack aircraft carriers is the Soviet assessment of the future of the US Navy's attack carrier programme. It would seem unlikely that the Soviet Navy would wish to begin an attack aircraft carrier race. The US Navy has had over fifty years of experience in the construction and operation of such ships and at present has a considerable force of attack carriers, carrier aircraft, experienced pilots and crew, not to mention the essential support and training facilities. Soviet construction of attack carriers could only be expected to stimulate demands that the US increase its carrier fleet at a time when US attack carriers have been reduced to fourteen vessels.³

¹ Ibid, p.19. This point had been previously made by the authors of Military Strategy, who claimed that geography alone ruled out successful Soviet operation of 'large surface ships' because 'two of our fleets were based in closed seas (the Baltic and Black Seas) while the Northern and Pacific Fleets faced great difficulties in reaching the open seas', RAND trans., p.233.
² Shiltov, 'An old idea', p.3.
³ Janes Fighting Ships 1974/5, p.380 and 404.
The Soviet Navy is more likely to continue its practice of attempting to evolve a counter to the attack carrier. Whereas this may provide a solution to the carrier threat against the Soviet Union it will leave as a major unresolved problem the question of countering US intervention in Third World countries and the problem of control of the high seas in situations short of general nuclear war.

If the Soviet Union were able to limit US construction of attack carriers by means of an arms limitation agreement which also allowed the Soviets to reach an eventual state of parity in this type of vessel, the above constraint would be removed. However, at the Vladivostok meeting between President Ford and Secretary Brezhnev in November 1974, at which agreement was reached on negotiating positions for SALT II, this issue does not appear to have been contentious as it was during the SALT I negotiations.

Soviet commentators are aware of the disadvantages of VSTOL aircraft especially when operated at sea. In particular it has been observed that the take off streams...

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1 Mr. Brezhnev appears to have agreed with Dr. Kissinger's comment that tactical nuclear weapons 'are not suitable for a significant attack on the Soviet Union'. Although this comment appears to have been directed specifically at tactical nuclear weapons stationed in Europe, it applies equally well to CVAs.

Undoubtedly, it is a view that the military professionals would dispute vehemently.


2 For a Soviet view on the role of CVAs in general nuclear war, see p.276 above.

For an account of the Soviet position on Forward-Based Systems, including aircraft carriers, during the SALT I negotiations, see Newhouse, J., Cold Dawn, p.175-5, 176, 189-190, 194-5.

An appreciation of how far the Soviets' views on F.B.S. have changed since SALT I is indicated in Kissinger's Congressional Briefing following the adoption of the SALT agreements: 'The Soviets believed that strategic means any weapons system capable of reaching the Soviet Union or the United States. This would have included our forward based aircraft and carrier forces...'

of VSTOL aircraft lead to deck heating which is a drawback if a catapult is being used. This problem may well explain the apparent lack of catapults on the Kuril carriers. Similarly, the absence of arrester gear on the Kuril is probably due to the fact that as yet the Soviets have been unable to devise a satisfactory modification of the aircraft nose wheel design capable of absorbing the strains imposed by arrest systems. Finally, it is noted that the take-off weight of an aircraft, and hence its fuel and/or weapons load, is dependent on the ambient air temperature. 1

The operation of helicopters at sea has also been subject to a balanced appraisal. 2 On the one hand it is acknowledged that helicopters can extend the range and improve the effectiveness of shipboard ASW weapons systems. On the other hand 'the slow cruising and search speed of ASW helicopters makes it impossible for them to carry out ASW missions sufficiently effectively'. Moreover, shipborne helicopters cannot be used in bad weather and area search using dip sonar requires continual hovering and slow manoeuvre making the helicopter extremely vulnerable. The conclusion of the appraisal is that

The helicopter carrying cruisers, as their displacement tonnage and dimensions are increased, can over the long run completely replace the obsolete anti-submarine aircraft carriers, and for this reason many specialists in the foreign navies feel that over the next decade a new class of ships will appear in the shipbuilding programmes, that is, anti-submarine helicopter cruisers. 3

The tactic of referring to the opinions of unidentified 'specialists in foreign navies' suggests that the role of anti-submarine helicopter cruisers was, at least at the time of writing, still controversial. Reference to increased

1 Korotkin, I.M., et al., Aircraft and Helicopter Carriers, p.11-12.
2 ibid, p.12.
3 ibid., p.118.
tonnage and dimensions suggests that the authors have in mind continued production of vessels of the Kuril class size.

Although the Kuril class is designated anti-submarine cruiser by the Soviets, a designation justified by its ASW armament and probable sonar systems, this does not, of course, exclude it from performing other roles. The most important alternate role is that of amphibious assault. Indeed, the possibility that the Kuril class may embark Hind-A helicopters, used by the Soviet Army for troop lift, would, if it eventuated, dramatically increase the credibility of the Soviet Navy as an interventionary force.

Such a use, while possible, would mark a revision of former Soviet policy on the commitment of troops to regions outside the immediate Warsaw Pact area. In the past, with the notable exception of forces stationed in Egypt prior to July 1972, Soviet troops outside the Pact area have been utilised in an advisory capacity.

Perhaps of greater significance than the pattern of past behaviour, however, is the fact that Soviet amphibious exercises continue to emphasise short coastal transits rather than oceanic exercises. Moreover, the projection capability of the Soviet Navy remains relatively modest despite the reactivation of the naval infantry in 1963. At present this force, whose function is to spearhead a landing, or to engage in coastal spoiling attacks and raids, rather than to carry out a major landing operation in its own right, consists of approximately 17,000 men, divided among the four fleet areas.

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1 Janes Fighting Ships 1974/5, p.532.
3 Amphibious assaults were an integral part of recent Soviet exercises including Sever in 1968, Oder-Neisse in 1969 and Okean in 1970.
The size of the Alligator class, the newest and largest vessels in the Soviet amphibious force, is 4,000 tons, and has a carrying capacity of 1,700 tons. This fact, together with the continued deployment of even smaller vessels for the amphibious forces suggests that the naval infantry is intended primarily for coastal operations.

Soviet comment on American amphibious landings during the war in Vietnam confirms this view. It is claimed that the Americans found it necessary to carry an amphibious battalion group and at least thirty heavy transport helicopters to achieve the most efficient results. It would appear at this stage that vessels of the Kuril class are too small to enable a troop lift on this scale, especially if air support has to be provided from the same source.

This still leaves open the option of using the Kuril class as part of an amphibious force undertaking an unopposed landing, or of using the Kurils as ferry vessels to deliver aircraft and arms to embattled pro-Soviet regimes, should this be considered politically necessary and/or profitable by the Soviet leaders.

There are two other possible roles for the Kuril class that may have been given considerable weight in the decision which led to the initial approval of the class: they could be used to enhance the Soviet Union's general sea control capabilities and they could be used to protect the Soviet Union's own SSBN force.

2 The Pobedny class of approximately 60 units has a 780 ton displacement and a 220 ton carrying capacity and the next most numerous class, the Vydra has a 300 ton displacement and a 250 ton carrying capacity. For these and other amphibious forces, Janes Fighting Ships 1974/5, p.568-9, and Weyers Warships 1973, p.196-7.
3 Korotkin, et al., op.cit., p.120.
It is unlikely that the Kurils were designed for an anti-SSBN role and unlike the Moskvas there is no evidence to suggest that they may have been intended as anti-SSGs or SSGN vessels. The difference between the limited search area imposed by the range and endurance of helicopters, and the range of their sonar systems, and the sea space available to an enemy SSBN equipped with Polaris A-3 or Poseidon missiles, to say nothing of the Trident successor, is so great that it is unlikely that the Soviet leadership would have sanctioned the development of a new vessel for such an apparently hopeless task.\footnote{It has been estimated that a helicopter equipped with dip sonar can examine a corridor approximately 6 x 60 miles in an hour. \linebreak SIPRI Tactical and Strategic Anti-submarine Warfare, p.25. Given the operational availability of seven or eight helicopters, it is possible that an area of 2,900 square miles could be covered during any given hour. However, a submarine armed with a 2,875 mile missile has at least six million square miles of sea space from which it can launch its missiles to hit Moscow. If we assume that the missiles are targeted on any site within the USSR, then the submarine may be anywhere in fifteen million square miles of sea space and still within range of some targets. Scoville, H. 'Missile submarines and national security?', in Arms Control,(San Francisco, 1973) p.238.} The fact that USN SSBNs can deploy to launch areas without having to transit any geographical choke points once they have left base only adds to the apparent futility of a Soviet surface force response to the SLBM threat.

The Kuril class vessels will improve the sea control capabilities of the Soviet Navy by offering at least a duplication of the ASW capabilities provided by the Moskva class. In addition they represent a considerable step forward in AAW. Not only is there a heavy SAM armament, including the latest generation SA-N-4, but the fixed wing V/STOL aircraft, which presumably will be deployed, will extend sensor and combat range not only for AAW but also for anti-surface ship warfare. The Kuril class constitutes a potential quantum jump for the Soviet Navy in terms of protection afforded to a surface task force.
Operational areas from which present and proposed SLBMs could hit targets within 200 miles of the borders of the USSR.

Area within 200 miles of the borders of the USSR.

1. Polaris A-1 range 1,200 nautical miles.
2. Polaris A-2 range 1,500 nautical miles.
3. Polaris A-3 and Poseidon C-3 range 2,500 nautical miles.
4. ULMs 1 range 4,500 nautical miles.
5. ULMs 2 range 6,000 nautical miles.

Whether the Soviets intend to use the new air capable ships in a pro-SSBN role must remain a matter of conjecture. The requirement for SSBN protection stems from the fact that at present the main component of the Soviet SSBN force, the Y-class submarine, must penetrate ASW barriers before it can reach launch stations from where it can attack the United States. The ASW capabilities of the United States are highly rated by Soviet writers.\(^1\)

The problem of reaching launch areas is compounded for the Soviets by their practice of maintaining only a few SSBNs on patrol. In 1973 only two or three of these boats were within range of the USA on a continual patrol basis,\(^2\) far fewer than considerations of distance and operational availability alone would allow. It seems, therefore, that the Soviets intend to deploy in surges either during crises or once war has actually broken out.\(^3\) In the latter case, SSBNs will be required to break through the ASW barriers which at present consist of ASW aircraft, (shore and carrier based), surface ships and SSNs together with surveillance devices which probably include fixed, bottom-mounted, sonars or sonar buoys, carefully sown across

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\(^1\) Soviet commentary on American ASW is discussed in conjunction with the Soviet missions of attacking the USA with SLBM on p.365-367 below.


\(^3\) It has also been suggested by J. McConnell that the Soviets are practising a 'withholding strategy' on the grounds that SSBNs in being are vital for intra-war or post-war bargaining. James McConnell 'Admiral Gorshkov on the Soviet Navy in War and Peace'. Center for Naval Analyses Working Paper, Mimeo, 20 July 1973. Even if McConnell is correct in his analysis, the USN's ASW barriers will still have to be overcome before Soviet SSBNs become a realistic bargaining chip.
Soviet assessments of United States anti-submarine warfare defence zones in the Atlantic and Pacific (1968).

Atlantic Ocean

- Geographic narrows.
- ASW carriers &/or helicopter carriers.
- U.S. submarines.
- U.S. shore based aircraft.
- Fixed hydroacoustic systems for long range detection of submarines.

Pacific Ocean

selected choke points. The Kuril class, with its AAW, ASW and anti-surface ship capabilities, appears to be an extremely valuable component of any task force sent to gain control of the sea in a reasonably limited area and coordinate the major operations required to combat the component parts of the anti-submarine barrier.

As the D class vessels, with their 4,600 mile missiles, enter service in larger numbers, the requirement for deployments to stations off the US coast will be reduced, as missiles will be able to hit US targets from the Northern and Pacific Fleet areas. This will require that the security of the fleet areas be guaranteed against enemy intrusions, especially by SSNs. Again, the Kuril class vessels appear well suited for the role.

If the Soviet military are thinking seriously about the protection of their own SSBNs, then the Kuril air capable ships could be an essential component of a force charged with the defence of the fleet areas against an expected Western penetration, or for the penetration of a Western strategic ASW defence.

The ASW barriers across, say the Greenland-Iceland-UK gap, may provide for a tactical area defence of the North Atlantic by denying Soviet submarines access to the Atlantic sea lanes. However, such systems are also capable of providing strategic area defence by denying SSBNs access to ocean area from which missiles may be launched.

It would appear that the air and naval patrols along the Greenland-Iceland-UK passages to the North Atlantic are intended to deny all types of Soviet submarines access to the North Atlantic during any future conflict. The development and deployment of CAPTOR, a sensor-triggered torpedo released from a mine, will greatly enhance this capability.

See SIPRI, Anti-submarine Warfare, and Garwin, R.L., Anti-Submarine Warfare and national security, p.248 and 259, in Arms Control, for further discussion on ASW barriers and weapons systems and their impact on the strategic system based on mutual deterrence.

Missiles from the Sea of Okhotsk and in the North Pacific off Petropavlovsk Kamchatska could hit targets in the United States. A recent report in the International Herald Tribune, 29 April 1975, states that the new D class vessels have not left the Barents Sea area although as many as eight of these SSBNs are said to be on patrol.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction</th>
<th>Range (m)</th>
<th>Speed (knots)</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRESTA II</td>
<td>6</td>
<td>6,000 tons standard</td>
<td>SS-N-10 2 quadruple</td>
<td>Built at Leningrad since 1968</td>
<td>5,000 miles at 18 knots</td>
<td>Steam geared turbines</td>
<td>The Kresta II carries a Hormone A helicopter for ASW.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7,500 tons full load</td>
<td>SA-N-3 4-57mm (2x2)</td>
<td>Zhdanov yard</td>
<td>1971</td>
<td>33 knots</td>
<td></td>
<td>In same respects a development of Kresta I with some hull lines and propulsion plant.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>d-p. guns 8-30mm (4x2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Has advanced missile armament</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AA guns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SS-N-10 - a 2nd generation missile with range of 29 miles, i.e. horizon range.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Helicopter primarily ASW</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-16-barrelled MBU forward</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SA-N-3 an improvement on SA-N-1.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-6-barrelled MBUs aft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Soviet designation - large anti-submarine ship - but ASW weapons are of 1962 origin - no VDS reported.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Torpedo Tubes 10-33mm (2x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Guns systems presumably available from Moskva.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-D radar systems similar to that on Moskva.</td>
<td></td>
</tr>
<tr>
<td>KARA</td>
<td>2</td>
<td>8,200 tons</td>
<td>SS-N-10 2 quadruple</td>
<td>Built at Nikolayev 1970 first seen in Mediterranean March 1973</td>
<td>Gas Turbine</td>
<td>Apart from the specialised Moskva class this is the first large cruiser in the Soviet Navy since Sverdlovs. It is the largest warship in the world with gas turbine propulsion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SA-N-4 4-76mm (2x2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>It is a new SA-N-4 system in addition to Kresta II armaments, plus a VDS ASWI A/S missile launchers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-30mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The large size of the Kara, and the array of electronic equipment suggests a flagship capability with these vessels replacing the Sverdlovs in this role.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>However, if this is so, crew space must be quite frugal given the below-deck requirements for missile and artillery magazines and for radar and ECM accommodation. Despite its size the class appears none too big given the weapons it carries.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-16-barrelled MBU launchers (forward)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Helicopters embarked.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-6-barrelled MBUs (aft)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The total question: is it overarmed and too big for its purpose?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Torpedoes 10-533mm (2x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Soviet designation: Large anti-submarine Ship.</td>
<td></td>
</tr>
</tbody>
</table>

See text for Sverdlov conversions.

Sources:  
Kresta II and Kara

The Kresta II class, designated "large anti-submarine ship" by the Soviet Navy, appears to be a development from Kresta I. Kresta II incorporates the weapons system, previously known as the SS-N-10, which has now been identified as an ASW missile, and the SA-N-3 also deployed aboard the Moskva, Kara and Kuril classes and evidently the current long range AAW weapon, into a hull/propulsion unit similar to those of the Kresta I class.

The presence of a Hormone A helicopter, configured for ASW, together with two quadruple ASW missile launchers, ASW torpedoes and multi-barrelled rocket launchers suggest a formidable anti-submarine capability for tactical point defence. The Kara class is significantly larger than any Soviet surface ship since the Sverdlov cruisers, excepting the Moskva and Kuril classes. This fact, coupled with the array of electronic communication equipment carried, suggests that these vessels are intended as command ships for squadrons on distant deployment. The mix of weapons systems "an ASW missile and two surface to air missile systems" is not in conflict with such a role.

1 Janes Fighting Ships 1974/5, pp. 550-551.
2 U.S. Chairman Joint Chiefs of Staff, United States Military Posture for F.Y. 1977, p. 59.
3 According to Janes Fighting Ships 1974/5, pp. 551-2, the Kresta IIs are heavier, slightly longer and draw more water. Meyer's 1973 confirms these differences but offers slightly different figures.
4 Hormone B is equipped for surface target acquisition and mid-course guidance functions.
5 Tactical point defence ASW aims to defend a particular point in the ocean occupied by a high value target. Protective screens of ASW equipped surface vessels, aircraft where available, and hunter-killer submarines are organised to "sanitise" the area around the potential target being afforded protection.
The Kara is the largest vessel in the world to be powered by gas turbines, suggesting that Soviet technology in this field is in advance of the United States. The advantages of quick get away time and rapid acceleration mark a major innovation in vessels of this size and are of obvious utility in an anti-submarine vessel. It is possible that the lead time required to design a gas turbine unit capable of driving such a large warship was longer than the rule of thumb ten years suggested for other vessels. Its weapons systems fit suggests an original decision date in the early 1960s.

The fact that both these classes of vessels have dispensed with their SSM armament and adopted anti-submarine systems suggest a major reorientation of Soviet concerns. Previously major Soviet surface vessels had been equipped with SAM or SSM but since 1968 no major Soviet warship has entered service with a purely SSM capability. As we shall see vessels in the 3,500-5,000 ton range Kashin, Kildin and the new Krivak have also had ASW weapons systems fitted. Moreover Kresta Is now appear to carry a Hormone A helicopter and bear the Soviet designation large anti-submarine ship suggesting that it too has undergone conversion to fit it for the ASW role.

It was previously argued that the SSM vessels, which originated from decisions in the 1953 period, were very much a product of Soviet concern to counter the threat posed by the aircraft carriers of the NATO allies. It would appear that this task is now the prime responsibility of the submarine fleet and the dramatic change to ASW armament for surface vessels arose out of decisions made in the early 1960s which took into account the fact that submarine launched missiles attacks were now the major sea based threat to the Soviet Union.

That there was a major reassessment of the nature of the sea based threat at this time has been made perfectly clear by

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1 It is possible that the missile launchers involved are dual purpose. If so this would indicate another technological advance for the Soviet Navy.
Gorshkov whose statement we have already noted. The reassessment is also a major difference in the first two editions of Sokolovsky and accords with the statement of the U.S. Secretary of Defence McNamara in 1962 that CVAs were now regarded as part of the General Purpose Forces.

The establishment of a major ASW role for the Soviet Navy's surface fleet appears to have been a response to the advent of the submarine launched missile. It was probably a response taken before the operational characteristics of the SSBN were fully understood or possibly at a time when the SSG or SSGN were regarded as a potential threat. In the present circumstances, when the area of sea space available to SSBNs has increased dramatically, the new ASW surface vessels, which seem suited primarily for tactical ASW, may be used to protect the Soviet Union's own SSBNs from enemy ASW forces, in particular the SSNs, or to protect high value surface warships from submarine attack.

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1 See pp. 242 above.
2 See pp. 236 below.
3 See Admiral Alafuzov's critique of Sokolovsky's Military Strategy, 1st edition, p. 369 below on this point.
4 See the discussion of the Moskva programme pp. 150-156 above.
Soviet Union has done with its missile-cruisers or air capable vessels. As we shall see this practice has affected the latest Krivak class of destroyers, which also carry a range of SSM, SAM, ASW, torpedo tubes and anti-aircraft artillery.

Admiral Gorshkov has pointed to the need for high habitability standards to be incorporated in vessels if high combat capabilities are to be maintained among the crew during 'the long stay of ships in the ocean frequently under extreme climatic conditions'. Yet, as *Janes Fighting Ships 1974/5* points out, despite the fact that the Kara is a significantly larger vessel than the preceding classes, when account is taken of the magazine requirements of the various weapon systems and the space requirements for the below deck radar displays and other electronic gear, habitability standards must be, by Western standards, quite spartan. Kara is in fact quite a small ship, given its weapons systems, probable role as a command centre, and the fact that its complement of officers and crew must approach the 550 mark.

During 1972 two Sverdlov class cruisers reappeared, having undergone conversions. The *Admiral Senyavin's* rear turrets were removed and replaced by a helicopter hangar and landing pad. A SA-N-4 mounting was added to the armament together with 4-30mm gun mountings. The Zhdanov had only one rear turret removed and this was

1 The decision to equip the Moskva and Kuzil class with a major ASW missile launcher in the middle of the fore-deck together with SAM systems has reduced the effective length of the flight deck in each case. (In the case of the Moskva this has been compounded by building the superstructure across the width of the ship.)

2 Gorshkov, S.G., 'Problems in mastering the world ocean', trans. p.22.

3 *Janes Fighting Ships, 1974/5*, p.551.

4 Although no figures are available for the crew complement of the Kara, this would seem to be a minimal figure. It has been derived by adding to the complement of the Kresta II given as 500 in *Janes*, p.551.
replaced by a SA-N-4 launcher. Both of these vessels were extensively refitted with communications equipment necessary for their new role as command ships.¹

It is an interesting comment on the state of the Soviet Navy that it has been found necessary to refit two twenty-year-old Sverdlovs for this role. Now that the Soviet Navy is increasingly involved in forward deployments, it is essential to increase the number of command ships, yet apart from the Moskvas, which spend most of their time in the Mediterranean Sea, and the Kurils, about to enter service, it is doubtful whether any other vessel has the space to accommodate the additional staff, and the communications equipment required.

Guided Missile Destroyers.

In 1967 units of the Krupny class SSM destroyers were taken in to the Zhdanov yard at Leningrad for conversion to SAM destroyers which have been renamed the Kanin class.² This conversion occurred at the same time as the second batch of Kotlin destroyers were being converted to Kotlin SAM. Both conversions highlight the importance of SAM armament to a navy which increasingly found itself conducting high seas operations beyond the range of shore based aircraft. The Krupny conversion indicated the demise of the pure SSM destroyer, brought about by the increase in range of carrier based aircraft, which enabled the carriers to launch attack planes from distances beyond the combat radius of Soviet air cover. The removal of the cumbersome and obsolete SS-N-1 missile system was probably justified in its own right,³ but it is significant that they were replaced not with a new SSM but rather by an early generation SAM, the SA-N-1.

¹ Janes Fighting Ships 1974/5, p.547-8.
² For details see Janes Fighting Ships 1974/5, p.556.
³ Breyer, S., Guide, p.58 notes that the missile has a 110 ft. launcher, an elevation not exceeding 30° and it must be brought back to the horizontal for re-loading.
At the same time as the SAM armament was being fitted the ASW capabilities of the former Krupny class were increased. The two hand-loaded 16-barrelled ASW rocket launchers were removed and three semi-automatic loading 12-barrelled launchers were installed in their place. Additionally two sets of triple ASW torpedo tubes were replaced by two quintuple mountings. This aspect of the conversion appears to have been the most significant so far as the Soviet Navy is concerned for the former Krupny class 'rocket ship' is now designated 'large anti-submarine ship'. As an ASW vessel the Kanins could only be effective in a tactical ASW or pro-SSBN role.\footnote{SIPRI Anti-submarine warfare, p. 34-37, for a discussion of tactical ASW.}

During 1972 a Kildin class destroyer was modernised in what appears to be a continuing programme. The SS-N-1 system was removed and replaced by two twin turrets for 76mm artillery and four launchers for the SS-N-11 29 mile range missiles, which is now thought to be an ASW missile. The class which is building at the relatively slow rate of two per year, appears to be the replacement for the navy's ageing Skory and Kotlin class destroyers. Designated a 'large anti-submarine ship', it is fitted with the new ASW missile system two 12-barrelled ASW rocket launchers and 8 21" ASW torpedo tubes. The rapid acceleration and timely availability conferred by its gas turbine propulsion are obvious advantages in a tactical ASW ship. The vessel includes both bow mounted sonar and a VDS system but has not been designed with in-built helicopter facilities, possibly indicating that its role
### TABLE III: GUIDED MISSILE DESTROYERS - POST 1960 PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Date</th>
<th>Range &amp; Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanin</td>
<td>6</td>
<td>3,700 tons standard 4,600 tons full load</td>
<td>SAM 1 twin SA-N-1 (aft) 6-57mm (2x4) (fwd) 8-30mm (4x2) ASW 3 12-barrelled MBUs torpedo tubes 10-533mm (2x5) A/S</td>
<td>Conversions from Krupny at Zhdanov yard Leningrad from 1967 on</td>
<td>Speed 34 knots</td>
<td>geared steam turbines</td>
<td>Conversion of Krupny SSM destroyer to AAW and ASW escorts. The cumbersome SS-N-1 launchers and missile hangers were removed and a SA-N-1 system installed. During conversion the hull was slightly altered to allow a new bow mounted sonar to be installed and the helicopter pad was enlarged. Triple torpedo tube mountings replaced by quadruple sets. Three automatically loaded 12-tubed MBUs replaced earlier hand loaded 16-barrelled MBUs. Soviet designation: Large anti-submarine ship.</td>
</tr>
</tbody>
</table>
is to destroy already located submarines rather than search for them along the perimeters of a task-force screen. On the other hand, the fact that the major adversary fleet, the US Navy, has no cruise missile submarines, and, prior to the 1960-61 time period, when the Krivaks must have been approved, had cancelled the Regulus cruise missile programme suggests that a detection system capable of searching over a 10-mile radius was considered adequate.¹

**Corvettes.**

The Grisha corvettes or 'small anti-submarine ships', to use the Soviet designation, are smaller than the Mirka corvettes although somewhat larger than the Poti submarine chasers, whose functions they seem to have subsumed. Armed with the new SA-N-4 system and a twin 57mm artillery mounting, the Grisha has a more assured AA defence capability than its predecessors, while only slightly reducing the ASW armament.²

The Nanuchka 'missile cutters' are considerably heavier than the Osa and Komar class. Their main armament consists of 6 (2x3) launchers for the SS-N-9 system which is credited with a range variously estimated at between 40 to 150 miles.³ The Nanuchka class also carries an SA-N-4 launcher and a twin turret for the 57mm gun system. These vessels, with their heavy SSM armament provide an all-weather surface attack capability which had previously been provided by the artillery of the larger frigates and the SS-N-2 missiles of the Osa and Komar missile cutters, the operations of the smaller craft being limited by extant sea states.

It would appear that the Soviet Navy is in effect replacing three types of vessels - escorts, large submarine chasers and missile boats, with two classes of ship in the

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¹ SIPRI Anti-Submarine Warfare, p.9, suggests that the range of contemporary homing torpedoes is 10-20 kilometres.
² See Table p.268 above.
³ Janes Fighting Ships 1974/5, p.638.
700 ton range. McCwire has suggested\(^1\) that this eliminates the escort frigates, which were, at 1,000-1,500 tons, larger than necessary for the task of fleet area support but too small for effective use on distant deployment, and has enabled the Soviet Navy to circumvent to some extent the limited shipbuilding capacity for large vessels suitable for distant deployment imposed by the resumption of some former cruiser and battleship ways for merchant vessels during the 1950s.\(^2\) There are reports that the Nanuchka class is under construction at the former torpedo boat yard which built the Komar and Osa hulls\(^3\) while the Grisha class is apparently building at the yards which previously produced the Poti submarine chasers.\(^4\) This has freed the former escort yards at Kaliningrad for construction of the larger Krivak class destroyers.\(^5\) The difficulties imposed by the practice of building vessels in yards previously equipped for handling smaller types explains in part the relatively low annual production rate of the Krivak, Nanuchka and Grisha classes to date. In addition, the production of increasingly sophisticated weapons systems causes production bottlenecks.

Ballistic Missile Submarines.

No new SSBN entered service with the Soviet Navy from 1962/3, when construction of the nine unit H class ceased, until late 1967 when the first Y-class vessel was delivered.\(^6\)

\(^2\) See. p.194 above for Khrushchev's resumption of naval building ways. During the 1950s other major surface shipbuilding ways in the North and Pacific were apparently given over to the construction of nuclear submarines.
\(^4\) McCwire, op.cit., p.223.
\(^6\) Explanations for this hiatus have been advanced on p.171-177 above.
### TABLE IV: CORVETTES - POST 1960 CONSTRUCTION

<table>
<thead>
<tr>
<th>Class</th>
<th>No. Displacement</th>
<th>Armament</th>
<th>Construction</th>
<th>Range &amp; Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grisha</td>
<td>750 tons full load</td>
<td>SAM SAM-4 guns 2-57mm (1x2) ASW 2-Tz barreled MBUs torpedoes 4-406mm A/S tubes</td>
<td>commenced 1969-70</td>
<td>30 knots</td>
<td>Gas turbines and diesels</td>
<td>A successor to Peti class. Incorporates SAM-4 missile system. Possibly has three screws: lateral for diesels central for gas turbines. Soviet design: small anti-submarine ship. Coastal operations and sighted in Mediterranean.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Class</th>
<th>No. Displacement</th>
<th>Armament</th>
<th>Construction</th>
<th>Range &amp; Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nanuchka</td>
<td>800 tons full load</td>
<td>SAM SAM-4 guns 2-57mm 2-Tz ASW (possibly) 1 or 2 MBUs (James only)</td>
<td>Built from 1969 onwards at the Petrovsky Yard Leningrad</td>
<td>35 knots</td>
<td>diesels</td>
<td>Larger size and in particular the high beam to length ratio may give ship more stability than the light Oksas and Komars. Soviet designation: 'Missle boat'. Building rate 3/year. Coastal operations</td>
</tr>
</tbody>
</table>

During this period the first generation SSBNs were retrofitted with second generation SLBM, the SS-N-5, which had a longer range, approximately 800 miles, and an underwater launch capability. Following the refitting of the H-class, which was extended over a four year period to ensure the availability of some SSBN capability during the mid-1960s, units of the G-class SSBN have been taken in hand and similarly retrofitted.

Reports that the first sustained patrols of ballistic missile firing submarines off the American coast did not take place until 1964\(^1\) suggest that no such patrols were instigated until missiles with an underwater launch capability became available. Prior to 1964 the existing SLBMs may have been part of a hostage Europe strategy or more likely they were deployed on an irregular basis which could be increased in a crisis or after the outbreak of war.

The experience of the Cuban operation in 1962, when a number of Soviet submarines, having been detected and tracked for days, were forced to surface within sight of US ASW air patrols and surface ships,\(^2\) was a convincing

2 Admiral Anderson the USN’s C.N.O. at the time of the Cuban missile crisis told a Navy League meeting in New York on 9 November 1962: 'The presence of many Russian submarines in Caribbean and Atlantic waters provided perhaps the finest opportunity since World War II for US Naval anti-submarine warfare forces to exercise at their trade, to perfect their skills and to manifest their capability to detect and follow submarines of another nation'. See also Anderson's testimony U.S. Congress. H of R Committee on Armed Services, *Hearings on Military Posture 88th Congress, 1st Session*, 1963, p.897. *New York Times*, 10 November 1962.

Subsequent accounts indicate that all of the six submarines sent to escort the merchant vessels to Cuba were forced to surface after protracted periods of tailing. *New York Times*, 18 April 1963, and Abel, E., *The Missiles of October* (London, 1966), p.143. According to Defense Market Survey (April and September 1967) the CAESAR system of hydrophones anchored to the US continental shelf 'sufficiently proved its value (during the Cuban episode) to be expanded and upgraded'. In 1962 the system was probably capable of providing approximate locations of submarines to be further refined by mobile ASW systems.
<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range &amp; Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>G II</td>
<td>11</td>
<td>2,350 tons surfaced, 2,800 tons submerged</td>
<td>3 launchers for SS-N-5 ballistic missile range 1,500 miles</td>
<td>conversions in 1967 after</td>
<td>25 knots</td>
<td>Data as for G except as indicated. The retrofitting of the SS-N-5 2nd generation SLBM gave not only a longer range but also a submerged launch capability.</td>
</tr>
<tr>
<td>H II</td>
<td>8</td>
<td>3,700 tons surfaced, 4,100 tons submerged</td>
<td>3 launchers for SS-N-5 ballistic missile range 2,000 miles</td>
<td>conversions occurred in 1963-67</td>
<td>25 knots</td>
<td>Contra to information in Janes 1974/5 these ballistic missile submarines cannot be traded in for new D class submarines under SALT I agreements - see text.</td>
</tr>
<tr>
<td>H III</td>
<td>1</td>
<td>-ditto-</td>
<td>test vessel for SSN-8</td>
<td>built at Komsomol and Severodvinsk</td>
<td>25 knots</td>
<td>Only one of these vessels - used for testing purposes. May have contravened the spirit of SALT I SLBM agreements - see text.</td>
</tr>
<tr>
<td>Y</td>
<td>33</td>
<td>8,000 tons surfaced, 9,000 tons submerged</td>
<td>16 launchers for SS-N-6 ballistic missile range 1,500 miles</td>
<td>built at Komsomol and Severodvinsk</td>
<td>25 knots</td>
<td>Third generation hull propulsion unit, 3rd generation SLBM - underwater launch range of 1,500 miles. Probably based on own experience with SLBMs in earlier units plus American Polaris programme.</td>
</tr>
<tr>
<td>D I</td>
<td>10?</td>
<td>8,000 tons surfaced, 9,000 tons dived</td>
<td>12 launchers for SS-N-8 ballistic missile range 2,000 miles</td>
<td>Komsomol and Severodvinsk delivered since late 1972</td>
<td>25 knots</td>
<td>The calculation of numbers of D I is tentative and assumes that the Soviets will build to the maximum number of submarines while staying just under 950 SLBM limit. Missile gives ability to hit US while in fleet areas.</td>
</tr>
<tr>
<td>D II</td>
<td>18</td>
<td>-ditto-</td>
<td>16 launchers for the SS-N-8</td>
<td>Komsomol and Severodvinsk announced in November 1973</td>
<td>25 knots</td>
<td>Without a 16 hole submarine for the SS-N-8 the Soviets could only build to 876 SLBMs if they kept within the 62 submarine limit. As yet no details of this class exist although sightings were reported by Norwegians.</td>
</tr>
</tbody>
</table>

demonstration to the Soviets of American ASW capabilities and must have induced a cautious approach to submarine deployment.

There was little point in giving the Americans ASW practice along their established ASW barriers and coastlines or allowing them to gain additional information on the relatively inferior Soviet submarine operational characteristics. The absence of forward basing facilities also meant that sustained patrolling could involve no more than one third to one quarter of the available submarines. By foregoing forward patrols the Soviets also made savings in manpower, operating costs and may have increased the operational readiness of their submarines for surge deployments.

There was considerable ambiguity over the status of the H and G class submarines as a result of the SALT negotiations. However subsequent clarifications between two governments concerned appear to have resolved these difficulties. Under the original terms of Article III of the Interim Agreement relating to SLBM, and the important Protocol attached to the agreement, it was unclear whether the Soviet Union could reach the maximum number of SLBMs (950) by trading in only the high yield long range ICBMs - the SS-7s and SS-8s - or whether a mix of ICBMs and submarine launchers from the G and H class could be traded. In addition there was a problem that the Interim Agreement may have allowed for the deployment of modern missiles on old submarines thereby allowing the Soviets to exceed their 950 quota for SLBMs. Initial American attempts to dispel the ambiguity over the status of the G and H class submarine missiles and to ensure that the ICBMs were traded were resisted by the Soviets until 24 July 1972 when Soviet Ambassador Dobrynin and Dr. Kissinger signed an agreed clarification. However the clarification, as revealed by Dr. Kissinger to a press conference on 24 July 1974, contained its own ambiguity. In the attempt to clear up the status of the G and H boats a formal definition of a
modern ballistic missile on a submarine was offered: 'a missile of the type which is deployed on nuclear powered submarines commissioned in the USSR since 1965'. This was unambiguous in the case of the H class SSBNs but it could be, and was, read by Pentagon officials to allow the Soviets to deploy modern missiles on the G class SSBS and thus exceed the 950 SLBM quota. The Soviet negotiators refused to close this new loophole until 18 June 1974. The position now agreed is that the Soviets are only permitted trade in ICBMs to reach the 950 quota for SLBMs and any modernisation of G and H class vessels must count against the 950 total.  

The conversion of one HII SSBN into a test vessel for the new 4,600 mile SS-N-8 missile therefore may be counted as one of the Soviets 62 SSBNs and its missiles - presumably three in all - against the 950 total. 

The Y class submarine which was first delivered in 1967 gave the USSR an SSBM similar in many respects to the USNs boats fitted with Polaris A-2 missiles. The Y class, a third generation hull/propulsion unit fitted with 16 launchers for the 1,500 mile underwater launch SS-N-6, will probably build to some 33 units, that is to just over half the maximum number of SSBNs allowed the USSR under the terms of the Protocol to the SALT I Interim Agreement. 

Although the Y class meant a considerable improvement in the capabilities of the Soviet Unions SSBN they are still subject to some of the same limitations as earlier ballistic

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1 The texts of the 'Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with respect to the Limitation of Strategic Offensive Weapons' and the 'Protocol to the Interim Agreement' 26 May 1972, have been reproduced in various places. I have used President Nixon in Moscow, U.S. Information Service. For an account of the ambiguities of the original Agreement and the efforts undertaken to clear them up including Kissinger's press conference on 24 July 1974 in which he revealed the substance of the interpretive agreement of 24 July 1972, see Gelb, L.H., 'Washington dateline: the story of a flap', Foreign Policy No. 16, Fall 1974, p. 165-181, and the New York Times, Washington Post and International Herald Tribune from 21 June 1974 - 25 June 1974.
missile submarines. The range of the SS-N-6 requires boats to be stationed off the US coastline, having in effect to run the gauntlet of the US Navy's anti-submarine forces (see map p.286a above). Recent reports of the development of even more sophisticated large fixed hydroacoustic systems in the United States can only compound this Soviet problem.¹

Sophisticated American ASW technology, together with the difficulties imposed by long transit times and the costs of maintaining SSBNs on distant deployment, has resulted in a significantly different deployment pattern than that adopted by the Americans. Whereas American practice and crew organisation² is geared to maintaining the greatest number of units possible on station, Soviet practice still involves keeping only a very limited number of boats on station.³ These boats are presumably prepared to launch on the instant that orders are received, providing they escaped destruction. The remainder of the SSBN force, which presumably are maintained in a high state of combat readiness, may then leave the fleet areas and transit to their stations following an attack on the ASW barriers undertaken by the surface fleet and naval air force.

¹ For a detailed discussion of large fixed arrays see SIPRI Yearbook 1974 p.316-318. In addition to the 'Caesar' system off the Atlantic coast, now in its fifth generation, the United States installed 'Colossus' off the Pacific Coast in the mid-1960s. There are additional systems reported in the Aleutian Islands off Kamchatka and one under construction in the Gulf of Mexico. There is a large hydrophone north of Hawaii and a system situated north of the Azores capable of monitoring and localising submarines transiting the Straits of Gibraltar.

A suspended array system capable of surveying an entire ocean is under development as is a moored surveillance system consisting of air-dropped long-life sonobuoys, which can moor to the bottom of the ocean and transmit information to satellite or airborne receivers for relay back to central processing and operation stations. See also SIPRI, Anti-Submarine Warfare, esp. p.29-31 and p. 78-81.


³ In 1973 it was reported that the Soviets sustained deployments were in the order of 2 or 3 SSBNs.
The Soviet attempt to establish a forward facility for SSBNs in Cuba was a response to the problem of transit times, and it may also have provided a solution to the difficulties imposed by the United States ASW capabilities, for at the time of the initial deployments it is unlikely that the Gulf of Mexico arrays were in operation. The fact that Cuba lies 150 miles off the Florida coast, 900 miles from the main East Coast operational carrier base at Norfolk Virginia, and only 600 miles from Charleston, the East Coast home base for American SSBNs, suggests that Soviet Y class submarines stationed in the area would be continually within range of these and other prime targets.

The withdrawal of Soviet equipment from the site at Cienfuegos during 1970-71, prior to the establishment of a SSBN base, doubtless has a number of explanations, including the determination of the US administration, the caution of the Soviet leaders, and, most importantly, the expectation that in 1972-3 the first of a new SLBM, the SS-N-8 with a 4,600 mile range, would be entering service.

This missile and its subsequent deployment aboard the D class submarine enables the Soviet Union to 'fire right

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1 Although I have not been able to check this point it may be that the Gulf of Mexico system was a response to the Soviet incursions into this area.
2 A 1,500 mile missile from Cuba could reach as far north as Boston and cover targets in an arc from Boston, Chicago to Texas.
3 Requirements for a SSBN base are limited. A sheltered berth for a submarine tender and associated barges is the absolute necessity. Rest and recreation facilities for the crew are highly desirable as is a supply of water and electricity.

It was reported in December 1970 that the Soviet Navy had moved barges capable of accepting radioactive salt water waste into the area, and that a submarine tender had recently left the area. A submarine net had been laid, recreation areas laid out and logistics and communications centres established.

out of Murmansk and hit the United States. That is, there is no necessity for the D class submarines to leave their fleet areas in order to be on station. There is thus no need to cross the North Cape let alone the Greenland-Iceland-United Kingdom barriers, or to leave the vicinity of Kamchatka in the Far East. Moreover the on station availability of the Ds will approximate 100%, since all but submarines undergoing major overhauls will be 'on station' while in base. While remaining within the confines of the fleet areas Soviet SLBMs can be protected by the whole range of surface, subsurface and land based aircraft and missile systems available to the Soviet Navy within its fleet areas.

Some attention has already been given to the SALT I agreement provisions as they affect the fitting of either the SS-N-6 or SS-N-8 missiles to earlier generations of ballistic missile submarines. In addition it should be noted that the Interim Agreement conferred potential numerical superiority to the Soviet Union should it choose to exercise the option. This was conceded by the United States on the grounds that the Soviet Union had an on­going construction programme with an annual production rate of $9 - 10^2$ SSBNs, which could leave the Soviet Union with a fleet of 80-90 SSBNs by 1977, the expiry date of the Interim Agreement.  


Whether the Interim Agreement did prevent the Soviets constructing up to this number of submarines or made any impact on their construction programme at all is open to considerable doubt.

In 1972 the United States Secretary of Defense, Laird, stated that the Soviet Union had 25 Y class units operational with a further 17 in various stages of assembly and fitting out. By mid-1972 he estimated that there would be a total of 31 Y class submarines in existence.

Secretary Laird indicated that the construction rate in 1972 had risen to 9-10 units per year compared with a rate of 7-8 units per year in 1971. In 1971 Laird had also indicated 'a longer range submarine launched ballistic missile is under active deployment'; the SS-N-8, 4,600 mile range missile of the D class submarine.

Whether the increase in production rate, noted in Laird's FY 1972 and FY 1973 speeches to the Armed Services Committees, represented a deliberate pre SALT I move by the Soviets, or whether this was a planned increase in production cannot be reliably documented. Dr. Kissinger obviously accepted the high production run of 1972 as being a sustainable on-going programme.

Regarded in this light the Agreement to limit the Soviet Union to 62 submarines, although conceding a numerical advantage, appeared a reasonable price to pay.

On the other hand, accepting a total of 31 boats complete by July 1972, the Soviets had the option of continuing their programme at an average rate of 6 units complete/year to give them 62 boats by 1977. This would not seem an unreasonable target given the intention of

1 Laird, op.cit., p.39-40.
3 Laird, F.Y. 1972, p.47.
building two variations of the existing Y class vessels, the DI class with 12 launchers for the SS-N-8 and the DII class with 16 launchers. Thus rather than halting a construction programme in mid course the United States may well have ratified an intended Soviet programme. Nor is there any guarantee that following the expiration of the Interim Agreement in 1977 the Soviet Union will not continue to assemble and launch SSBNs without a break, should they choose to keep this option open.

A further ambiguity in the SALT agreements, of concern to us, stems from the fact that the Soviets cannot build 950 launchers on 62 SSBNs (nor can the Americans reach 710 launchers on 44 boats). If the Soviets are to build to 62 vessels they can either have 50 16-launcher boats of the Y and DII classes and 12 12-missile boats, for a total of 944 launchers, or else they could exceed their agreed launcher total by 2 opting for 52 16-launcher boats and 10 12-launcher vessels. Thus it appears that by May 1977 the Soviet Union could possess 33 Y class, and 10 or 12 DIIs and 17 or 19 DIIIs. Alternatively the Soviets could use their nuclear submarine construction capability to construct SSNs, at present in short supply in the Soviet Navy. This however could only be achieved if the SSBN programme were cut short of the 62 units allowed by 1977.

Cruise Missile Submarines.

In the period 1963/4 - 1967 27 units of the EII class SSGN were delivered, suggesting an average rate of about 6 deliveries/year. This was the maximum number of units capable of being produced from the yards at Severodvinsk in the North and Komsomolsk on the Amur River in the Far East which, during the period, were the only yards producing nuclear powered submarines. These deliveries of the EII

---

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range &amp; Speed</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSGN</td>
<td>11</td>
<td>4,300 tons surface 5,100 tons submerged</td>
<td>8 tubes for SS-N-7 missile range 30 miles dived launch. Torpedo Tubes 8-533mm</td>
<td>1st deliv. 1968 building at Gorky</td>
<td>submerged 30 knots approx.</td>
<td>A third generation hull/propulsion unit. The short range of the missile and its dived launch capability presents a great advance on the EI and EII systems; notably in the absence of the need for mid-course guidance. There may be some difficulties or uncertainty about the class given a slow building rate of 2/year. Role apparently anti-carrier.</td>
</tr>
<tr>
<td>P</td>
<td>1+7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No further information available</td>
</tr>
</tbody>
</table>

brought the total of SSGNs to 32 (5 EI + 27 EII) while operational SSGs numbered 32 units (16 Js and 7 W Longbins).\(^1\) The figure of 32 SSGNs available in 1967, compared with the 13 N class SSNs and the 9 H class SSBNs, clearly reflects the priority given SSGN development, in the naval construction programme of the mid-1960s. This priority in turn reflects the importance given to counter carrier systems and may reflect Soviet expectations, circa 1957/8, that a major American SSBN threat would not develop until the late half of the 1960s. It also suggests that apparent defects in the 1st generation hull-reactor units (and possibly 2nd generation units), and dissatisfaction with the range of 1st and 2nd generation SLBMs, may have led the Soviets to refrain from constructing SSBNs and SSNs during this period.\(^2\)

Since 1967 this concentration on SSGNs has given way to a concentration on Y class SSBNs and their D class successors.\(^3\) This has been reflected in a slow production rate of the C class SSGN which since 1968 has delivered approximately 14 units at the current rate of 2/year.\(^4\) These vessels have been constructed at the Gorky shipyard, which had previously been involved in constructing conventional submarines.\(^5\)

One unit of the P class has been reported but as yet no details have come to light. It is possible that this was the first of the follow-on class to the C, such a

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\(^1\) I have left out of account 5 W twin cylinder type which were experimental craft.

\(^2\) See p.171-177 above for discussion on these points.

\(^3\) The conversion of some EI SSGNs to SSNs is taken up in the subsequent section. It can also be seen as part of the down-grading of the SSGNs as the threat from SSBNs has increased. Soviet SSBNs are a deterrent to the use of the US equivalents and SSNs a means of actively countering them in a war situation.

\(^4\) Total from Berman 'Soviet naval strength and deployment' and construction rate from Janes Fighting Ships 1974/5, p.539.

development being expected at about this time\textsuperscript{1} but the lack of detail and evidence of a continuing construction programme\textsuperscript{2} must leave this conclusion tentative.

The C class, the third generation SSGN, is armed with 8 SS-N-7 sub-surface to surface missiles, which have a range of some 30 miles. Clearly such a system loses its effectiveness if it has no organic guidance for missiles or effective target discrimination and so such capabilities must be assumed.

The advantages conferred by a submerged launch missile system are obvious enough. Unlike the surface vessels, which since Kresta II have been armed with short range SSMs, the C class is more immune to surface detection. Moreover the short range of the missile, if accompanied by reliable organic guidance systems, suggests that the chances of attaining an accurate strike are such that high explosive warheads could be used. However the fitting of a short ranged missile has meant that the submarine will have to penetrate the ASW defence zones surrounding the task force or convoy. It may be that the slow building rate of the C class, and the apparent hesitation over developing the P class indicates an awareness of these difficulties, although unless additional nuclear submarine construction facilities are made available it may be difficult to significantly increase the construction rate above 2/year.

\textsuperscript{1} Evidence for the probable existence of a fourth generation SSGN is derived from the development of a fourth generation propulsion/hull unit for SSBNs, the appearance of a new SSN, the A class, which to date has not been developed, and the timing of the P's appearance, some 6 years after the first C class.

\textsuperscript{2} Although the P class was first reported in Janes Fighting Ships 1973/4, neither Janes 1974/5 nor Berman's list as of 1st July 1974 indicate any additional construction.
Attack Submarines.

If the production rate of the C class SSGN appears slow the same applies to recent V class SSN construction which has had an apparent building rate of 2/year since the first units were delivered in 1967/8. This apparent slowness is difficult to account for as it would appear that the SSN, used in a trailing mode, offers the Soviet Union the greatest opportunity of countering the Polaris submarines. Moreover one might have expected a more rapid construction rate given that the first generation SSNs, the N class, are noisy and relatively unreliable and hence disqualified from the SSBN trailing role.

The slow production rate, at first sight, does not appear to be due to the lack of construction facilities, as is the case with Soviet surface ships. Estimates suggest that Soviet nuclear submarine yards have a total capacity of 20 boats per year working on a one-shift basis. This has come about by increasing the number of ship yards capable of building these vessels. The Gorky

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1 Janes Fighting Ships 1974/5, p.542.
2 SIPRI Anti-submarine Warfare, p.45 suggests that 'the overlap of any Soviet area-defence tactical ASW with counter SSBN operations seems small' a conclusion which appears reasonable in the light of the vast areas of sea space available to the USN's SSBNs and the fact that they do not have to cross major Soviet ASW barriers which appear to be situated primarily in the vicinity of the USSR's fleet areas. On p.43 of the SIPRI report it is noted that the American SSBNs are invulnerable to a first strike unless the Soviet Union undertakes a long range, and necessarily highly visible programme of hunter-killer submarine construction which would deliver a number of SSNs several times the total number of Polaris/Poseidon craft.
3 Janes Fighting Ships 1974/5, reports that the N is a noisy boat. As such they are subject to detection by the passive acoustic systems incorporated in SSBNs. See also Breyer, S., Guide, p.286. Wells, R.D., Lt. Commander, U.S.N., 'The Soviet submarine force' USNIP August 1971, p.73 reports that the Ns are the most frequently sighted of the nuclear submarines, suggesting that they find it necessary to surface frequently. Wells also points to the well known fact that at least one SSN has sunk at sea in April 1970, at the time of the OKEAN exercise.
4 Polmar, 'Soviet shipbuilding', p.278.
yard, as we have noted, was responsible for the construction of the C class SSGN and further facilities have been made available at either, or both, the Ordzhonikidze and Sudomech yards in Leningrad.\(^1\) It is possible that this apparent anomaly between ship yard capability and need on the one hand and actual production rates on the other, may be due to difficulties in coordinating the deliveries of components or to problems in producing sufficient propulsion systems or weapons outfits for submarines. Unfortunately, it is not possible to arrive at a firm conclusion in favour of either of these suggestions. Gorshkov's series of articles 'Navies in War and Peace' suggests that there may be budgetary constraints\(^2\), but it must be remembered that ship building is a complex assembly industry and viewed in this perspective the ability of submarine yards to produce to 65 or 70% of their capacity would seem to be a reasonable achievement.\(^3\)

The present scarcity of SSNs in the Soviet fleet stems from the priority that was given to SSGN construction in the mid-1960s. After 1967 the major effort in submarine construction has been directed to making good the backlog in SSBN construction. In an apparent effort to make good the present shortage of SSN the Soviet Navy has taken in hand several units of the first generation SSGN the EI and removed their missile launchers.\(^4\) This effort to make good

\(^1\) The Ordzhonikidze yard built the nuclear powered ice-breaker Lenin in 1956-1959 and has since built 4 further nuclear powered ice breakers. Janes Fighting Ships 1974/5, p.583. Breyer, S., Guide notes that 'There is a submarine section that works independently and coordinates submarine development; (at Ordzhonikidze) for this purpose, the yard is an external agency of the Atomic Institute of Leningrad University'.

\(^2\) See Chapter XI below.

\(^3\) This assumes a building rate of 8 or 9 SSBNs, 3 SSGNs and 2 SSNs a year giving a total of 13 or 14 nuclear powered submarines annually. As I have suggested earlier this rate may be expected to decrease as the SSBN yards switched to DI or DII construction.

\(^4\) Janes Fighting Ships 1974/5, p.540 indicates that only one unit of the EI class remains.
### TABLE VII: ATTACK SUBMARINE - POST 1960 PROGRAMME

<table>
<thead>
<tr>
<th>Class</th>
<th>No.</th>
<th>Displacement</th>
<th>Armament</th>
<th>Construction Data</th>
<th>Range &amp; Speed</th>
<th>Machinery</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSN</td>
<td>14</td>
<td>3,600 tons</td>
<td>Torpedo</td>
<td>first units</td>
<td>20 knots</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>surface</td>
<td>tubes</td>
<td>delivered 1967-8</td>
<td>surfaced</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,200 tons</td>
<td></td>
<td></td>
<td>30+ knots</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>submerged</td>
<td></td>
<td></td>
<td>submerged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>3,000 tons</td>
<td>completed</td>
<td>1970</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>surfaced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>4</td>
<td>2,500 tons</td>
<td>Torpedo</td>
<td>Launched 1968</td>
<td>16 knots</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>surface</td>
<td>tubes</td>
<td></td>
<td>submerged</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2,860 tons</td>
<td>6.533mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>submerged</td>
<td>(Janes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,000 tons</td>
<td>surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,100</td>
<td>submerged</td>
<td>(Weyer)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>1</td>
<td>1,000</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 1,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ton range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources:**
an obvious backlog would seem to be a temporary measure until a new class of SSN can be introduced on a large scale.

As with the SSGNs there is a prototype of new SSNs, the A class. However this class does not appear to have been developed beyond the initial prototype delivered in 1970\(^1\) possibly because additional development work was required before large scale production of a quieter boat was initiated.

At present the vast majority of SSNs operate from the Northern Fleet area\(^2\). They are undoubtedly engaged in hunting for Polaris/Poseidon boats, as is indicated by recent reports of a collision between American and Soviet submarines in the North Sea,\(^3\) and they probably have a role in defending Soviet SSBNs.

The deployment of the SS-N-8 missile suggests that by 1977 almost half of the Soviet SSBN force may not find it necessary to leave the fleet areas to target American cities and installations. This suggests a requirement for SSBN protection within the fleet areas which could be carried out by conventionally powered submarines, given the short distances involved between Murmansk and Bear Island.

There have in fact been two new classes of diesel electric submarines reported. In 1968/9 four units of the B class were delivered. To date there is still confusion about the details of this class with Jane's Fighting Ships 1974/5 reporting a displacement slightly

\(^1\) Jane's Fighting Ships 1974/5, p.542.

\(^2\) Berman, R., 'Soviet naval strength and deployment', suggests that all the V class and 9 of the N class are in the Northern Fleet Area. Jane's Fighting Ships 1974/5 reports 2 V class and 5 N class units with the Pacific Fleet.

\(^3\) Canberra Times, 7 January 1975. Rear Admiral La Rocque (USN retd.) claimed that other collisions had occurred 'one in the Mediterranean and the other at the approaches to the Straits of Gibraltar'. 
heavier than the F class. If this is correct then the B class may have been intended as a follow-on class to the Fs. Weyer's Warships 1973 however gives displacement figures suggesting that the Bs may have been intended as a prototype class designed to test new propulsion units for a class designed to replace the Ws.

Although it is impossible to be certain at this stage it appears as though the figures in Weyer's may be the correct ones. The Bs only built to four units, an adequate run for a prototype class, and a new class of what appear to be medium range diesel submarines has recently been reported. Although sources differ as to the numbers produced it seems as though all units of the new T class are stationed in the Northern Fleet. If they are in fact medium range boats, as suggested by the available figures for their displacement, then it is almost certain that they are to be involved in fleet area protection rather than commerce disruption in the Atlantic.

Air Cushion Vessels. In 1967 the Soviet Navy acquired its first hovercraft and conducted investigations designed to test and evaluate the potential of hovercraft for naval applications. Since then a military version of the Skate passenger amphibious hoverferry has entered naval service. Although there are no numbers available for this type of craft they appear to be used as fast amphibious transports for the Soviet naval infantry. A much larger 200 ton amphibious hovercraft is undergoing trials for the naval infantry and will probably be used as an assault craft.

1 Berman, op.cit., suggests 4 units; Janes Fighting Ships 1974/5, suggests 1. The difference may be due to the date of publication.

2 This section is adapted from information in Janes Fighting Ships 1974/5, p.569, Janes Surface Skimmers 1974/5, p.116-125, esp. p.120-121, and 'The great Caspian Sea Monster', Time, 11 February 1974.
Such craft have obvious utility over rivers, sheltered bays, and ice and can attain speeds in the region of 150 miles/hour. However their ability to operate over rough terrain and high seas is suspect.

Reports that a large Soviet experimental wing-in-ground-effect machine has undergone tests in the Caspian Sea are of considerable interest. Although details are scanty the craft known as Ekranoplan has been credited with a speed of 300 knots at an operating height of 25-50 ft. above water. It is powered by eight gas turbines forward and two other turbines aft and has been reported as having a range of 7,000 miles and a flight time of two or three days. The Ekranoplan is expected to be fully developed and possibly in service by the late 1970s.

Soviet experts maintain that the craft can negotiate sand spits, shallows, marshes, ice, snow and sloping planes and to be sufficiently seaworthy to operate over rough seas.

It is possible that such a craft will be used by the Soviet Navy for amphibious operations: they have the capacity to carry an estimated 900 men and material to selected landing areas with little regard for sea conditions, underwater obstacles or minefields.

Technical experts have thought, on the basis of artists impressions, that the Ekranoplan may not be able to operate in extremely turbulent weather conditions. Moreover the relatively wide wing span and its low operating height suggest that the craft may have limited manoeuvrability. This may throw some doubt on its future use in ASW patrol work, although this role has been highlighted in Western comment on the machine. Soviet sources have also noted ASW, minesweeping, anti-surface ship, patrol and fast supply roles. The anti-surface ship role seems to be quite inappropriate, given the poor manoeuvrability characteristics and the relatively low speeds and operating height, for although a low operating height may enable the craft to avoid radar detection it also limits the range
from which ASMs can be fired and thus brings the launch platform within reach of target counter measures.

**Naval Aviation.**

At present the Soviet naval air arm, the world's second largest, operates approximately 1,200 fixed wing aircraft and helicopters in the four fleet areas. The major units and their combat roles are indicated in Table VIII.

The more important combat characteristics of bomber aircraft not previously listed are also tabulated.

The Soviet naval air force continues to perform three major roles; maritime reconnaissance, anti-surface ship and anti-submarine warfare, and the subsidiary roles of mid-course missile guidance, electronic intelligence gathering and electronic countermeasures. While the fixed wing components are still land based the construction of at least two Kuril class carriers suggests that in the near future V/STOL fighters will be taken to sea. As had already been noted this will improve the sea control capabilities of the Soviet Navy and may be used to give the Navy an enhanced intervention capability. ¹

The most widely reported aircraft for this role is an improved version of the Yakovlev Freehand which was first seen at the Domodedovo air display in 1967. At the time Western experts rated the aircraft as inferior to the British Harrier and noted that it was clearly subsonic and had a combat radius of less than 100 miles from the carrier deck. ² Since then advanced versions

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¹ This will mean the reintroduction of fighter aircraft to the Soviet naval air force for the first time since 1960. Prior to 1960 the fighters were all land based.
<table>
<thead>
<tr>
<th>Designation</th>
<th>No.</th>
<th>Brief Description</th>
<th>Armament</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>TU-16 Badger</td>
<td>280</td>
<td>Long range medium bomber</td>
<td>ASM</td>
<td>anti-surface shipping</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td></td>
<td></td>
<td>reconnaissance and tanker</td>
</tr>
<tr>
<td>TU-22 Blinder</td>
<td>55</td>
<td>medium range supersonic bomber</td>
<td>ASM or free fall bombs</td>
<td>anti-surface ship and reconnaissance</td>
</tr>
<tr>
<td>IL-28 Beagle</td>
<td>20</td>
<td>light bomber</td>
<td>torpedo equipped</td>
<td>anti-surface ship</td>
</tr>
<tr>
<td>TU-95 Bear</td>
<td>50</td>
<td>long range bomber</td>
<td>ASM or free fall bombs</td>
<td>anti-surface ship and reconnaissance</td>
</tr>
<tr>
<td>M-12 Mail</td>
<td>100</td>
<td>medium range amphibious</td>
<td>anti submarine torpedoes depth charges and ASW search equipment</td>
<td>anti-submarine and reconnaissance</td>
</tr>
<tr>
<td>IL-38 May</td>
<td>60</td>
<td>medium range militarised version of commercial air freighter</td>
<td>anti submarine torpedoes depth charges and ASW search equipment</td>
<td>anti-submarine and reconnaissance</td>
</tr>
<tr>
<td>Mi-4 &amp; Ka-25 Hound and Hormone</td>
<td>270</td>
<td>helicopters</td>
<td>anti submarine weapons and search equipment</td>
<td>anti-submarine and mid course guidance for long range ship borne SSM. Carried aboard Moskva, converted Sverdlovs, Kara, Kresta, I and II classes. Many of the recent destroyers have helicopter landing pads.</td>
</tr>
<tr>
<td>Other</td>
<td>200</td>
<td></td>
<td></td>
<td>transport, training and general utility aircraft - both fixed wing and helicopter.</td>
</tr>
</tbody>
</table>

Sources:  
Janes All the World's Aircraft 1973/4, various pages.
### TABLE IX: LAND BASED BOMBERS IN SERVICE WITH NAVAL AIRARM (POST 1960 ONLY)

<table>
<thead>
<tr>
<th>Designation</th>
<th>Speed</th>
<th>Range</th>
<th>Armament</th>
<th>Op. Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>TU-22 Blinder</td>
<td>Max Speed at 40,000 ft - 920 mph</td>
<td>1,400 miles + in flight refueling capability</td>
<td>Kitchen ASM or internal bomb load</td>
<td>1st shown publicly in 1961 Aviation Day fly past</td>
<td>The TU-22 was originally intended for a strategic role, but range is inadequate. Subsequently 2 naval versions: <strong>Blinder B</strong> - equipped to carry Kitchen ASM recessed in weapons bay. <strong>Blinder C</strong> - reconnaissance version six cameras reported in weapon bay, modifications to nose cone suggest electronic intelligence or electronic counter-measures.</td>
</tr>
<tr>
<td>Possibly also TU Backfire</td>
<td>Max speed of the order of 1,750 mph at high altitude possibly in the 5,500-6,000 mile range</td>
<td>free fall weapons or a stand off ASM at least the equivalent of Kitchen and possibly penetration aids</td>
<td>prototype observed in July 1970 possibly 12 pre-production models for full range of test and evaluation in early 1973</td>
<td>It is not clear as yet whether this variable geometry wing aircraft will enter the Naval Air Arm. However if past practice is followed it may do so especially as some of the earlier bombers dating from the 1950s must be retired soon. One report suggests that a prototype remained airborne for 10 hours after in-flight refuelling.</td>
<td></td>
</tr>
</tbody>
</table>

**Sources:**
- *Janes All the World's Aircraft 1973/4*, various pages.
have flown at Ramenskoye and have been tested aboard the Moskva. 1

The Soviet Union appears to have upgraded the status of naval aviation in anticipation of its increased importance. The late Naval Aviation Commander I.I. Borzov, was promoted to the Rank of Marshal of Aviation during 1972. 2

It has been suggested that the Naval Aviation Commander has considerable autonomy within the naval hierarchy in that he may carry over the war-time organisational structure which enabled the Commander to formulate plans, programmes, carry out operations and possibly supervise the development and procurement of naval aircraft. 3 Erickson has noted that the patterns of exercises and operations has occasionally shown that the Naval Air Force executes its role with a degree of wilful independence, a fact which may stem from a tendency of naval aviators to align themselves out of professional instinct with the Soviet Air Force. 4

It is possible that this identification with the Air Force, observable even in the official titles of rank, will gradually dissipate as the naval air arm takes to sea aboard the new aircraft carriers.

During the 1960s land based bombers overflew American aircraft carriers on an increasingly frequent basis. The first of these incidents, reported in March 1963, took place in the North Pacific, while in the Atlantic the Forrestal was overflown by 'Bears' while positioned off

1 Janes All the World's Aircraft 1973/4, p.498-9; and Janes Fighting Ships 1974/5, p.623.
2 It will be noted that Borzov was given an airforce type promotion rather than being made an Admiral.
the Azores, a round trip of some 4,000 miles from Soviet territory.1 After the June 1967 war, when Soviet air units were stationed in Egypt, flights over the Sixth Fleet in the Mediterranean were commonplace until Sadat demanded the withdrawal of Soviet advisers.2

Such demonstrations of shore based naval aviation capability raise the possibility that aircraft armed with long range ASMs could successfully attack carriers. While this role is undoubtedly part of Soviet naval aviation doctrine it would seem as though the early warning radar systems, shipborne and carrier aircraft borne, provide sufficient warning to enable the aircraft to be intercepted before they reached missile range and for counter measures to be taken against the missile itself.

Auxiliary Fleet

During the 1960s the Soviet Navy maintained an increasing number of vessels on forward deployment. One of the limiting factors on Soviet attempts to sustain vessels on distant deployment was the number of support vessels available. To some extent this deficiency could be made good by using vessels from the merchant marine, by reaching facility agreements with countries in the deployment region, and by a great deal of improvisation.

The recent construction at Leningrad of three units of Chilikin class fleet replenishment ships of 20,500 tons full load and the acceptance of at least one Manych class vessel from Finnish shipyards indicates that the requirement

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1 See text of McNamara statement on these first overflights, New York Times, 1st March 1963.
2 Aviation Week & Space Technology, 24 July 1972, p.16, and 5 February 1973, p.28. 'There have been almost no Soviet reconnaissance flights over Western surface operations in the Mediterranean since the expulsion from Egypt.'
for purpose built vessels for fleet support had become widely accepted. However it is uncertain whether this awareness preceded the move to forward deployment or whether the awareness stemmed from actual operating experience. Certainly the fact that the Chilikin class is based on the design for the Veliky Oktyabr merchant tanker and may have been built in the same yards suggests that the usual ten year lead time for new construction could have been cut considerably.¹

There can be little doubt that the logistics services of the Soviet Navy have assumed greater importance now that the Navy has left its fleet areas and undertaken distant deployments necessitating a greater reliance on afloat support.² Given the degree of political insecurity inherent in base facilities arrangements outside the confines of the Soviet Union, the expansion of the auxiliary fleet can be expected to continue, unless there is a radical change of policy over the practice of forward deployment.³

**Future Size of the Soviet Navy.**

It is appropriate to conclude this chapter on naval construction with some observations about the expected size of the Soviet Fleet in the first years of the 1980s. For the purpose of the exercise only the submarine fleet and vessels with an ocean going capability will be taken into account. It is assumed that whereas new classes of each type of vessel may be built it is unlikely that the building rate of each type will dramatically alter or

² Gorshkov notes 'Long oceanic cruises by naval ships present new increased demands on rear service support'. 'Some problems in mastering the World Ocean', Morskoy Sbornik No. 2, 1973, p.22.
³ See Chapter XI below for suggestion that the argument that forward deployment enhances foreign policy options may be under attack.
that if it does it will do so at the expense of some other type.

The SSBN construction programme limited under the terms of the SALT I agreements will deliver no more than 62 units of the Y + DI + DII class by May 1977. It is unlikely that this limit will be exceeded in the 1980s because of more pressing requirements for hull/nuclear propulsion units particularly for SSNs. This expectation may be nullified if the Soviets perceived a growing ASW threat to their SSBNs or a major American construction programme for this type of vessel. Even then it may be considered more advisable to concentrate on increasing the safety of their own SSBNs by building protective SSNs which would also be capable of countering enemy SSBNs.¹

It is unlikely that the numbers of SSGNs will increase at a rapid rate. The threat from carrier aircraft is still taken seriously but is not afforded the same priority as the threat from SSBN. In the 1980s units of the EII class will still be available and there could be as many as 20-25 units of the C class and its successors. It will be interesting to see whether the Soviet Navy does in fact build to a total size: of 50-55 SSGN units (EII + C and possible successors) or whether it will divert SSGN production capability to the construction of SSN. It may be decided to continue with SSGN production, thereby deriving the advantages of a more modern force and utilising the long lead time components of the SSGN, and to convert some EII units to SSN as has happened with the

¹ See the detailed analysis of Kuenne, R.F., The Polaris Missile Strike on this point. He concludes p.387-394 that the cheapest and most effective way of preserving a given SLBM capability against enemy SSNs is to increase the number of SSNs used in a protective role rather than to construct additional SSBNs.
earlier EI class. Undoubtedly assessments of the combat utility of the horizon range SS-N-7 system based on experience in exercises and testing will play a major role in this decision.

At present construction rates and assuming dissatisfaction with the performance of the N class SSN it is to be expected that by the early 1980s the Soviet Navy would have no more than 25-30 operational SSNs. This would appear to be far fewer than warranted either by comparison with the American SSN fleet\(^1\) or in terms of probable Soviet requirements for an anti-Polaris/Poseidon/Trident system or for protection of its own SSBN fleet. However following the completion of the SSBN and possibly SSGN programmes it may be expected that some of the additional shipyard capacity and propulsion units will be available for SSN building. It is difficult to be precise but such a step could lead to an annual construction rate of 10-14 units of the SSN compared with the currently estimate rate of 2-3/annum.

So far as conventionally powered submarines are concerned it is unlikely that any further construction of SSBs is contemplated. Despite the range of the SS-N-8 SLBM it is unlikely that the Soviets would forego the advantages of on station concealment conferred on the ballistic missile submarine by the use of nuclear propulsion. Moreover to put long ranged SLBMs on diesel powered submarines in excess of 62 submarines or 950 launchers would break the agreement between the Soviet Union and United States arrived at in the aftermath of SALT I.

\(^1\) By the early 1980s the US SSN force will consist of 90 units; 26 Los Angeles class; 53 other SSNs of the Skipjack and later classes and 8 older vessels for training and research purposes. An experimental quiet design SSN has just joined the fleet and it is expected that some features of this experimental class will be incorporated in units of the Los Angeles class.
It would seem unlikely that the Soviet Navy would wish to construct any new SSGs given the advantages of concealment currently possessed by the nuclear-powered C class and its under-water launched missile system. If there is to be a new cruise missile submarine, and the reported existence of a new 400 mile range missile suggests that this is likely, then in all probability it will be nuclear powered.

Conventionally powered SS construction appears to have virtually come to a halt. W class vessels which built to a total of 240 units are being retired at a reported rate of 20/year and the scrapping of the Z class cannot be delayed much longer. This leaves a present SS force of some 56 Fs, 14 Rs, 4 Bs and perhaps 4 Ts, the last three all being medium range vessels. As yet there appears to be no construction of a follow-on class for the Fs and the building rate of the Ts is as yet unknown. It is unlikely that the construction rate of the replacement vessels will approach the massive proportions of the post war building programme. Conceivably the Soviet Navy could enter the 1980s with a conventionally powered attack submarine force of under 100 units only half of which, the Fs, would be available for operations requiring long deployment periods.

Not only are the numbers of submarines declining in overall terms but the proportion of task specific submarines is rising. Thus the SSBNs are not likely to be used in any but their deterrent role, a considerable number of the available SSGNs will be involved in anti-

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2 Janes Fighting Ships 1974/5, p.546.
3 The number of 'available' units of any class is but a fraction of the total number. If we consider the SSGNs assume the existence of 55 units in 1980 and distribute these among the fleet areas in the same proportions as at present then we may expect 38 units with the Northern Fleet and 17 units in the Pacific. Of these no more than 2/3 could be relied on to be operational at any given time.
carrier operations and the SSNs may be fully occupied in SSBN related activities. Therefore although it is possible that some SSGNs and SSNs may be assigned to anti-commerce activities it is not expected that this will be their major operational role. Perhaps only the 56 large SS boats will be involved in the anti-sea lines of communication role in a future war involving the super powers. If this is so then given the continuation of present deployment patterns (31 North, 14 Baltic and 11 Pacific) it is unlikely that more than 8 - 10 units could be operated on a sustained basis in the mid-Atlantic. ¹

It would be possible, if the Soviets continue their present practice of building vessels of over 15,000 tons in only one yard, to have four units of the Kuril class in operation by the early 1980s to which should be added the 2 Moskva units already in service. Depending on their fleet distribution, it would seem as though the Soviets may be able to keep one Kuril in fairly constant operation with both the Northern and Pacific Fleets.

The Kara at present building at the rate of less than one/year is under construction at Nikolayev. It may be possible for the Zhdanov yards in the Baltic, which have been involved in the Kresta II programme, to take part in the programme. On the assumption that this will occur, it

¹ Janes Fighting Ships 1974/5, p.531 and Berman, op.cit., for deployment patterns. It is important to remember the effectiveness of American anti-submarine warfare capabilities in this context. We have noted the success of American ASW forces during the Cuban crisis when they forced conventionally powered submarines to surface in full view of ASW aircraft and ships. It has been reported that the tactic of 'riding out' submarines by aircraft is no less successful in the Greenland-Iceland-UK gap and may even be effective against nuclear powered craft. See Kuenne, R.B., Polaris, p.90.
seems that production could be stepped up to an average rate of three missile cruiser units every 2 years, thereby producing some 11 units by the early 1980s. If there are in fact 11 units of Kara, or a Kara follow-on by 1980 this will give a total of twenty five guided missile cruisers armed with SSM. However, four of these, the Kyndas, are suspected of poor seakeeping qualities, and the absence of an on board helicopter robs the vessel of its full utility.

By the 1980s the Sverdlov class cruisers which have not been modified will either be scrapped or else join the aging Chapayevs and Kirovs as training vessels. It is also to be expected that the Skory class, originally built to some 75 units, will have been paid off and the conventionally armed Kotlins (26 units) may well have joined them. This will mean a deficit of some forty-five surface ships from the present surface fleet of about 115 units. To offset this loss we have seen that some 9 additional missile cruisers can be added to the fleet. In the destroyer category only the Krivak class is at present under construction. At a current building rate of 3 units every two years it is unlikely that this class will have produced more than 16 units by 1980 unless additional yard space is given over to construction. 2

In short old age is overtaking the Soviet Navy, and the numbers of its surface units and conventionally powered attack submarines can be expected to show a continuation of the decline which had been evident since

1 The figure of 45 includes 9 Sverdlovs, 17 remaining Skorys and 19 Kotlins.
2 If additional escort yards are being redirected to the construction of destroyers as has been suggested previously then it is possible that yards at Khabarovsky in the Far East and at Kamysk Barun in the Black Sea could be utilised. If this is done then the rate of decline in surface ships may not be as drastic as suggested in the last years of the 1970s. This reduction in the rate of decline would be due to policies adopted under the post Khrushchev regime. See McCGwire, 'Soviet Naval Programmes', p.223.
the late 1960s. In part this decrease in overall size is accounted for by the fact that recent ship construction has been more costly and the ships produced have been qualitatively different from those constructed during the 1950s. The more important factor in bringing about this decline in the 1960s and 1970s was undoubtedly the policy adopted by Khrushchev: the cancellation of an ongoing building programme and the handing over of battleship and cruiser ways to merchant ship and nuclear submarine construction. The replacement programme of the Khrushchev era has resulted in only four ships of over 15,000 tons being constructed since 1958, and two of these are yet to enter service. To date some 17 missile cruisers have been delivered since 1962, at an average building rate of less than 1½ vessels per year, and 34 new destroyers have entered service in the same period, at an average building rate of 2½ vessels per year.

Whether, and to what extent, the present leadership has taken steps to alter this situation will become clearer in the next few years when post 1964 construction programmes begin to deliver new units, but it is unlikely that new programmes will reverse the trend of overall decline in numbers prior to the 1980s.

This decrease in quantity is combined with qualitative improvements hence comparisons of fleet strength cannot be made in terms of combatants alone. However at a time when the Soviet Navy is appearing in virtually all the world's oceans, and is apparently incurring additional responsibilities, a reduction of forty five surface vessels in the next six years will present difficulties given that it is unlikely that current production rates will produce 20 surface replacements.

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To reverse this trend of an overall numerical decrease the Soviet Union would need to undertake a major effort to construct new shipyards or to reallocate existing yards, as may be the case with yards previously producing escort vessels. While this would not reverse the trend to reduced numbers by 1980 it would enable some expansion during the 1980s. It has however, been suggested that

Many yards, especially the big ones, have exhausted all possibilities of expansion because of space limitations. And it is very difficult for the Soviets to build new yards, because suitable land is often not available and the cost of making land suitable may be prohibitive.¹

Alternatively the Navy could press for the return to the fleet of construction facilities which were lost to the merchant mariner in the 1950s. This would require a policy decision to be made at the highest political levels.

In other areas of what appear to have been Soviet neglect new units are appearing but not in sufficient numbers to make good the backlog in the near future. Thus new support ships are being constructed² but not at a sufficient rate to support the requirements of a Navy operating in the Mediterranean Sea, the Indian, Pacific and Atlantic Oceans. Recent testimony before Congressional Committees points to the continued use of merchant vessels by the Navy for support services.³ The Soviet Navy has no equivalent to the underway replenishment groups to be found in the United States Navy, nor does it have an elaborate network of bases to compensate for its deficiencies in this area. The amphibious forces of the fleet are growing, but descriptions of exercises suggest that these forces are still primarily intended for local coastal operations over comparatively short distances.

² The Chilikin and Manych class of fleet replenishment ships.
³ Admiral Elmo Zumwalt, Jr., US Navy C.N.O. to House Committee on Foreign Affairs sub-committee on Near East and South Asia.
### APPENDIX TO CHAPTER VIII:

**MISSILES ENTERING THE SOVIET FLEET POST 1965**

#### Surface to Surface

**Strategic**

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Launch Platform and launchers/platform</th>
<th>Range</th>
<th>Operational Date</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-N-7</td>
<td>Y SSBNs (16)</td>
<td>1,500 miles</td>
<td>1967 aboard 1st Y class</td>
<td>dived launch: two stage solid propellant</td>
</tr>
<tr>
<td></td>
<td>C SSGN (8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS-N-9</td>
<td>NANUCHKA (6) missile corvettes</td>
<td>150 miles</td>
<td>1968-9</td>
<td>mounted in triple launchers.</td>
</tr>
<tr>
<td></td>
<td>KRA cruisers (8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KRESTA II (8) KRIVAK destroyers (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS-N-10</td>
<td>KOSA cutters (4)</td>
<td>30 miles</td>
<td>1968</td>
<td>note the trend to horizon-range SSM in post-1968 deliveries.</td>
</tr>
<tr>
<td></td>
<td>KOSA cutters (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KOSTA cutters (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KRESTA II (8) KRIVAK destroyers (8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS-N-11</td>
<td>SS OSA (fast missile)</td>
<td>30 miles</td>
<td>1968</td>
<td>probably a modified STRY SS-N-2 credited with low altitude capability.</td>
</tr>
<tr>
<td></td>
<td>modified KILDINS (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS-N-13</td>
<td>There have been recent reports¹ that the Soviet Union has developed a new long-range cruise missile the SS-N-13 with an estimated 400 mile range at a speed of Mach 1.2. Information on target location, speed and course could be beamed from an aircraft to the missile on a vessel carrying the missile. The flight time is such that a task force moving at 20 knots would have moved no more than 3 miles from its original position suggesting that a terminal homing device could bring the missile onto target. However, the major difficulty is that a system appears to be utilized for the characteristics of any potential missile which is not a true five stage system. Requires advanced programming.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Designation and Name</th>
<th>Launch Platform</th>
<th>Range</th>
<th>Speed</th>
<th>Control</th>
<th>Op. Date</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAN-3 Goblet</td>
<td>KURIL (4)</td>
<td>20 miles</td>
<td></td>
<td></td>
<td></td>
<td>Possibly a derivative of the land based. Gainful system.</td>
</tr>
<tr>
<td></td>
<td>MOSKVA (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KRESTA II (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KARA (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAN-4</td>
<td>KURIL (6)</td>
<td>20 miles</td>
<td></td>
<td></td>
<td></td>
<td>Normally housed in silo raised to fire and retracted for reloading and stowage. Possibly a barrage system using multiple unguided rockets.</td>
</tr>
<tr>
<td></td>
<td>2 SVERDLOV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>conversions (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>KARA (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>KRIVAK (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NANUCHKA (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GRISHA (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AIR TO SURFACE MISSILES**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Launch Platform</th>
<th>Range</th>
<th>Speed</th>
<th>Control</th>
<th>Op. Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-5 KELT</td>
<td>BADGER G (2)</td>
<td>130+ miles</td>
<td>Mach 9</td>
<td>radio command + terminal radar and homing.</td>
<td>1968</td>
</tr>
<tr>
<td>AS-6</td>
<td>BADGER G</td>
<td>350 miles</td>
<td>Mach 3</td>
<td>inertial navigation + radar homing</td>
<td>1970-71</td>
</tr>
</tbody>
</table>

Sources: Janes Fighting Ships 1974/5, p.637-640 and p.531.
Chapter VII showed that naval spokesmen were engaged in a defensive operation to maintain the role of navy and to establish the continuing importance of the surface fleet in particular. However, the introduction of new weapons systems into the navy occasioned an intra-navy debate over operations, tactics, the relative importance of the navy and the role of surface vessels in the new navy.

This debate, while interesting in its own right, is significant because the arguments of one loose faction "the naval radicals" supported those non-naval figures who maintained that it was not necessary to emulate the other major naval powers in order to achieve Soviet objectives at sea. Missiles launched from a relatively few small surface vessels, submarines and naval aircraft could accomplish the limited defensive tasks of the Navy.

The remainder of the chapter is an assessment of the capabilities of the Soviet Navy circa 1967 to undertake the missions assigned it: contribution to the strategic strike force, suppression of hostile ASW forces, countering sea based nuclear weapon systems, enemy commerce disruption, cooperation with the ground forces, in an attempt to indicate the impact of fiscal parsimony on the Navy's ability to carry out its assigned functions.
CHAPTER IX
Tactical Debates and Operational Requirements in the mid-1960s.

Introduction: The Revolution in Military Affairs and Naval Issues.

'The revolution in military affairs' has become a stock phrase in the writings of Soviet military theoreticians and is used to convey those changes which had their origins in the 'outstanding successes in the development of the Soviet economy and science and technology,' permitting 'the creation of an absolutely new military technical base and new weapons for the armed forces'.

For the possibilities opened by science and technology in the fields of atomic energy (nuclear weapons and means of propulsion), rocketry (delivery vehicles), radio-electronics and cybernetics (command and control), to be successful in affecting a revolution theoreticians claimed two further necessary conditions.

(1) The timely anticipation by the political leadership of the trends in the development of new military equipment and weapons, the disclosure of the nature of a future war, and the carrying out of basic reforms in military affairs.

and


The availability in the armed forces of such personnel, especially of leaders, who will have the ability to master quickly the new means of armed conflict and use them in any combat conditions with the greatest effectiveness.\textsuperscript{1}

According to Soviet authorities 'The Communist Party and its Leninist Central Committee were the organisers and leaders of this revolution...'

The party 'gave clear and scientifically based answers', viz.

The Armed Forces and the country, as a whole, must prepare for a war in which nuclear rocket weapons will be used most widely: which will represent a decisive, classic collision of two opposed world social systems: and which will be distinguished by unprecedented violence (on the whole territory of the participants) dynamic force and high manoeuvrability of combat operations.\textsuperscript{2}

Besides developing views on the nature of modern warfare the party was credited with the successful re-equipment of the Army and Navy with nuclear missiles and the reorganisation of the Armed Forces by establishing a new and independent arm of service, the Strategic Rocket Forces.\textsuperscript{3} In addition, the reprocessing of manuals and regulations to take into account the peculiarities and requirements of nuclear rocket war; the training of all personnel in the mastering of the new weapons and of officers in the newest methods of waging warfare; the inculcation of the necessarily high moral-political

\textsuperscript{1} Ibid., p.25.
\textsuperscript{2} Ibid., p.26.
\textsuperscript{3} c.f. the situation in the United States where the U.S.A.F. Strategic Air Command was responsible for the development and control of ICBMs, the USN for the SLBMs and the Army for tactical missiles and IRBMs.
qualities and the combat qualities of readiness and ability to defeat the enemy; and the further strengthening of the political organisations in the Army and Navy, attracted the concern and attention of the party. \(^1\)

It is not necessary for us, as outsiders, to accept the above descriptions of the role of the party during this period of change. However the claims of the Party that 'the prime foundation of military development and organisation is the leadership of the CPSU over the Armed Forces' \(^2\) and that the leadership bases its conclusions on 'scientific' (scholarly) investigation of the facts, had a considerable impact on the style and substance of debate among those closely concerned with the implementation of policy.

The revolution in military affairs brought to the fore a number of important issues of concern to the Soviet Navy. Broadly stated these issues revolved around the type of war for which the Navy was to prepare, the operations which the Navy would face in the event of a future war, \(^3\) the relative position of the Navy vis-a-vis

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\(^1\) Ibid., p.26-27 and Col. I. Prusanov, article in Communist of the Armed Forces, No. 3, 1966, p.8-16, translated as 'Activity of the Party in Strengthening the Armed Forces under conditions when a Revolution is underway in Military Art'. JPRS, Soviet Military Translations, No. 243, p.1-13. The Prusanov article was recommended by the Journal Communist of the Armed Forces for use in studying the general subject of the role of the party during a period when there is a revolution in military affairs coinciding with the danger of a new world war.


\(^3\) By the mid 60s it had been established that the Navy did have a role to play. The debate was over what that role was to be. During the mid 1950s Gorshkov claims that 'influential authorities' with 'leftist' tendencies argued that there was no need for a Navy at all. It is apparent that the reference is to Marshal Zhukov and Secretary Khrushchev.
other branches of the Armed Forces, and the applicability of former tactical doctrine in the sphere of operations.

One of the subjects of debate in the mid-sixties was whether naval missions were confined to the initial (and in Soviet doctrine the decisive) stage of general nuclear war, or whether the Navy had a role in the subsequent stages of general war or in other types of conflict. Moreover the Commander-in-Chief of the Soviet Navy argued for a re-evaluation of the role of the Navy in furthering the 'state interests of the Soviet Union in time of peace'.

This particular debate merged into a discussion of the operations the navy could be called on to effect during a future conflict. Besides carrying out nuclear strikes from the sea and destroying the enemy's sea based nuclear weapons systems, operations on which there was a high level of intra navy agreement other questions arose. Was there a need for operations against the enemy's sea lines of communications (SLOC) and for protection of Soviet coastal lines of communications (CLOC)? Was there a likelihood of amphibious operations in a future war and if so on what scale and at what range? The continuing relevance of 'battle', 'manoeuvre', 'coordination' and 'massing', as tactical imperatives in the naval theatre, was also subject to questioning, as was the relative importance of the Navy vis-a-vis the other branches of the Armed Services.

The answers to these questions were, in part, determined by the respondents views on the nature of a future war and in part by their views on the implications of the revolution in military affairs for the future development of the Navy. The fact that some contributors to the debate on tactics and missions advocated solutions beyond the current capabilities of the Soviet Navy indicated either a knowledge of future building programmes, as in the case of the SSBN, or else advocacy of a new type of fleet capable of carrying out the missions regarded as being of greatest importance. In particular
some contributors were clearly in favour of re-examining the relative weight afforded to surface ships, nuclear and conventionally powered submarines, and naval aviation, whereas, others appeared content to operate within the confines of a submarine-aviation fleet.

One important result of the 'revolution in military affairs' was to increase the threat to the Soviet Union presented by NATO sea based nuclear weapons systems. This fact was alluded to by all participants in the disputes over the issues outlined above. We have already examined the efforts to counter the CVAs of the NATO allies and the increased attention given the Polaris weapon system during the early 1960s. A representative selection of quotations indicates that this concern had not diminished in the mid 1960s and into the 1970s.

In 1966 Gorshkov observed:

In their preparations for a new world war our probably enemies...are assigning a special role to their fleets. Over one third of all the strategic nuclear weapons available to all branches of the armed forces are concentrated at present in the American fleet. ¹

Prior to the 24th Congress of the CPSU, First Deputy Commander-in-Chief of the Navy, Admiral of the Fleet, V.A. Kasatonov claimed:

Naval forces are being given the role of a shock force in the adventures of the imperialists ...They contain strike carriers with nuclear bomb-carrying aircraft and about 50 nuclear submarines armed with long range missiles.

(Here he is summing the SSBN fleets of the US, UK and France.)

These forces, concentrating about 40% of the strategic nuclear potential of the aggressor, are already deployed on the seas and oceans and are aimed at the U.S.S.R. and other socialist states.¹

Marshal A.A. Grechko, U.S.S.R. Minister of Defence, in the Navy Day issue of Morskoy Sbornik for 1971 wrote that the military and political circles of the United States were 'hypnotised by this increased naval potential' and were declaring a

so-called oceanic strategy, capable in their opinion, of ensuring a successful nuclear strike against our territory and removing their own territory from the threat of a retaliatory blow. Its essence consisted of shifting their main strategic nuclear potential from land to sea.²

Finally Admiral Gorshkov in the concluding article of his series 'Navies in War and Peace' noted that under modern conditions 'vast areas of the oceans (have) become launching pads for nuclear missile weaponry' and that in the post-war era

the U.S.S.R. and other socialist states found themselves surrounded on all sides by a hostile coalition of maritime states posing the serious threat of a nuclear missile attack from the direction of the sea.³

The discussion of tactics and operational requirements within the Soviet Navy had their basis in the revolution in military affairs, in the size and shape of the existing Soviet Navy circa 1967, and in assessments made about the desirable future size and shape of the Soviet Navy.

Subsequent discussion makes reference to the major units available to the Soviet Navy in 1967 which are tabulated in Table I.

It is important to keep these figures in mind when considering the claims that by 1968 the revolution in naval affairs had been completed.\(^1\)

Whereas Gorshkov could point to the beginnings of 'an ocean going submarine and aviation fleet capable of successfully carrying out its tasks in a nuclear rocket war'\(^2\) it is doubtful whether the numbers of 'rocket carrying atomic powered submarines' (32 E I & E II SSGNs and 9 H SSBNs), 'rocket carrying surface vessels armed with up-to-date anti-naval, anti-aircraft and other weapons' (30 missile destroyers, 8 missile cruisers and 1 (+1) helicopter cruisers), 'rocket carrying naval aircraft' (approximately 200 based primarily in the north western and south western sectors of the U.S.S.R.), 'highly mobile marines with means for their landing' (perhaps 3,000 men in all) and 'coastal rocket artillery units'\(^3\) constituted that mass influx of new equipment said to be essential for the revolution to be complete.

Captain Penzin highlighted the importance of the quantitative aspect of the change.

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1. Gorshkov, S.G., 'The Fleet of our Motherland', Krasnaya Zvezda 11 February 1968, 'now the period of complete reconstruction of our naval system is behind us'.
2. ibid.
3. ibid.
TABLE I: MAJOR UNITS AVAILABLE TO THE SOVIET NAVY CIRCA 1967

<table>
<thead>
<tr>
<th>Submarines:</th>
<th>Number</th>
<th>Class</th>
<th>Propulsion</th>
<th>Main Armament</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSB</td>
<td>7</td>
<td>Z-V</td>
<td>Conventional</td>
<td>2 x SS-N-4 missiles surface launch 350 mile range</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>G</td>
<td>Conventional</td>
<td>3 x SS-N-4 missiles</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>H</td>
<td>Nuclear</td>
<td>3 x SS-N-3 missiles submerged launch 650 mile range</td>
</tr>
<tr>
<td>SSBN</td>
<td>5</td>
<td>W conv</td>
<td>Conventional</td>
<td>1 or 2 x SS-N-3 missiles, approx. range 300 miles</td>
</tr>
<tr>
<td>Cruise Missile</td>
<td>7</td>
<td>W conv</td>
<td>Conventional</td>
<td>4 x SS-N-3 missiles</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>E1</td>
<td>Nuclear</td>
<td>6 x SS-N-3 missiles</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>E1</td>
<td>Nuclear</td>
<td>8 x SS-N-3 missiles</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>J</td>
<td>Conventional</td>
<td>4 x SS-N-3 missiles</td>
</tr>
<tr>
<td>Attack Submarines</td>
<td>22</td>
<td>Z</td>
<td>Conventional</td>
<td>torpedoes</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>F</td>
<td>Conventional</td>
<td>torpedoes</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>N</td>
<td>Nuclear</td>
<td>torpedoes</td>
</tr>
<tr>
<td></td>
<td>170</td>
<td>W</td>
<td>Conventional</td>
<td>torpedoes</td>
</tr>
<tr>
<td></td>
<td>approx.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface Vessels: Cruisers</td>
<td>12</td>
<td>Sverdlov</td>
<td>12 - 5.9&quot; guns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 (+1)</td>
<td>Moskva</td>
<td>4 SA-N-2</td>
<td></td>
</tr>
<tr>
<td>Missile Cruisers</td>
<td>4</td>
<td>Kynda</td>
<td>8 x SS-N-3, 1 x 2 SA-N-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Kresta I</td>
<td>4 x SS-N-3, 2 x 2 SA-N-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>SAM Sverdlov</td>
<td>2 SA-N-2</td>
<td></td>
</tr>
<tr>
<td>Destroyers</td>
<td>50</td>
<td>Skory</td>
<td>8 x SS-N-3, 1 x 2 SA-N-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>approx.</td>
<td></td>
<td>4 x SS-N-3, 2 x 2 SA-N-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Tallin</td>
<td>2 SA-N-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>Kotlin</td>
<td>artilllery: some modified to improve ASW cap.</td>
<td></td>
</tr>
<tr>
<td>Missile Destroyers</td>
<td>4</td>
<td>Kildin</td>
<td>2 SA-N-1 range 100 miles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Krupny</td>
<td>1 SS-N-1 range 100 miles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>SVM Kotlin</td>
<td>2 SA-N-1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 (+9)</td>
<td>Kashin</td>
<td>4 SA-N-1</td>
<td></td>
</tr>
<tr>
<td>Naval Aviation:</td>
<td>400</td>
<td></td>
<td>200 fitted with ASM</td>
<td></td>
</tr>
<tr>
<td>ASM</td>
<td>400</td>
<td></td>
<td>ASM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>approx.</td>
<td>50</td>
<td>Bombers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>150</td>
<td>Bomber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>200</td>
<td>Bomber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>185</td>
<td>Bomber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>on</td>
<td></td>
<td>Bomber</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
it is not enough to have extremely modern, single models of a new weapon in order for there to be considerable, and even basic revolutionary transformations in military affairs. The weapon must be a mass one, and it must have the corresponding carrier.¹

Penzin stated quite plainly that 'the primary weapon of today (is) the missile'² and he was equally firm in his contention that although in the past

the main strike force in our Navy consisted of surface warships and diesel submarines, today the role of main strike force, capable of operating against targets at sea, as well as ashore, has passed to the atomic submarines and naval missile air force which has powerful nuclear missiles at its disposal. For carrying out the other naval missions, there are surface warships of appropriate types.³

Yet in 1967 the missile firing atomic submarines had been introduced slowly into the fleet at a rate of just over four units per year since 1958. Diesel submarines had continued in production to make up the numbers. Thus the ballistic missile fleet consisted of twelve nuclear powered H class vessels and 22 conventionally powered G class submarines constructed between 1958 and 1962.

¹ Penzin, K.V., Captain 1st Rank, Candidate of Naval Sciences 'Changes in methods and forms of armed conflict at sea', Morskoy Sbornik No. 7, 1966, U.S. Navy trans. p.38. See also Pantelyev, Yu. A. Admiral, Professor, 'Some Questions of fleet actions in contemporary war', Morskoy Sbornik, No. 2, 1966, U.S. Navy trans. p.17 states 'revolutions in military affairs are the result not only of the creation of new types of equipment for use in combat, but of their mass introduction in units and forces, of the development and the mastering of the forms and methods of using them'. Kharlamov, N.M., Admiral 'Trends in naval developments', Morskoy Sbornik No. 1, 1966, U.S. Navy trans. p.24, writes of the 'modernisation and full equipping of the fleets with nuclear missiles, with electronic gear, and with atomic propulsion' which allegedly resulted from the revolution in military affairs. Admiral Gorshkov noted 'new weapons can only have a decisive impact on changing methods of warfare when used on a mass scale by the armed forces', 'Naval might of Soviet Power', Soviet Military Review, July 1965, p.4.
² op.cit., p.38.
³ op.cit., p.40.
While the E II nuclear powered cruise missile units were being produced in 1963-1967 16 J class conventionally powered units were delivered and the F class attack submarine ran to some 56 units while the nuclear powered N class numbered 13.

The influential former army officers Sokolovsky and Cherednichenko observed that 'Diesel-electric submarines with modern armaments have not lost their importance (against aircraft carriers)' and the influential volume Military Strategy noted that 'Diesel-electric submarines will obviously be used against lines of communication'.¹ Whereas the latter observation can be justified, the sacrificing of the advantages of underwater endurance and speed in submarines designed to attack major, well protected, surface units, capable of carrying out nuclear strikes against the land mass, suggests a false economy imposed on the navy by the more powerful arms of the Soviet defence establishment.

The limited production runs of various classes of surface vessels also suggest difficulties in applying the revolution in military affairs. By 1967 six of the eight Kruşny class SSM destroyers were about to undergo a major conversion to produce the Kanin SAM class, a clear indication that they had not proved satisfactory as built. The solitary Sverdlov conversion was a sufficient testament to the failure of that attempt at modernisation while the construction of only two Moskva units - nearing completion by 1967 - suggest a radical rethink about the requirements for anti-submarine warfare.

Thus when Soviet naval writers spoke of a mass influx of new equipment, based on the new technologies, necessary for a revolution in military affairs, they were

not describing an existing state but rather advocating the large-scale series production of new classes. Undoubtedly some of the writers quoted must have known of the forthcoming submarines and surface vessels planned for the late 60s and early 70s. Their contributions appear to be designed in part as protection of these new programmes which if fulfilled could bring about the desired mass increase.

What exactly was to be increased; the submarine and aviation arms only, or the surface fleet as well? To a great extent the answer to this problem can be gleaned from the writings on tactics and operations which appeared during the early and mid-1960s. In a wider perspective those, such as Gorshkov, who concerned themselves not only with the war fighting capacity of the Soviet Navy but also looked to the role of the Navy in peacetime found themselves in disagreement with colleagues whose conclusions were based on an examination of specific war related questions.

Authors of the 1960s who concerned themselves with tactical and operational questions necessarily had to take into account the ships and weapons systems already available. Hence some conclusions may have arisen not from the consideration of the impact of new weapons on old forms and methods alone, but from a realistic appreciation of what equipment was available. Others noted the new weapons but appeared to base their conclusions on what, in their view, was necessary rather than immediately available.
Missiles and the Question of Tactics

The introduction of nuclear armed missiles to the Navy was generally accepted as a major revolutionary event in naval development. It was widely held that battles, formerly characterised by long duration, close combat and great expenditure of ammunition, would now consist of nuclear missile strikes which were defined as the rapid employment of powerful weapons by a single vector, or by one or several tactical vector groups, against a selected objective for the purpose of destroying it.

For some this change completely altered the old verities of naval combat.

These properties of the modern weapon (the destruction in one blow not only of a single ship but of several at one time, the ability not just to inflict damage on a base but completely to destroy it and all its installations, as well as to sink all the ships present) have, at one blow, nullified all the old laws for conducting war.

The more cautious observed 'Conditions for combat at sea and the essence and nature of this combat are now entirely changed'. Such changes required Tactics, theory and practical methods for conducting naval operations (which) have been developed in conformity with the new equipment, and with consideration given to the actual capacities of our likely opponents.

3 Panteleyev, 'Some questions of fleet actions in contemporary war', p.18.
Admiral Gorshkov noted that the transition had not been an easy one when the first models of combat equipment made their appearance in the fleet arsenal our scientific thought attempted to use those provisions of the operational art and tactics which they already had, adapting them to new conditions.¹

However,

The more new combat weapons the fleet received...the more clearly the fleet felt the need to develop means and methods which were new in principle for utilisation of its forces in combat.²

There followed a period of 'critical analysis of the established theory of naval science' resulting in the 'breaking down (of) obsolete views and notions' out of which 'Quite a few new, original and extremely effective methods for conducting the armed struggle against a powerful naval enemy were found'.³

Besides indicating that changes in naval tactics, which were not specified, were required Gorshkov notes

The theory of naval science...was completely re-oriented to support the practical requirements of the fleets in carrying out strategic and tactical-operational missions corresponding to the new combat capabilities.⁴

¹ Gorshkov, 'The Development of Soviet naval science', p.20. It seems likely that Gorshkov is referring to the period between the late 1950s and 1963. During this time new missile units were being added to the fleet but there was little evidence of any major changes in fleet training or operational areas.

In a major address to the fleet in February 1963 - i.e. in the aftermath of the Cuban missile crisis - Gorshkov claimed to 'possess a most modern navy' but then had to instruct his men to take their ships to sea and undergo realistic training.


² Gorshkov, 'The Development of Soviet naval science, p.20.

³ ibid., p.20.

⁴ ibid.
These new combat capabilities meant that for the first time in its history our Navy was converted, in the full sense of the word, into an offensive type of long range armed force.¹

There is an important widening of focus which can be traced through these quotations. In the first Admiral Panteleyev fixed his gaze on the increased potential of the new weapons and attempts a revision of tactics from this standpoint. Indeed he goes further and implies conclusions about the future growth and shape of the fleet. This relatively fixed concern is shared by others who for convenience can be labelled 'the naval radicals'.² They include Admiral Kharlamov and Captain Kolesnikov whose ideas we shall explore in greater detail.

The broader view of Admiral Sergeyev took note of the 'actual capabilities of our likely opponents' in addition to the new capabilities of the Soviet fleet. His view was


² It is not suggested that these 'naval radicals' necessarily formed a self conscious cohesive group or that as a group or individually they actively lobbied for the acceptance of their ideas within the Navy or within the Politburo. I have found no evidence to support the existence of intra-navy group conflict and therefore suggest that this debate can be best understood in terms of what Franklyn Griffiths calls 'tendency analysis' or what the Soviets call 'non-antagonistic contradictions'. As Griffiths points out, 'the articulations of political participants will ultimately be influential only to the extent that they form part of existing tendencies... At the subsystem level the presence of a tendency would be indicated by a pattern of articulation associated with a loose coalition of actors operating at different levels of the political structure, whose articulations tend in the same direction but who are unlikely to be fully aware of the common thrust and consequences of their activity'. (p.358). This is not to deny that factions within the political leadership, anxious for a variety of reasons to keep naval expenditure to a minimum, may have been impressed by the arguments of the naval radicals and used them to bolster their case.

extended by Gorshkov who was concerned with the requirements of a navy recently converted to 'an offensive type of long range force' as opposed to its former status as a 'defensive type of coastal protection force'.

Gorshkov was moreover concerned to establish the role of the Soviet Navy in protecting the Soviet Union's 'expanding interests in the seas and oceans in peacetime'.

There was general agreement that the power of the nuclear strike increased the importance of achieving surprise and 'firing the first salvo'.

(The) importance of the factor of surprise is constantly increasing. In the last world war surprise can be said to have provided a relatively short-lived advantage for the attacker: today surprise strikes by nuclear weapons are fraught with catastrophic consequences.

and

(U)nder present day conditions the 'first salvo' has taken on a new meaning, since in fact the first blow by a missile with a nuclear charge in the vicinity of the target can completely destroy it. Now the 'first salvo' is the 'to be - or not to be' for if the first salvo is not successful one must expect a retaliatory strike by the enemy, the results of which will be decisive.

Captain Kolesnikov and Admiral Kharlamov concurred in this view stressing that success depended on the enemy 'not be(ing) permitted to use his powerful weapon'.

Soviet naval writings were and still are replete with exhortations to maintain a high state of combat readiness

1 Gorshkov, op.cit., p.14 indicates 'the strengthening of defensive tendencies' in the navy in the immediate post war period, which resulted in the advocacy of the 'operational utilisation of surface forces for defensive purposes in coastal engagements.'
2 ibid., p.21.
3 Sergeyev 'The Navy of a great power', p.8.
4 Panteleyev, op.cit., p.19.
5 Kolesnikov, op.cit., p.12, and Kharlamov, op.cit., p.27.
at all times (as are Soviet military writings in general) - a doctrine very much in keeping with the importance of the 'first salvo'. The only concession to this doctrine, with its implications of a pre-emptive strike, was the equally popular injunction that fleet forces be maintained 'in constant combat readiness to inflict immediate retaliatory strikes against the aggressor in order to disrupt his surprise attack'.

The urgency of striking first had obvious implications for the tactical coordination of different types of naval force. It was on this issue, and that of massing, that those I have loosely labelled 'the naval radicals' were clearly distinguishable from other writers.

The view of the radicals was succinctly put by Kolesnikov who held that to insist on tactical coordination was

totally incompatible with the situation which has developed: if we take into account the time factor - we win, if we disregard it in favour of coordinated action - we lose. Therefore, in this case it would be more correct to substitute the principle 'no-one waits for anyone' for the coordination principle 'we proceed alone - we fight together'.

Panteleyev although agreeing with the above proposition stopped short of completely dismissing the importance of tactical interaction of different types of forces. '(I)t remains a superior way of using forces to achieve a goal', and 'such organisation is always desirable, even though it may not always be mandatory, or even possible today'.

Admirals Panteleyev and Kharlamov were both concerned that given the likelihood of combat operations in distant waters coordination would no longer be possible. They dismissed the problem by asserting that such organisation was not mandatory, and bolstered their argument by reference

1 Sergeyev, op.cit., p.8.
2 Kolesnikov, op.cit., p.12.
3 Panteleyev, op.cit., p.20.
The powerful nuclear weapon (which) now makes it possible for a limited group of similar forces to carry out a mission independently. Therefore, the concentration of a great many different types of forces is simply superfluous at times.¹

The only other reservation expressed was that some minimal coordination would be necessary 'to ensure the safety of (our) own forces'.²

Those who maintained that coordination remained an important principle of naval warfare, to be achieved wherever possible, agreed that it would be folly to allow opportunities to slip away since

in the time required to bring proper forces to the area the enemy grouping may be able to evade the strike, damage the forces being concentrated or do both, and may even use his weapons to carry out his primary mission.³

Yet coordination was still of relevance, even in remote areas, because 'individual strikes cannot always attain the desired objectives'.⁴

It was apparent that a prerequisite for tactical coordination, particularly in distant areas, was the availability of reliable global intelligence. Recent innovations in the miniaturisation of electronic equipment made possible the surveillance of vast tracts of the globe by aircraft and more significantly by satellite reconnaissance. Given that this was attainable

¹ ibid., p.20. Kharlamov, op.cit., p.28 argued that the effectiveness of a missile strike remained high 'regardless of its launch source' and so coordination of a variety of forces was not mandatory.
² Kharlamov, op.cit., p.28.
³ 'The theory of naval science and the modern navy', op.cit., p.33.
⁴ ibid., p.33
The present status of means for conducting surveillance and communication for all practical purposes imposes no limit on the possibilities for controlling one's forces. Thanks to these means it is possible to locate an enemy in time, to deploy one's forces...1

The pre-planning of strike forces and their coordinated deployment may no longer be rendered impossible by lack of information. Given the removal of this major handicap it was argued that coordination, even in distant waters, should be achieved for:

It makes it possible for the formation to manoeuvre flexibly, to put the enemy under the most unfavourable conditions, to strike powerful coordinated blows and to maintain mutual support and aid in combat.2

Indeed the fact that 'Now the ships do not travel, as before, in solid ranks, and are frequently out of visual and technical range'3 intensified the need for careful coordination and planning.

The issues which arose in the debate over the continued relevance of the tactical doctrine of 'massing' were outlined in an anonymous article which appeared in Morskoy Sbornik in February 1964. On the one hand there were those who held it no longer necessary to mass forces and weapons because

Rocket nuclear weapons offer an incomparably higher probability of striking the target with colossal destructive power than was the case with conventional weapons. Individual weapons can hardly be shot down by the present means of defence.4

1 Petrov, B.F. 'The essence and nature of modern naval warfare', p.23.
3 ibid., p.8.
Spokesmen for this view rejected the necessity for large-scale use of nuclear rocket weapons in single strikes.\(^1\) On the other hand more cautious writers continued to insist on the importance of massing because of the vulnerability of the cruise missile.

\(T\)he use of nuclear warheads, as the most powerful striking weapons, does not exclude, but on the contrary, presupposes massing, because this increases the probability that a missile will reach the target even when there is a powerful defence.\(^2\)

The conclusion of the anonymous correspondents on this issue was

if the number of missiles in the salvo is increased, beyond a certain minimum, the effectiveness of the strike (attack) can be sharply increased. The power of such a strike will be considerably greater than the total power of several sequential strikes with a smaller number of missiles. This circumstance in the opinion of the authors predetermines the necessity of massing firepower and forces in battle.\(^3\)

**Cruise Missiles**

The naval radicals were sustained in their views on tactics by the properties they imputed to the missiles which had entered service. Whereas there was general agreement that missiles were able to put nuclear charges on targets quickly, accurately and in a short period of time,\(^4\) there was less agreement as to the certainty of their reaching the target. If we discount the effects of missile failure in firing, flight or on impact, there

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\(^1\) Panteleyev, op.cit., p.19, (the strength of the action is not the result of the number of missiles launched, but, rather, the size of the nuclear charge they carry').

\(^2\) Svetlov, A.G. Capt. 1st Rank, Morskoy Sbornik, No. 12, 1962, p.19. See also Petrov, op.cit., p.29 for the view that enemy defences can destroy cruise missiles.

\(^3\) 'Theory of naval science and the modern navy', p.32.

\(^4\) Sergeyev, op.cit., p.5.
are four other ways in which the cruise missiles available to the Soviet Navy could be countered.

Firstly and most obviously the launch platforms themselves could be eliminated. (It should be remembered that even the SSGNs had to surface in order to launch their missiles). Protective sea based air cover available to an enemy task group could either prevent a submarine from surfacing or else attack a surfaced submarine before it had the opportunity to launch its missiles. Surface ships and naval aircraft equipped with missiles could also be detected and countermeasures taken against them. Even if missiles were launched at maximum range - about 300 miles in 1967 - there is no guarantee that the launch platforms would be beyond the detection range of the outer picket vessels and carrier based early warning aircraft, despite constant Soviet assertions to the contrary.

The speed of the Soviet cruise missiles, ranging from approximately Mach 1.0 in the case of the SS-N-1 to a possible Mach 1.5 for the SS-N-3 and perhaps to Mach 2.0 for the AS-3, meant that these missiles fly at speeds comparable to those of contemporary aircraft, and hence were vulnerable to the weapons systems available to naval air power and to shipboard point defence systems. If the flight time of the missile is taken into account, there would in many cases be adequate warning time to enable these systems to be activated.

Mid-course guidance was required by all the early Soviet cruise missiles when used against targets beyond the horizon. The guidance systems also provided the target discrimination necessary to ensure destruction of the major target (e.g. a carrier, rather than one of its escorts). This guidance, provided by aircraft as a rule, raised problems of coordination in attacks in distant waters, as all Soviet fixed wing aircraft were land-based. Guidance may be provided by shipborne helicopters (with attendant problems of vulnerability to attack by aircraft),
by satellites (where coordination of satellite launch from remote sites and selection of suitable orbits present major difficulties), or submarines (which if not in sight of the target cannot perform their function, and if in sight of it may be fully occupied in surviving attack by enemy ASW ships, aircraft and helicopters).

Incoming missiles may also be countered by interfering with, or confusing, their terminal homing devices. Terminal homing, based on active radar or infra red systems, can be diverted by decoys or else select a low value target. Radar can be jammed by the defensive use of chaff or by electronic countermeasures, and subjected to constructive deception causing the missile to home in on false targets.¹

This is not intended to discount the utility of the cruise missile systems. It does however suggest that the naval radicals were overoptimistic in their claims for the new weapons.

**Fleet Size and Composition**

The most important conclusions drawn by the radical tacticians concerned the size and composition of the fleet and the question of numerical supremacy in combat. Panteleyev, during his discussion of coordination claimed that 'submarines and aviation can, (together and separately) with the help of nuclear weapons, carry out large scale missions',² and as we have seen his rejection of the need for massing and coordination was based on the supposition that 'the powerful nuclear weapon now makes it possible for a limited group of similar forces to carry out a mission independently.'³

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² Panteleyev, op.cit., p.20.
³ ibid., p.20.
Admiral Kharlamov was more forthright in his assessment

(Any grouping of ships at sea can now be wiped out in an extremely short period of time by a comparatively small group of long range nuclear missiles stationed in predetermined areas, in advance.1

The naval battles of old would be replaced by nuclear strikes, 'carried out by small numbers of highly manoeuvrable groups of carriers of nuclear missiles and torpedoes'2 and

the primary concern of the commander in charge of directing combat activities at sea is now not the massing of his forces...but rather the organisation of a small number of nuclear strikes by a formation which is comparatively few in numbers, and even single weapon carriers.3

Kharlamov concluded with the observation that

Whereas at one time it was believed that the primary need in order to gain victory was numerical superiority over the enemy forces, this today is not given so decisive importance.4

There was, in all of this, the basic claims of what Herrick termed the 'neo young school' of the Soviet Navy5 and indeed there are close affinities between the spokesmen of 'the naval radicals' and the propositions advocated by Soviet naval spokesmen in the period from the early 1920s to the mid 1930s. This affinity was highlighted in the cautious contribution of Captain Penzin to the debate.

1 Kharlamov, op.cit., p.28. It is possible that Admiral Kharlamov had the Mediterranean squadron of the Black Sea Fleet specifically in mind. At the time of publication, January 1966, this 'comparatively small group' of ships armed with long range missiles fluctuated between a high point of some five major surface combatants, five submarines and ten auxiliaries and a low of one surface combatant and three auxiliaries.
2 ibid., p.28.
3 ibid., p.29.
4 ibid., p.27.
5 Herrick, R.W., Soviet Naval Strategy.
Penzin claimed that in the past

the mine and the torpedo cast doubt on the
primacy of large, gun firing ships, particu­
larly when they were operating close to
enemy bases

which was precisely the claim of the young school doctrine. These weapons reduced the necessity of supremacy at sea, at least to ensure the safety of the homeland, the central historical concern of the Soviet Navy and the Russian

navy before it. Penzin implied that the new missile

weapons have further 'reduced in scope the old framework

in which the form of conflict used to fit'; in particular

the former requirement for numerical superiority and

subsequent supremacy at sea. 1

However, he warned of the dangers inherent in 'the

overstatement of capabilities' by 'enthusiastic adherents'

of new technologies and weapons 'who at times go to

extremes in evaluating them' and invoked not only 'the

very nature of armed conflict' but the 'universal
dialectical law', 'the law of unity' and 'the conflict of

opposites' to suggest that

The development of a means of protection against
every effective offensive medium begins
immediately upon the appearance of the latter. 2

This would have been little more than an interesting

internal debate within the Navy were it not for the fact

that the naval radicals received now, as they had in the
past, the blessing of the party and the rest of the armed
forces concerned at the cost of any attempt to emulate
the major naval powers. If Panteleyev and 'the naval
radicals' were correct then it would be possible to achieve
the operational requirements of the navy relatively

1 ibid., p.43.
2 Penzin, K.V. Capt. 1st Rank, 'Changes in the method and
forms of armed conflicts at sea', Morskoy Sbornik, No. 7,
inexpensively by utilising missiles on a relatively small number of surface ships, submarines and naval aircraft. The frugality of the party and the armed services vis-a-vis the navy's requirements up to 1968 requires no further evidence than the slowness of introduction to the navy of even that equipment required for a neo young school strategy; nuclear powered submarines and missiles.

One representative offering from a non naval officer will suffice - 'A small fleet may be said to have become equal in the power of its armament with the large ships of the line', so that

Now...one torpedo boat is capable of destroying or putting completely out of action any large surface ship, even an aircraft carrier, with one or two torpedoes.1

If this was accepted then the investment of funds in aircraft carriers and other large surface vessels was clearly superfluous.

The position of those who would argue against such a party sanctioned line was unenviable, particularly if they also occupied high ranking positions in the Soviet Navy. Of necessity, the Party and Government had to be lauded for its role. Thus,

The Communist Party and the Soviet Government display wise judgement in taking all necessary measures to have the armament and organisation of our navy correspond to its increased role in the country's defence and in the protection of its state interests.2

Moreover the Commander in Chief had to consider the morale of his officers and men. He could hardly explicitly cry woe over the state of his service, particularly on public occasions such as Navy Day addresses.

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1 Derevyanko, Col. P.M. 'Changes in the armed forces and their operations' from The Revolution in Warfare - Its Nature, JPRS SMT No. 386, p.11. See also Cherednichenko and Sokolovsky.
Hence the frequent claims that 'the Soviet Union is a great maritime Power' and that 'the Soviet Navy now has everything necessary to beat back any aggression'.

Gorshkov himself may have been influenced momentarily by the argument that the qualitative changes in the fleet had offset any quantitative disadvantage it may face vis-a-vis the most likely potential enemy. The Pravda article for the 1962 Navy Day celebrations stated,

The might of the navy is now determined in the first place not by the number of pennants, but by the quality of vessels, by their being equipped with modern military technology and weapons.

The Soviet Navy is at present more modern than the navy of any capitalist country.

In February 1963 Gorshkov significantly modified his previously expressed view in a more restricted outlet, the military newspaper Krasnaya Zvezda

It must be noted that today the might of the navy is determined not only by the number of vessels but also by the combat properties of the ships and aircraft and by their being equipped with perfect technology and weapons.

In February 1967 Gorshkov attempted to refute the claims of the neo young school or 'the naval radicals'. Firstly, he ridiculed the defensive orientation, the young school philosophies and the basic training of the Soviet

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1 From Gorshkov's Address on Navy Day 1965. BBC SWB SU/1920/C/14 and an interview with the Admiral of the Fleet V. Kasatonov, First Deputy Commander in Chief of the Soviet Navy, Tass in Russian for abroad 12.27 and in English 12.31 GMT 20 July 1965, BBC SWB SU/1916/B/1.


Navy in the immediate post war era, and by implication attacked the present neo-young school adherents who also advocated a defensive strategy carried out by a small number of units. Then he advanced the claim that:

In the mid fifties, in connection with the revolution in military affairs, (which at this time had not advanced beyond the growing awareness that nuclear weapons had made nonsense of most of Stalinist military doctrine) the Central Committee of our Party defined the path of fleet development, as well as the fleet's role and place in the system of Armed Forces in the country. The course taken was one which required the construction of an ocean going fleet, capable of carrying out offensive strategic missions. Submarines and naval aviation, equipped with nuclear weapons, had a leading place in the program.2

Now although the new course may have required the construction of an ocean going fleet there is no evidence that this requirement was met in decisions originating in the mid 1950s, or arguably at any stage since then. In 1967 at least this was still an on-going requirement. Of course the Soviet fleet can and increasingly does go to sea in times of peace and even in times of international tension. Whether any but its SSBNs could remain there in times of conflict is however a different matter. Lacking sea based air cover it must be vulnerable to attack from

1 'As a result of the strengthening of defensive tendencies there was in the practice of combat training, a natural attempt to have own forces operate so as to cause enemy warships to enter the minefields, and to put them in an unfavourable position for carrying on the battle, and then to use torpedo boats, aviation, shipboard and shore artillery, to destroy these forces. Of course, operations such as these could take place...But this undeviating attempt to conduct every engagement with surface ships by launching the main strike in our own coastal waters, and mandatorily by the various types of fleet forces in an area designated in advance, and often in the same identical area could not be justified.'


2 ibid., p.19 emphasis added.
the air and, with the exception of its SSBNs, would be very hard pressed to carry out offensive strategic missions, except within the range of shore based air cover.

Gorshkov's navy circa 1967 failed to meet his requirements. No amount of assertion could hide the fact that 'our ocean going fleet', that 'qualitatively new type of Armed Force' in which 'submarine forces, aviation, surface warships and other types of forces developed harmoniously', still remained an aspiration. What was important however was that this aspiration in itself was of a qualitatively different kind from the views of the naval radicals. It involved the desire for 'a balanced Navy, capable of successfully conducting combat operations under differing circumstances' as opposed to Kharlamov's navy comprising nuclear submarines, and naval aviation armed with nuclear rockets in which surface vessels play a marginal role. It implied a capacity for offensive strategic missions as opposed to Kharlamov's essentially submarine-oriented defensive requirements. Finally it implied a capability to sustain itself on the oceans; it was to be an 'ocean-going fleet' rather than an updated version of the prewar mosquito fleet.

And Gorshkov went further, for his well balanced fleet was to be one

which, in composition and armament is capable of carrying out missions assigned it, not only in a nuclear war, but in a war in which nuclear weapons are not used, and is also able to support state interests at sea in peacetime.¹

the latter mission being almost impossible for a submarine-aviation fleet, except in the context of strategic deterrence.

¹ ibid., p.19, f/n 1.
Operational Tasks 1967

The general war requirements of the Soviet Navy as noted by Soviet naval and military writers, and the Soviet Navy's ability to meet those requirements, have been fully covered by R.W. Herrick in his Soviet Naval Strategy for the period of the mid to late 1960s.

The Role of Strategic Strike Force

Herrick found the threat posed to the continental United States by the Soviet SLBM fleet to have been exaggerated, given the presence in the Soviet fleet of only nine SSBNs armed with three 650 mile missiles each. (The utility of the conventional FBMS, 7 Z conversions and 22 G class, must be open to considerable doubt as is evidence by the fact that the Z class submarines retained their complement of two SS-N-4 missiles, range 350 miles, and only half of the G class have been converted to take the 650 mile SS-N-5). Moreover he concluded that these submarines were not intended for use in a first strike capacity, and demonstrated the low priority apparently afforded these vessels. (No new SSBNs entered service within the period 1962/3 - 1967). Their technological inferiority, (to the U.S. Navy's Polaris boats), and the noise of their propulsion units together with the elaborate offshore and forward ASW systems of the United States suggested that the NATO forces could expect a relatively high degree of success in anti-submarine operations.

1 Herrick, R.W., Soviet Naval Strategy: Fifty Years of Theory and Practice. United States Naval Institute, Annapolis, Maryland, 1968, especially Chapter 8, 'NATO versus Soviet Missions' and Chapter 9, 'Major Tasks and Capabilities'. Besides noting his conclusions it is not intended to duplicate his research, particularly as my own independent research in this regard produced almost identical conclusions.

2 Janes Fighting Ships 1973-4, p.536.

3 For construction details see Janes Fighting Ships 1973-4, p.534-536.

These apposite observations should not however obscure the fact that the Navy aspired to upgrade the importance of its SLBM forces both numerically and in comparison with the ICBMs of the Strategic Rocket Troops, initially at least in the face of opposition from the other services. Thus the authors of *Military Strategy* indicated that 'the need may arise for missions to deliver nuclear missile strikes on coastal targets'. This formulation remained unchanged in the subsequent editions of this important volume and remained the only mention of this topic under the general heading 'Military operations in naval theatres'.

Admiral Alafuzov's review of the first edition of *Military Strategy* observed, by way of an additional notation that the authors 'should have pointed to the advantages of nuclear missile firing submarines (in carrying out strikes against coastal targets)'. He apparently found no quarrel with the view that in operations designed to

undermine the military capacity of the imperialist coalition by destroying its nuclear weapons, and to destroy its military and economic potential by destroying the economic war base and the governmental and military system of control (the main weapons are) Strategic Missile Forces equipped with intercontinental and intermediate range missiles carrying powerful thermonuclear and atomic warheads, and also the Long Range Air Force armed with missile carrying nuclear warheads.

The second edition of Sokolovsky extended this list to include 'rocket carrying submarines'. However it would appear that these had but a secondary role to play in the achievement of strategic goals. As a senior air force officer put it:

Strategic Rocket Troops are the main branch of the Armed Forces insofar as their nuclear rocket power cannot be replaced by any of the other branches. In addition, rocket carrying submarines have their own advantages since nuclear strikes by them can be successfully employed in coordination with nuclear strikes by other branches.

The interesting feature of naval pronouncements on SLBM systems throughout the first half of 1960s was the growing assertiveness of claims made regarding their capabilities.

Admiral Grishanov, Chief of Political Administration, claimed on Navy Day 1964:

Long range rockets of our submarine fleet can be launched underwater and with their nuclear warheads can hit not only the naval forces of the enemy, but also targets well inside the territory of the aggressor.

These claims were greatly exaggerated if taken as referring to then current capability. The SS-N-5 missile had a maximum range of 650 miles, which in comparison with the Polaris A-1, (range 1,200 miles) let alone the Polaris A-3 (range 2,500 miles), hardly justified the description long range. The assertion that Soviet SLBMs possessed an underwater launch capability can be traced back to Soviet

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1 Scott, H.F., translation, p.293.
3 Admiral Grishanov, Chief of Political Administration, Moscow home service 7.30 GMT 26 July 1964, BBC SW5 USSR/1615/28 July 1964, p.c/4.
press reports of Khrushchev's visit to the Northern Fleet area in July 1962.\(^1\) Despite the continued appearance of these assertions the retrofitting of the H class SSBN with SS-N-5 missiles was not completed until 1967. The claimed ability to hit targets 'well inside the territory of the enemy' was a significant departure from the view expressed in *Military Strategy* that submarine missiles were for use only against coastal targets.

The potential of the SLBM was attracting increasing attention not only within the Navy but among the political and military leadership. Gorshkov had claimed early in 1963 that in the event of a future war

> We (the Navy) must be prepared to reply with crushing blows on naval and land targets over the entire area of the world's oceans.\(^2\)

Admiral Grishanov, Chief of Political Administration in the Navy, whose views were cited above, reflected the newly emerging party sanctioned line. Admiral Sergeyev noted that nuclear powered submarines could 'strike vitally important land targets on enemy territory at great range'\(^3\) and in a Navy Day 1965 interview Kasatonov, Deputy Commander in Chief of the Navy, claimed the SLBM as the main striking force of the navy and suggested that this had increased the role of the navy in any future war.\(^4\) Premier Kosygin's observation that the striking power of the fleet had been greatly increased by rocket armaments suggested a governmental upgrading of the role of SLBMs.

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\(^1\) The Navy's modern weapons were used in the manoeuvres. Shots were fired by missile armed surface vessels and by submarines armed with nuclear missiles, which launched their rockets from underwater positions'. Pravda and Izvestia, 22 July 1962, p.1 trans CDSP Vol. 14, No. 29, p.23.


\(^3\) Sergeyev, 'The Navy of a great power', p.6.

in any future conflict.  

The final seal of approval from the remainder of the Armed Forces was conferred on the SLBM system during the Marshal Malinovsky address to the 23rd Party Congress:

Along with Strategic Rocket Forces, we have created during these years an underwater rocket armed fleet which is able to fulfill strategic missions destroying enemy objectives both on sea and land. It includes new atomic missile carrying submarines armed with ballistic rockets having underwater launch capability and great range.

The Navy appeared anxious not only to have the capabilities of the SLBM system recognised but to press for the recognition of its status as at least equivalent to the land-based ICBMs of the Strategic Rocket Forces, if not their superior.

At the present time missile submarines, achieving strategic results with their strikes, may exert a decisive effect on the course and outcome of a war... The resolution of a number of operational and strategic missions formerly delegated to bomber aviation, to carrier task forces and to ground missile units can now be assigned to nuclear missile armed submarines.

These views are attributed to the military specialists of the large naval powers' and to 'American military figures' who 'openly proclaimed submarines as the most important means of strategic attack' but there can be little doubt that such claims were viewed favourably by Soviet naval leaders.

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1 'One of the most powerful forms of armament are our rocket carrying submarines; the territory of any potential enemy of our country is within reach of their powerful rockets', Kosygir Navy Day Address at Baltiysk Moscow home service 17.30 GMT 24 July 1965 BBC SWB SU/1920/C/6.
2 Malinovsky: Address to the XXIII Congress CPSU, in Kintner and Scott, op.cit., p.283.
3 Nikolayev, P.V. Capt. 1st Rank, 'Problems pertaining to the detection and destruction of missile armed nuclear submarines'. Morskoy Sbornik, No. 2, 1965, JPRS SMT No. 184, p.21-2.
4 ibid., p.22.
Admiral Kharlamov claimed 'the role of the navy is increasing among the other branches of the services'\(^1\) and that the navies of the United States, Britain and France were shifting into 'the first echelon of strategic assault forces.'\(^2\) He clearly implied that this pattern should be emulated in the USSR.

After stating,

submarines, the most important elements of the navy...are competing for the role of the most important carriers of strategic nuclear weapons.\(^3\)

Kharlamov cited the then United States Secretary of Defense, Mr. McNamara, as advocating that missile armed submarines, because of their mobility and concealment, are virtually impossible to intercept, and are therefore more reliable than batteries of intercontinental missiles (including missiles in underground silos).\(^4\)

By 1967, the year the first Y class SSBN became operational, Gorshkov claimed:

With the Strategic Missile Forces the Navy had become the most important weapon the Supreme Command had, one which could exert a decisive influence on the course of an armed struggle in theatres of military operations of vast extent.\(^5\)

Gorshkov, phrasing his claims in the past tense, was clearly being misleading. Nonetheless he undoubtedly knew of the forthcoming Y class boats, with their 16 SS-N-6 1,350 mile range missiles, and must have been aware of the planning that was to result in the D class. His claim foreshadowed a situation which although yet to emerge was clearly in sight. The institutional confirmation of the Navy's upgraded role was not to emerge until 1973

\(^1\) Kharlamov, op.cit., p.7.
\(^2\) ibid., p.7.
\(^3\) ibid., p.9.
\(^4\) ibid., p.9, emphasis added.
\(^5\) Gorshkov, 'The Development of Soviet Naval Science', p.19, emphasis added.
with the appointment of Admiral S.M. Lobov to the post of Assistant Chief of the General Staff.¹

In the task of achieving an upgraded status for the SLBM Gorshkov shared common ground with the naval radicals. Not only did they have a common appreciation of the importance of the SLBM but they also showed an aspiration for equality, to say no more, with the Strategic Rocket Troops.

The Suppression of NATO ASW

Where there must have been ground for conflict was over the problem of ensuring that the SSBNs should be able to bring their missions to bear. The United States' abilities in the field of underwater surveillance were well known among Soviet Navy circles, as was the fact that ASW zones were maintained across the relatively narrow channels which Soviet submarines had to transit to gain access to the high seas.²

In the Atlantic the following anti-submarine zones were identified:

¹ 'Soviet Generals Show New Style', New York Times, 23 April 1973, p.1. Lobov had been the Commander of the Northern Fleet since 1964 and is acknowledged as an expert on nuclear submarines - a specialisation which accounts for his inclusion in this former preserve of the Ground Force Officers.

² See Nikolayev, op.cit., for a contemporary account of the USN's ASW technology, particularly as it relates to detection systems.

Gavrilov, F. Captain 3rd Rank, 'Fearing Retribution', Krasnaya Zvezda, 7 January 1966 JPRS SMT No. 228, p. l-4 details NATO ASW zones. - 'anti-submarine vessels, submarines and aircraft are constantly to patrol the zones which are to be equipped with stationary hydro-acoustic detection systems.

Gavrilov, op.cit., p.1. 'Carrier-borne search and attack groups (CSAG) are assigned a conspicuous role in the execution of these missions... (T)he CSAG consists of several squadrons of destroyers and destroyer escorts, and an anti-submarine aircraft carrier with aircraft and helicopters aboard.'
Spitzbergen - Northern Norway; Greenland - Southwestern Norway; Newfoundland - Gibraltar as well as along the US Atlantic coast.¹

In the Pacific region zones between 'The Aleutian and Hawaiian Islands and along the Pacific Coast of the United States' were identified, while the exits from the Sea of Japan were recognised as potential choke points.²

The description of NATO ASW exercises along these barriers suggested a lively awareness of the difficulties facing nuclear powered submarines in achieving undetected access to waters close enough to the United States to bring the SLBMs to bear against land targets. The problem was posed all the more starkly by the continued Soviet practice of deploying very few SSBNs on sustained peacetime patrol. The position of the conventionally powered vessels must have been widely recognised as untenable in such an environment.

The destruction of the vessels and aircraft patrolling these zones demanded the attention of Soviet naval planners charged with allocating forces to carry out wartime missions. To achieve this goal against the forces maintaining the patrols, let alone any reinforcements they might receive, would, of necessity, involve a force capable of attacking a well prepared and powerful enemy group equipped with strong ASW forces, carrier based aircraft suitable for surveillance and combat roles, and surface ships.

Such an offensive mission would require Gorshkov's 'ocean going fleet' consisting of 'submarine forces, aviation (and) surface warships'. That is a fleet force capable of denying these zones to enemy ASW forces and maintaining a secure control over the zones until the

¹ ibid., p.2. Particular mention is made of the 'Caesar' and 'Artemis' detection systems.
² ibid., p.3.
completion of hostilities. As Herrick has pointed out, the ability to maintain reliable control in areas over 150 miles from Soviet occupied territory was beyond the capability of the Soviet Navy. Outside that range the requisite protective air cover could not be guaranteed.

Countering Sea Based Nuclear Weapons Systems

The task of countering sea based nuclear weapons systems has been acknowledged by both military and naval spokesmen as the primary task of the Navy in any future general war situation. Herrick's assessment that the Soviet Navy had little possibility of success, particularly against the SLBM systems, despite the bland assertions to the contrary, was well based.¹

If we discount assertions of SSBNs vulnerability, and leave in abeyance the claims that attacks by the Strategic Rocket Forces on navigation and communication stations, together with saturation strikes in areas of probable deployment, could cripple the Polaris system, there were two alternative Soviet naval strategies for countering the SLBM.

Both start with the premise:

The main actions of the enemy navies in a contemporary global war will be conducted not in the internal seas, but in the ocean theatres.²

One view asserted the necessity for control of the sea while the other devised a solution based on submarine battles.

¹ Herrick, op.cit., p.94-8 and 109-22.
² Lomov, N.: 'Fundamental Tenets of Soviet Military Doctrine: the Revolution in Military Affairs, its significance and consequences'. Krasnaya Zvezda, 10 January 1964, cited R.W. Herrick, op.cit., p.110. See also Military Strategy, RAND p.420. 'The World's Oceans may prove to be military theatres'; and Alafuzov's review, op.cit., 'The World's Oceans will prove to be military theatres'.
Captain P.V. Nikolayev examined 'the problem of destroying the main striking force at sea - which is the nuclear missile armed submarine' on the basis of the views of foreign military specialists and concluded:

operations aimed at the detection and destruction of nuclear powered submarines (before they can launch their missiles) presupposes control over all the routes they follow: from the bases to possible missile launch areas. Because of the fact that submarine search areas at sea are vast, the speed of underwater missile carriers is great, while the range of the anti-submarine tracking devices is comparatively limited, large forces and considerable means will be required for the successful detection of targets.¹

The proposed 'control over all the routes they follow' was an inconceivable task for the Soviet Navy, particularly as the SSBNs of the NATO navies do not have to pass through narrow seas to reach launch areas from which the Soviet Union can be brought under attack. Nikolayev's 'solution' implied the ability to maintain, in the face of heavy opposition, control over almost the entire North Atlantic and North Pacific Oceans, the Mediterranean and perhaps the North-West Indian Ocean as well.

The assertion of the authors of Military Strategy that,

Homing missiles launched by submarines and surface ships are an effective weapon against missile carrying nuclear submarines.²

¹ Nikolayev, P.V. Capt. 1st Rank: 'Problems pertaining to the Detection and Destruction of Missile Armed Nuclear Submarines'. Morskoy Sbornik, No. 2 1965, JPRS SMT No. 184, p.26, and later; '(T)he struggle against nuclear missile-armed submarines under present conditions becomes one of the most important tasks confronting the navies, a task that will have to be resolved by the warring sides on the broad expanses of the ocean'.
² Military Strategy, RAND, p.409.
not only indicates that: 'the indisputable fact that nuclear submarines will operate only when submerged was not taken into consideration',¹ as Alafuzov pointed out, but it assumed that the surface ships and missile launching submarines would be capable of operating freely in waters 1,100 miles from the coast, especially in the Arctic Ocean, the Northern Seas, the north eastern Atlantic and the western Pacific.²

Military Strategy also noted

The nuclear submarine is a formidable underwater vessel. Consequently, armed combat in the naval theatres may take the form of underwater operations.³

The role of nuclear powered submarines which 'successfully combine such features as stealthy approach, mobility, unlimited cruising range and tremendous striking power' in coping 'in full measure with battle missions against the surface and underwater striking forces' of the enemy was frequently noted.⁴ However, here was another clear case of naval aspiration outrunning naval capability. The thirteen N class submarines, if used as hunter killer submarines, could not guarantee the destruction of the US' Polaris fleet. Not only were there too few of them, but the vessels, because of the great number of free flood holes in their hull casings and problems with the first

¹ Alafuzov, op.cit., p.94.
² Military Strategy, RAND, p.422. The authors of Military Strategy were aware of the development of the longer range Polaris A-2 and A-3 missiles, which they cite as having ranges of 1,500 miles and 2,500 miles respectively. They note that this increase in range 'considerably increases the combat potential of these submarines and makes them less vulnerable to shore-based anti-submarine weapons'. ibid., p.174.
³ ibid., p.422.
generation propulsion units, were very noisy.¹

The N class was produced in the period 1958-63 and no equivalent submarine appeared until the V class first joined the fleet in 1967-8. (This class has since been building at the rate of two per year, suggesting that the Soviets have preferred to allocate most of the naval nuclear reactor systems to missile firing submarines: SSGN in 1963-1967 and SSBN subsequently). It clearly indicates that the Soviet Navy has not been able to convince the Ministry of Defence of the importance it appears to attach to nuclear submarines in the anti-Polaris role.

Soviet statements on the vulnerability of large surface ships, including aircraft carriers, are legion. The US Navy's attack carriers were alleged to belong to the 'yesterday of navies' and to have 'outlived their age'. 'It has become vulnerable: in a nuclear war it will no longer be able to play a decisive role in sea actions'.² Yet despite these assertions the task of eliminating the attack aircraft carriers remained 'a most important task'³ because of the immense damage they could inflict. The peacetime forward deployment of the Soviet Navy into areas where the aircraft carriers were not only present, but also within striking range of the Soviet Union, represented a post 1963-4 solution to the problem of countering the carriers in the early stages of general war. It is in this context that the admonitions to remain on constant alert are frequently pressed. If the surface missile ships and cruise missile submarines remain within

¹ Janes Fighting Ships 1973-4, p.542.
² Sokolovsky and Cherednichenko, op.cit., p.18.
³ ibid., p.18.
firing distance of the carriers during peacetime they have the possibility of launching a successful 'first salvo' against the carriers during the initial stages of a general war. If the 'first salvo' could be launched prior to the aircraft take-off then the threat from the carriers can be eliminated. Yet until the aftermath of the June 1967 war, when facilities were made available in Egyptian ports, the Soviets could maintain only a relatively small force in the Mediterranean to carry out this task - a force in keeping with the expressed views of Admiral Kharlamov:

In order to launch such a strike (the first strike), it is no longer necessary to re-deploy large forces from various directions and concentrate them in the combat area, creating powerful groupings with bulky combat formations which are difficult to control. It is possible to destroy any naval grouping at sea, within a very short time, by employing relatively small groups of vessels armed with long range nuclear missiles which can be deployed in advance in certain areas.¹

What Kharlamov did not examine were the requirements for a successful strike against a carrier task force moving into a launch area under conditions of general nuclear war. Such a task force, covered by protective ASW and anti-aircraft screens, as well as airborne early warning systems, can detect enemy vessels in the area so that active defence measures may be taken against them. The possibility of launching a surprise first strike from a surfaced submarine under these conditions must be rated low, particularly when the requirements for mid-flight guidance are taken into account. What is required is not 'small groups of vessels...deployed in advance in certain areas' but an offensive force capable of suppressing the enemy's defences. As Admiral Petrov pointed out:

Under modern conditions under-evaluation of the need to suppress the enemy's defences is dangerous as is under-evaluation of the capabilities of new means for attack. There exists the opinion that modern aircraft, atomic submarines, and surface ships which use long range rockets are capable of destroying main enemy targets without suppressing his defences beforehand. We think in some cases this might actually be so, but in other cases it is hardly possible.

Modern anti-air defense of ships (convoys) (also task forces) at sea is effective at great ranges, and the means for effecting such defense make it possible to destroy aircraft and the rockets which they fire, as well as the rockets which are fired by other forces (surface ships or submarines).

Modern anti-submarine defense of ships (convoys) at sea is also characterised by great range, and the forces used are characterised by great effectiveness.

The Soviet Union possessed the capability of overcoming these forces, of 'attaining the strategic goals of the struggle at sea with a powerful enemy' within a mere 150 miles or at the most 300 miles from its coast. Outside these limits torpedo and cruise missile armed submarines could attempt to launch strikes at carrier task forces, in conjunction with naval aviation, which had sufficient range to participate in a strike, but without the continuous air cover essential to protect the surface fleet or surfaced submarines.

A Soviet naval writer credited the carrier based aircraft with a range of 1,625 miles (2,600 kilometres), an admission that the carriers need not approach the strongly defended coastal waters to launch an attack.

Little wonder then that the 1966 Navy Day article in *Morskoy Sbornik*, after noting that the world oceans were becoming 'a vast arena containing the launch points for highly mobile, secretive carriers of strategic missiles, and for mobile aircraft carrier forces', claimed that:

...the struggle with the main forces of the enemy fleet is, for our Armed Forces, taking on immeasurably greater significance than it had in any of the past wars.

The main content, and the main purpose, of this struggle will be to destroy an aggressor's strike forces in the shortest space of time and to eliminate his ability to deliver his nuclear strikes from the sea. It is for this purpose that the Soviet Union, in addition to its other branches of the Armed Forces, must have a strong ocean-going fleet.1

This amounts to an admission of the fact that countering sea-based nuclear weapons systems was not only, or perhaps even primarily, a task for the Navy. As in other broad strategic missions the Navy had a contribution to make to the accomplishment of the task, in this case to sink aircraft carriers on forward deployment and to do battle with carrier reinforcements before they reached launch zones. However, it was only a contributing role in a mission in which other services play important parts. It is noteworthy that the important mission against carrier reinforcements, one in which the Navy could expect to play a major role, was arguably beyond the capacity of the Navy as it existed in 1967.

Briefly, the other branches of the armed forces concerned included the air defence force, the anti-aircraft and anti-missile forces and the Strategic Rocket Troops, the latter being called on to destroy submarines and aircraft carriers at their bases.2


The Downgrading of the Anti SLOC Mission

There appears to be a degree of unanimity, between the naval radicals and Gorshkov, that operations against enemy SLOC were not likely to be of great importance in a future war, whereas the authors of Military Strategy saw the anti-SLOC role as one of the main tasks of the Navy from the very beginning of a future war. Filonov observed

in the initial, and most intensive, period of the war there may develop an environment which will exclude the possibility of organising strategic military and commerical shipments by sea.

The NATO powers were establishing 'the necessary armament and strategic raw material reserves right in the probable theatres of war for the entire initial period of the war'. Moreover, 'air transportation is planned for the transfer of military forces and units from the rear areas to the front'. Hence,

the sea lanes will be of no real significance in the initial phase of a general thermonuclear war in the contemporary environment and consequently, combat operations to disrupt or to provide intercontinental transportation may be only of an auxiliary nature within the framework of other missions executed by naval forces.

Gorshkov noted that in the immediate post-war period when the 'imperialists' attempted to encircle the countries of the socialist camp, 'the disruption of the ocean lines of communication...continued to be one of the most important of the fleet's missions' but made no further reference to this mission when discussing the important missions of the fleet in contemporary circumstances. He continues to

1 RAND, p.420.
2 Filonov, S.J., Capt. 1st Rank, 'Armed Conflict and Communications by Sea', p.32-3; see also Panteleyev, op.cit., p.24-6, and Kharlamov, op.cit., p.11, for similar conclusions.
mention the disruption of enemy SLOC in subsequent articles but this is neither consistent nor, when mentioned, does it appear as a major task.¹

If the anti-SLOC mission had been demoted in importance in a nuclear missile war (and no other type of war involving the Soviet Union and the United States was envisaged), then the conditions which brought this about were held to give the coastal lines of communication (CLOC) 'a completely unique significance in a nuclear missile war'. Nuclear strikes would disrupt land communications, leaving only coastal shipping utilising small harbours and coves to provide for the necessary movement of reinforcements and material.²

The protection of own CLOC was therefore given great importance. The Soviet Navy could expect to protect its coast-hugging maritime transports which would operate precisely within the zone where the full brunt of Soviet naval might could be brought to bear, under a continuous air cover, against enemy submarines, naval aviation and surface vessels.

Granted that the 'at sea' part of the anti-SLOC role was likely to be of secondary importance, opinions differed as to how it should be achieved. The authors of Military Strategy looked to 'the destruction of convoys and transports at sea by submarines and aircraft' and called for 'the flexible use of nuclear submarines' while observing 'diesel-electric submarines will obviously be used against lines of communication'.³

¹ e.g. 'It (the Navy) has to carry out a wide range of tasks. It strikes at ground targets on enemy territory and fights his naval forces at sea. It disrupts ocean and sea-going transport, defends our coastlines and so on'. Gorshkov, 'On the high seas and oceans', Pravda, 14 February 1968. Translation in the files of IISS, London.
² Filonov, op.cit., p.33-4.
³ Military Strategy, 1st edition, RAND, p.423 and 2nd and 3rd editions H.S. Scott, p.34. Apparently the same nuclear submarines that were to do battle with the enemy's SSBNs.
Admiral Alafuzov noted that, counter to the opinions of the contributors to Military Strategy, Germany, which had relied on submarines, had been unsuccessful in its efforts to completely sever enemy SLOC. Indeed, the position in both wars indicates:

he who had the strongest surface fleet controlled the maritime communications and he who did not was deprived of his maritime communications from the very start.¹

For Alafuzov success in anti-SLOC role (he does not declare himself on the issue of the importance to be attached to it), required a balance of surface vessels, submarines and naval aviation, capable of achieving that degree of supremacy at sea which the Germans were never able to assert, but which the Americans achieved in the Pacific during World War II.

Filonov, an exponent of the view that anti-SLOC missions had lost their significance in determining the outcome of a future war, went on to imply that this reduced the importance of attempting to gain control of the sea. The principle of 'superiority at sea', according to Filonov, was originated and formulated during the course of wars which, in the past, had been fought for 'the right to unlimited control over the sea lanes'.² To gain this control it was necessary to create 'large naval forces in order to gain control of the lines of communication'.³ Given that this control was no longer essential then that 'supremacy at sea' required to maintain control of the sea lanes had also lost its significance. What was required was a naval force capable of protecting the CLOC, the significance of which had greatly increased.

¹ Alafuzov, op.cit., p.95. Rear Admiral Petrov noted 'in battle with a convoy there is no possibility of destroying the transports without suppressing the defences of the convoy'.
³ ibid., p.27.
Whether, on the broader issues, Filonov would declare himself in favour of a defensive or offensive naval strategy is impossible to say from his contribution. However, Admirals Panteleyev and Kharlamov, who agree with his analysis of the role of anti-SLOC operations, have been identified as proponents of a small fleet, defensive navy, comprised basically of submarines and naval aviation. Undoubtedly the naval radicals used Filonov's analysis to bolster their case.

**Co-operation with Ground Forces**

The Soviet Navy was undoubtedly best equipped and most capable of fulfilling its historic mission, co-operation with the ground force along the sea flanks of the operational zones. The fact that, in the coastal zone, it could expect to maintain control of the sea against the naval forces of the NATO alliance suggests that the Navy could counter strategic or tactical landing forces, defend the ground forces from sea-based attack, (although purely naval success in this depended on whether aircraft carriers were involved) and carry out its own tactical landings in support of ground forces.

The navy had to continue to fight for this role. Admiral Panteleyev had to argue that when the tempo (the decisive factor in the success of an operation) of an offensive by ground forces was reduced,

there is probably only one way out: put ashore tactical land forces capable of changing the situation decisively in favour of attacking forces.1

Even the role of fleet combat actions in support of the coastal flanks of the army may have been under attack.

From a purely theoretical approach it can be said that they (the army) are in a position to repulse an enemy landing and to cover their flank against action from the sea...In this connection there are some specialists who feel it expedient to have fleet forces act against the enemy's forces at sea which are attacking along the army's flanks.2

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1 Panteleyev, op.cit., p.21.
Conclusion

The Soviet Navy was obviously affected by the introduction of new equipment which marked the revolution in military affairs. Issues which arose over tactical questions and likely missions in a future war had implications for the size and shape of the Navy. In addition the importance of the Navy's contribution to joint operations such as strategic missile strikes, defence against sea-based nuclear weapons systems, attacks on sea communications and co-operation with the ground forces was reassessed. In all of this it must be remembered that there is no Soviet naval strategy as such but rather a naval contribution to over-all strategy within a unified military doctrine.¹

The Navy had, by 1967, won its case for a greater share in the offensive task of strategic missile attack. This was indicated by the subsequent priority afforded the new and more sophisticated SSBN, the Y class and its D class successor. In the role of defence against sea-based nuclear weapons systems the navy had been given the task of marking aircraft carriers on forward deployment with a view to destroying them in the initial stages of a future war. It was also charged with destroying other aircraft carriers, although its ability to have done so must be open to considerable doubt. A large part of the burden must be shared with the fighters and surface to air missiles of the air defence force, which are charged with countering airborne attacks, whether these originate from carriers or land bases. The destruction of the Polaris submarines, although enjoying the status of the Navy's primary task, would appear to be beyond the capabilities not only of the Soviet fleet, but of the Armed Forces as a whole. The Strategic Rocket Troops and the SSBNs can launch missiles

against bases and hence eliminate those submarines, possibly a third of the total, berthed within them, but to date the Polaris/Poseidon submarines in transit or on station appear to be invulnerable. At least until 1967 the Soviet fleet did not possess a hunter killer submarine capable of tracking enemy SSBNs without being detected, and the rate of production of the V class suggests that no great effort is being made in this field. Soviet agreement to limit the deployment of ABM systems suggests that at present ABM technology is not sufficiently developed to be capable of providing an effective defence.

The Soviet Navy appears to have downgraded the anti-SLOC role in the belief that the Strategic Rocket Troops strikes on ports, naval bases and important centres of transport will eliminate the need for such a mission. The Navy is obviously still best equipped for operations in the coastal zone yet even here, apparently, still has to justify its utility to the remainder of the armed forces.
CHAPTER IX

CONCLUSION

Although the arguments of the naval radicals undoubtedly appealed to the political leadership and members of other branches of the armed services because they implied that recent technological innovations had made possible an effective navy based on relatively limited numbers of submarines, aircraft and surface ships equipped with a variety of missiles it is pertinent that by 1967 the navy had not been supplied with sufficient numbers of nuclear powered missile firing submarines to fulfil the requirements of the strategically defensive radical strategy. The fact that even those arguing for a minimal posture were unable to secure the type of equipment needed in sufficient numbers is a clear indication of the low priority afforded the Navy.

The assessment of the Soviet Navy's ability to perform allocated missions suggests that whereas the Navy had significant roles assigned to it these roles are shared by other branches of the armed services and that in many cases the naval contribution to the mission may not have been of major significance e.g. disruption of enemy sea lines of communication. In roles where its contribution is of greater significance e.g. the destruction of sea based strike forces, it appears most capable of combatting those attack carriers which it marks in peace time, less capable of destroying replacement carriers and virtually incapable of eliminating enemy SSBNs on patrol.
CHAPTER X

INTRODUCTION

We have already examined the initial Soviet naval deployments in the Mediterranean and Norwegian Seas. It was argued that these deployments and the associated exercises undertaken by the vessels when on station, were designed to provide a presence capable of attacking the carrier task forces stationed in those seas. The Mediterranean deployment was abruptly halted in 1961 when the Soviet Union lost access to Albanian facilities - a political casualty of the Sin-Soviet dispute.

Since 1964 the Soviet Navy has again undertaken regular deployments to the Mediterranean and for the duration of the facility agreement with Egypt was able to maintain a steady high level continuous presence in that sea. Soviet vessels have also deployed to the Caribbean, and the South Atlantic. These deployments are sketched but one example - that of the Indian Ocean - is described in greater detail. Soviet diplomatic, economic and strategic concerns in the Indian Ocean region are discussed, the patterns of naval deployment indicated, the impact of the Soviet presence on regional conflicts examined and the prospects for future increases in naval strength discussed.

In particular attention is drawn to the difficulties under which the Soviet Navy operates in this region, difficulties to some extent ameliorated by the establishment of facilities at Berbera but which nonetheless indicate the problems facing the Soviet Navy when it seeks to operate at great distance from its bases.
CHAPTER X
Forward Deployment: The Indian Ocean Case

Introduction:

Prior to the 1960s the Soviet Navy had, in the main, confined its operations to the four fleet areas where its primary task had been one of coastal defence and support of the ground forces. The stationing of a modest force of submarines in the Mediterranean in 1958 constituted the major exception to this rule. There had also been occasional Soviet exercises in waters off the Norwegian coast which had become potential launching areas for attack carrier aircraft.

A former Supreme Allied Commander Atlantic, reflecting on the pre-1960 situation, stated:

The sight of Soviet ships on the high seas was exceedingly rare except for occasional transfers of units between the Baltic and Northern Fleets. These transfers were accomplished in haste and left the impression that the Soviets felt somewhat uncomfortable outside the waters of their own fleet areas.

The exercises undertaken in the late 1950s by the Northern Fleet, to test the anti-carrier capabilities of coordinated submarine and aircraft attack, were enlarged in 1961 and 1962. In July of each year surface combatants and their associated support vessels, together with submarines and naval aircraft, undertook a major exercise in the Norwegian Sea. Whereas the 1961 exercise was held off the Norwegian coast that of 1962 was a larger, more complex, affair involving an estimated twenty submarines and extending from the North Cape to the Iceland-Faeroes-Gap. During 1962 the first transfer of warships from the

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1 See p.211-219 above.
2 See p.207-208 above.
Northern Fleet to the Black Sea occurred.¹

The Cuban crisis in late October 1962 had exposed the limited capabilities of the submarines and crews which had been sent to escort the merchant ships carrying missiles to Cuba. The impact of this experience on the Soviet naval leadership was evident in Gorshkov's Krasnaya Zvezda article, 5 February 1963, an exhortation to the fleet commanders and staffs to get their ships to sea and train their crews in a realistic manner. Gorshkov demanded exercises involving

The organisation of the mutual protection of submarines, surface ships, and the air force through which representatives of the diverse kinds of forces in accomplishing their individual tasks simultaneously create the tactical organisation for others and simulate the necessary counteraction from the enemy. Apart for the certainty that the combat training plan would be carried out, such a complex would be a good screen against all kinds of simplification and indulgence which occasionally exists in training.²

Moreover

It must become a rule for the ships in the first line to carry out the major part of their tasks in winter, at night, and under bad weather conditions and restricted visibility.³

The stated objective of this training programme was to increase the vigilance and combat preparedness of the crews; to train them for a future conflict in which heterogeneous forces, a variety of weapons systems and 'technical means' were used.⁴ Such training was necessary to prepare the fleets for the major task of countering

¹ For details of Soviet major exercises involving the European fleet areas between 1960 and 1970 see Holmes, op.cit.
³ ibid., p.cc4.
⁴ ibid., p.cc4.
the carrier strike forces and the SSBNs of the Atlantic powers 'over the entire area of the world's seas'.

Gorshkov stated

Today there are no invulnerable objectives on the continent just as there are no areas in the seas of the world where in the course of combat operations, the enemy's ships would not be subject to the threat of destruction.

but this was mere rhetoric. Gorshkov could claim with some justice that 'cruising in the Arctic by our surface ships and submarines has for a long time been a more or less routine matter', but early in 1963 that was the extent of the Soviet Navy's ability.

Gorshkov's hectoring of the fleet was soon reflected in a change of exercise patterns. During 1963 a pattern of biannual exercises, occurring in March-April and in August, was established.

Northern Fleet exercises reflected the changing Soviet assessment of where the primary confrontation between Soviet naval forces and Western units would occur. During the late 1950s and into the early 1960s exercises indicated that the Soviets expected the major confrontation to occur north of Norway, but since 1962 the area of operations has covered the whole of the Norwegian Sea, with particular attention being given to the Greenland-Iceland-United Kingdom (G-I-UK) Gap. Occasionally major exercises have involved incursions into the Central Atlantic. This pattern suggests that the G-I-UK Gap is regarded by Soviet naval planners as their forward defence zone covering access to and from the Atlantic.

1 ibid., p.cc1-2.
2 ibid., p.cc2.
3 ibid., p.cc3.
4 Holmes, op.cit., p.7.
In 1968, 1970 and 1975 the Soviet Navy staged naval spectacles - the Sever, Okean and Okean 75 exercises - the last two being world wide in scope. Major fleet transfers occurred between the three European fleet areas, amphibious forces conducted a large scale landing in the Kola Peninsula area and surface ships, submarines and aircraft tested their anti-carrier, and ASW potential. Perhaps as important as the actual training experience for the crews and ships at sea was the opportunity these exercises afforded the naval staff to examine their command and control procedures. Certainly this was the aspect highlighted in the major Soviet accounts of the Okean manoeuvres.\footnote{Gorshkov's comment 'The OKEAN manoeuvres) provided excellent practice for ship and aircraft commanders and crews, and for group and detachment commanders and staffs in conducting operations in remote ocean areas. The manoeuvres enabled commanders and staffs to test their skills and abilities at organising and conducting modern naval operations and at directing heterogeneous naval forces and resources' is illustrative of the general overview comments on the value of OKEAN. See Shablikov, N.I., ed., OKEAN, Military Publishing House, 1970, JPRS Translation on USSR Military Affairs, p.9.}

Despite the occurrence of two major exercises per year in the Norwegian Sea, and the more frequent small scale training exercises conducted on a routine basis in the fleet areas, the Soviet Navy has not attempted to maintain surface warships by continuous presence in this region. The major biannual exercises are primarily to test their capacities of sea denial and enemy exclusion from the Norwegian Sea. By way of contrast ships have been maintained on forward deployment in the Mediterranean Sea, since 1964, and subsequently in the Indian Ocean. Several factors can be suggested as accounting for this difference.

Firstly the US Navy does not maintain surface units on a continuous basis in the Norwegian Sea. (When a NATO naval exercise occurs Soviet vessels track the vessels
involved on a continuous basis.) Secondly, the home base of the Soviet Northern Fleet is sufficiently close to the Norwegian Sea to enable a rapid deployment should circumstances warrant it. Moreover, while the US Navy refrains from a major surface ship deployment in the area, apart from the forces engaged in ASW, the Soviet fleet is closer to the G-I-UK Gap than is the US fleet stationed at Norfolk, Virginia. In a crisis Soviet vessels from the Kola base could arrive on station in the Gap in $1\frac{1}{2}$ to 2 days if they maintained a speed of 25-30 knots. An American task force, moving from Norfolk, Va., would not be able to reinforce the ASW forces for 7 or 8 days after it left base. In addition it is unlikely that the Soviet Northern Fleet can be as readily contained as the Black Sea Fleet, the Baltic Fleet or the Pacific Fleet all of which have to pass through narrow egress points, which in the case of the first two can be successfully blocked by quite modest naval forces.

1 According to a retrospective briefing given by Strategic Headquarters, Allied Powers in Europe, Soviet reactions to Operation Strong Express held between 14-28 September 1972 included:

15 September - overflights by Soviet reconnaissance aircraft, the launching of Cosmos 518, a reconnaissance satellite, into an orbit designed to pass over the exercise area;

16 September - 2 Soviet submarines and one destroyer in vicinity of USS Kennedy task force; continual surveillance of exercise by Soviet ships; launching of Cosmos 519 a manoeuvrable, high resolution reconnaissance satellite to orbit over the exercise area;

19 September - over 24 Soviet surface ships including ELINT trawlers and submarines in the immediate exercise area, concentrating on HMS Ark Royal and USS Mount Whitney flagship of the amphibious forces;

20 September - Soviet activity in area increases - 27 Soviet naval vessels sighted around the 43 ship Atlantic Strike Fleet. Soviet intelligence collection ships steam with and often inside formations of the amphibious task force and numerous reconnaissance aircraft make overflights.

Soviet reactions to the NATO exercise were officially described as 'mild'. 'Exercise Strong Express in retrospect' International Defense Review, No. 6, 1972, p.661-664.
Thirdly the establishment of a major and continuous naval presence in the Norwegian Sea may have undesirable repercussions, from a Soviet perspective, on the defence policies of the Scandinavian countries. The threat of naval encirclement could force a reexamination of Norwegian policy on the question of foreign bases and nuclear weapons on Norwegian soil.

Although Soviet operations in the Norwegian Sea appear to be based primarily on the anti-carrier mission it is undoubtedly the case that anti-SSBN operations are regarded as highly important. However such operations present intractable problems and it is likely that the Soviet Navy does little more than log the passage of SSBNs in and out of the Holy Loch base from its electronic intelligence vessels.

In 1964 the Soviet Union began to maintain vessels in the Mediterranean on a continuous basis, the first such presence since the submarine base at Valona, established in 1958, had been denied the Soviets by the Albanian Government in May 1961. The original deployment can be explained as a reaction to the attack carrier threat from the Mediterranean 6th Fleet. In February 1957 the carrier Forrestal deployed to the Mediterranean carrying the A3D Skywarrior, a twin-jet bomber capable of carrying nuclear bombs to targets in the Soviet Union.1 By July 1964, the date at which the Soviet Navy established a fluctuating presence in the Mediterranean, the threat of sea based nuclear attack had been significantly increased by the deployment of three SSBNs in the Mediterranean. The SSBN deployment was first announced on 28th March 1963,2 and on

1 'If little wars come: U.S. Sixth Fleet - the punch behind the doctrine', Newsweek, 11 February 1957, p.49.
2 The three SSBNs were stationed at Holy Loch Scotland. See Department of the Navy, Strategic Systems Project Office, 'Polaris and Poseidon Chronology', (Washington D.C., 1970), p.8.
24 February 1964 the USS Proteus arrived at Rota, Spain, the advanced anchorage site and 'home' for the Mediterranean squadron of SSBNs.  

Soviet activities in the region reveal an understandable preoccupation with sea based nuclear weapons. Admiral Kidd, a former Commander of the US Sixth Fleet, stated, in 1972, that it was Soviet practice to maintain an intelligence ship off Rota to monitor SSBN movements and to watch traffic transiting to the Gibraltar Straits. Further intelligence ships and a hydrographic vessel were stationed at the Strait of Sicily choke point. Soviet vessels also trailed high value warships and during exercises involving amphibious groups or carrier task forces intermingled with the ship formations.

The details of Soviet naval deployments to the Mediterranean have been examined on a number of occasions. What stands out from these accounts is the sporadic nature of the initial Soviet deployments. Soviet ships returned to the fleet areas during the winter months because they lacked the facilities to maintain themselves on station for prolonged periods. Soviet naval activity grew steadily in the period 1964-1967. Deployments involving submarines,

1 'Polaris and Poseidon Chronology', p.8. On 1st April 1964 the USS Holland relieved the Proteus.
2 Kidd, Isaac C. Admiral USN, 'View from the bridge of the Sixth Fleet Flagship', USNIP, January 1972, p.28.
3 See for example, Weinland, R. 'Soviet transits of the Turkish Straits 1945-1970' for an exhaustive analysis of documents, Rapport Annuel sur le Mouvement des Navires à Travers les Détroits Turcs issued from 1946-1971 providing a reasonably reliable index of the growth of Soviet naval interest in the region.

McCaw, M., 'The Mediterranean and Soviet Naval Interest' which deals with the Soviet interests leading to forward deployment in this region.

Draganich, G.S. 'The Soviet Union's Quest for Access to naval facilities in Egypt prior to the June war of 1967'. A more detailed set of readings can be found in the bibliography but these articles are among the most useful.
destroyers, gun cruisers and an occasional SSM armed surface unit occurred, but, without support facilities in the region the Soviet Navy was unable to maintain a steady-state deployment. The lack of an effective support fleet, the inexperience of the crews in at sea replenishment techniques and the absence of facilities, not only accounts for the relatively low level of operational activity of the Mediterranean contingent, it also accounts for the high level of activity undertaken to acquire facility rights in the region. Dragnich documents four visits by Admiral Gorshkov to Egypt between December 1961 and January 1967, an increase in Soviet naval aid to Egypt during the 1960s, and the firm rejection by the Egyptian government of Soviet requests for facilities until July 1967. He concludes

Had it not been for the cataclysmic effect of the June War on Soviet-Egyptian relations, it is doubtful that the U.S.S.R. would have ever obtained the regular use of Egyptian naval facilities which virtually fall into its lap after that event.¹

With the establishment of rights of access to Egyptian ports and facilities which followed the June War the Soviet Navy was able to embark on a programme of continuous year round deployments at sharply increased levels of activity. It was also possible for the Soviet Union to use aircraft, nominally the property of the Egyptian government but piloted by Soviet crews, to conduct maritime surveillance flights over NATO naval forces in the Mediterranean. This capability was denied following Sadat's demand that Soviet advisers be withdrawn from Egypt in 1972 but reports do not suggest that there was any major downturn in Soviet naval access to port facilities.²

¹ Dragnich, 'Quest for naval facilities', p.49.
Whatever the original Soviet intention in sending vessels to the Mediterranean once there these vessels have a potential capability for fulfilling a range of other missions, including those which may be subsumed under the heading 'exploiting a naval presence for political purposes'. However Soviet naval activity has been generally restrained in times of crisis. Thus in the June War of 1967 the Soviet Navy did shadow US carriers, but adopted an attitude of studious detachment from Egypt's fate. The Jordanian crisis of 1970 did not bring about a dramatic confrontation between the opposing naval forces. Indeed during the crises

There was none of the nonsense of their ships running in and around our men of war at close range... (The Soviets were) sensitive to the potential seriousness of the situation although units of both fleets intermingled at times. The same judgement appears to be valid for the October War. The Soviet naval presence was dramatically increased during the course of the war, but significantly, more attention was paid to the possibility of a major Soviet air-borne intervention.

It is not intended to deal in detail with Soviet naval deployment to Caribbean or West African waters. It need only be noted that Caribbean deployments are infrequent, low level and subject to continuous surveillance by the United States. A Soviet base area in the Caribbean would offer advantages for Soviet Y class submarines which could target the US Navy's SSBN Atlantic home port of Charleston S.C. and the carrier base at Norfolk Va. However the development of the D class submarine suggests that a Caribbean base for this purpose is not a vital objective.

1 Kidd, Isaac C., Admiral U.S.N., op.cit., p.27 (Admiral Kidd was Commander Sixth Fleet during the Jordanian crisis).
and certainly not worth the risk of producing a major confrontation with the United States. What the occasional visits by submarines, sometimes nuclear powered, sometimes obsolescent SSBs, suggest is that the Soviet Union uses the Caribbean from time to time to test United States resolve. As well as being a useful test in itself it may also lead to further Soviet deployments of nuclear powered submarines to the region, should United States resolve be judged to be weakening, for the Soviet Union may see the benefits of increased missile accuracy and SSBN dispersal as sufficient to warrant the introduction of SSBN units on a permanent basis.

The Soviet Navy has maintained a small presence off the West coast of Africa. It is of interest because this 'Guinea patrol' has not the immediately apparent strategic relevance which we have noted for the Mediterranean and the Caribbean presence. Moreover the vessels involved have been engaged in activities suggesting that commercial and political interests are being pursued, although it is difficult to infer that the policies of the African states in the region have notably shifted in directions favourable to the Soviet Union, despite the naval presence and the large scale assistance to the central Government during the Nigerian Civil War.

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The Indian Ocean
Soviet Diplomacy Toward the Indian Ocean
Littoral States - A Broad Assessment

It was not until the mid 1950s that the Soviet Union began to develop relations with any of the Indian Ocean littoral states. During Stalin's post-war years of high cold war tension the newly independent nations had been assigned to the imperialist camp. It was probably the desire of the United States and its NATO allies to further contain an allegedly expansionist Soviet regime through the SEATO Treaty and the Baghdad Pact, which gave point to the Soviet Union's reappraisal of the 'third world'.

The Soviet Union's objective, denying states along its southern borders to a United States-backed alliance system, led to a Soviet interest in maintaining the non-aligned status of the Indian Ocean powers. This interest, intimately connected with Soviet security concerns, involved the littoral states and did not initially suggest a wider interest in the Ocean itself. There was no evidence of Soviet activity involving an armed presence, nor of the recipients of Soviet attention being drawn into a counter-alliance system. Indonesia, which until the fall of Sukarno had received large amounts of Soviet military aid for its navy and airforce, seemed more interested in forming a Jakarta-Phnom Phen-Peking axis than a Jakarta-Moscow axis. After Sukarno's fall relations between the two powers cooled considerably, yet Moscow appears to be intent on doing nothing which could sway Indonesia from its non-aligned foreign policy.

The Soviet-Indian Treaty of Friendship and Co-operation of August 1971 marks a departure from this position, for its terms comply with the formal requirements for an alliance. It obviously had significance for India's decision to launch the Indo-Pakistani war of December 1971 and would in all probability be invoked should the situation it was designed to ward off, a Chinese invasion of India, arise. Despite this, India still maintains, in
her public pronouncements and in her recent diplomatic rapprochement with the United States, that between the two super powers she is still effectively non-aligned and has continued to rebuff reported Soviet overtures for the establishment of naval facility rights in the region.\(^1\)

The Soviet Union's attempts at crisis management in the subcontinent appear in part to be directed against China. Baldly stated, if the tensions on the subcontinent could be eased then India could divert more of her attention to the Chinese border. Moreover the idea of an Asian collective security pact, launched by Brezhnev at an international gathering of communist parties in June 1969,\(^2\) has been denounced as an anti-Chinese move by Peking. Despite Moscow's protestations to the contrary\(^3\) it is difficult not to agree with the C.P.R.'s assessment.\(^4\)

What initially began as an essentially defensive diplomatic move into the northern Indian Ocean littoral states, designed to disrupt the perceived threat of encirclement by American land bases, has, in the last decade, developed overtones of a positive policy designed to contain Chinese influence. The Soviet naval presence in the Indian Ocean is a contributing factor to the containment of Chinese influence in the region although this is not to suggest that Chinese containment is the sole motivating factor for that presence. The naval

\(^1\) Indian Government sources 'leaked' news of a formal Soviet request to India for standing facility rights prior to the Brezhnev-Ghandi talks in November-December 1973. Australian 22 November 1973. The same source also suggested, prior to the talks, that India would reject this overture.

\(^2\) Moscow Home Service 1115 GMT, 7 June 1969, BBC SWB SU/3094/C/2-27.


\(^4\) Howard, P. 'A System of Collective Security', Mizan July/August 1969, p.199-204, analysed the Soviet media reaction to Brezhnev's proposal and found a strong containment of China theme.
presence demonstrates that whereas Peking may be able to offer the intangible benefits of Mao's thought to regimes and movements in the region, Moscow is a major power capable of projecting its military capability.

Non-Military Interests in the Indian Ocean

The Soviet Union, besides being interested in the foreign policies of the littoral states, has had a growing interest in the Indian Ocean as a region in its own right. Its fishing fleet is present for legitimate fishing purposes, its merchant marine crosses the ocean, some of its space experiments impact in the area, and it has a growing interest in the oil resources of the Persian Gulf states and the possibility of extracting mineral resources from the sea bed. These interests are likely to grow and in themselves may have been used as factors justifying the initial establishment of a protective naval presence in the Indian Ocean region. They also suggest that the Soviet Union would be best served by an absence of tensions and conflict within the region and by cordial relations with the littoral powers.

Soviet interest in fishing is well known. The fishing fleet ranges far and wide over the world's oceans on extended deployments. The Indian Ocean area as a whole provides less than 4 per cent of the world's total fishing catch and is not a major area of interest for the Soviet Union which has none the less fished there since 1964. In 1965 the total Soviet catch from the region was 36,100 tons which by 1970 had increased to 47,000 tons representing 0.7 per cent and 0.6 per cent of the Soviet total.

2 I should like to thank Mr. V.C. Ogareff of the Department of Political Sciences, Research School of Social Sciences for providing me with these figures based on Soviet sources.
Most Soviet fishing occurs in the grounds off both coasts of South Africa and undoubtedly vessels from the Southern Atlantic grounds use facilities available in the Southern Indian Ocean. In and around the Persian Gulf and Arabian Peninsula area the Soviet Union has upgraded the local fishing industries by providing vessels and shore facilities for processing the catch.\(^1\) The Soviets appear to do little fishing of their own in this region.\(^2\)

On this basis the fishing agreement with Mauritius, which provides up to 15 Soviet trawlers a year with docking rights and Aeroflot with landing rights, enabling crew transfers, appears consistent with Soviet requirements.\(^3\) The fishing vessels which operate in the Indian Ocean are presently drawn from the Vladivostok fleet and the distances involved justify the use of local facilities for crew replacements and repairs.

The Soviet maritime fleet has been steadily expanding since the mid 1950s\(^4\) and it has been carrying a greater percentage of the Soviet Union's increased sea borne trade. The Soviet merchant marine has more than quadrupled in size since 1955, totalling over 14 million gross

\(^1\) e.g. Tass in English 1725 GMT 26 July 1968 announcement of Soviet-Pakistani fishing agreement. These agreements are usually for a limited duration and provide for Soviet experts to train local specialists, explore the extent of resources, and carry out construction either of vessels or harbour facilities.

\(^2\) There have been unconfirmed reports that Soviet fishing vessels have a fishing monopoly in certain areas off Aden. E.g. Edith Redan 'Red Sails in the Sunset', Morning Post (Nigeria) 18 January 1972.

Soviet fishing vessels have used the Aden facilities for trawler overhauls with ship repair workers being flown from Vladivostok to Aden. 'This procedure will be cheaper than bringing ships back to their port of registry' Vladivostok 1030 GMT 20 April 1971, BBC SWB SU/3641/A4/4.

\(^3\) See Tass (Soviet News Agency) 15 July 1970. BBC SWB SU/3435/A5/2 for Soviet announcement of the treaty.

\(^4\) See p.193-4 above for the effect of this on naval construction. The Soviet Union still remains heavily dependent on foreign shipyards.
registered tons in 1970 and is expected to reach 20 million gross tons by 1980.\textsuperscript{1} In 1968 approximately 51 per cent of Soviet import and export cargoes went by sea routes and of this some 52 per cent was carried in Soviet vessels in 1967.\textsuperscript{2}

On 15 March 1967, a year before the first Soviet naval deployment, the Soviet bloc had a total of 300 vessels located at sea or in ports in the Indian Ocean region (on the same day there were 1,221 NATO bloc vessels and 433 flags of convenience in the Indian Ocean).\textsuperscript{3}

The following table is based on a recent United States estimate of Soviet Merchant Marine activity in the Indian Ocean.

<table>
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<tr>
<th>Number of Merchant Ships Transiting the Indian Ocean</th>
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<td>Soviet</td>
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<td>United States\textsuperscript{1}</td>
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<th>Port Calls by Merchant Vessels</th>
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<td>Soviet</td>
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\textsuperscript{1}Estimates only.

Source: Information supplied by Mr. S. Weiss, Director, Bureau of Politico-Military Affairs, Department of State, to Committee on Foreign Affairs, Subcommittee on Near East and South Asia. House of Representatives, 93rd Congress, 2nd Session, Hearings Proposed Expansion of U.S. Military Facilities in the Indian Ocean, p. 32.

\textsuperscript{1}Moscow's Expanding Mercantile Role', \textit{Interpreter Brief}, February 1972.


I have no figures to suggest how much of the Soviet shipping was connected with through trade, to say North Vietnam or Vladivostok, from European U.S.S.R., as opposed to trade directed to the Indian Ocean littoral states, although the above table indicates that port calls to the littoral states have been increasing in the period 1971-1973.

It can be expected that Soviet usage of the Indian Ocean as a transportation route will increase because of an increase in the already existing flow of trade. In addition Soviet vessels can be expected to carry some extra European U.S.S.R. - Pacific Coast U.S.S.R. cargoes, generated by the development of Siberia, although most of the extra traffic will travel on internal routes or via the Arctic Sea route.

Soviet space related activities in the Indian Ocean stem from the fact that the western part of the Ocean, north of Malagasy, lies on the polar orbit which passes over the Soviet Union's space control centre at Plesetsk. Single space related vessels have been deployed in this area for some time but in 1967 a group of some 19 vessels appeared. This was followed by another large scale space related deployment in April 1968 which was undertaken in association with the Zond 5 and 6 space probes. The Zond 5 capsule was retrieved on 21 September 1968 and taken to Bombay for airlifting to the U.S.S.R.¹ Since then space related vessels have used the Indian Ocean as the occasion requires.

The question of Soviet interest in Middle Eastern oil is complex. Until recently the Soviet Union had been reluctant to allow Eastern European countries to meet their oil needs by drawing on Middle Eastern sources. However, Soviet policy of selling oil to the West for convertible currency placed the Eastern European countries

¹ 'Indian Navy help transport Zond-5 to airport'. Indian News, 26 October 1968.
in the position of signing direct contracts with oil producing countries because of the short term inability to increase Soviet recourses. Moreover, Soviet interests in Middle Eastern oil have recently increased. In late 1970 a gas pipeline with a capacity of 1.6 billion cubic feet per day was completed from Iran to the Soviet Union and the Soviet Union has concluded an agreement with Iraq to help develop the North Rumaylah oil fields in return for payments in oil.

The relative proximity of Iraqi oil to the major processing and refining installations located at Baku makes further developments along these lines likely, for oil reserves in the Baku region are being slowly depleted. Even after the development of oil reserves in Siberia, in collaboration with Western and Japanese capital, there will probably be a substitution trade, exports from the Far East being balanced by imports from the Middle East.

Soviet interest in the sea bed resources of the Indian Ocean is at this stage a futuristic concern. Admiral Gorshkov however devoted a considerable section of his concluding article in the series 'Navies in War and Peace' to a discussion of the riches of the sea bed and the dangers of 'imperialists' using the sea bed for the emplacement of unspecified weapons systems. The discussion of ocean resources is conducted in terms of the dangers of 'imperialists' attempting to monopolise vast areas of sea bed for their own use - a monopoly which would be enforced by their navies. While Gorshkov's discussion is, no doubt, yet another justification for a greater role for his own navy it is likely that Soviet interest in sea bed resources will increase.

1 Economist, 31 October 1970.
2 This agreement will enable Iraq to maintain production levels at a rate comparable to the pre-June 1972 figures. Following nationalisation of the IPC Company Iraq's oil production fell by approximately 17.5 million long tons to 65 million long tons for 1972. Whitakers Almanac 1974, p.884.
It is unlikely that any of these factors, either alone or in toto, did in fact, lead the Soviet Union to deploy naval vessels to the Indian Ocean, despite Soviet suggestions to the contrary. None of them appear sufficiently important or sufficiently endangered to suggest that the Navy should, at considerable financial cost, use their scarcest resource — surface vessels — to deploy to the Indian Ocean. Given an established naval presence, and particularly after facility arrangements have been made, these interests probably suffice to ensure a continual, if low level, naval interest in the region.

The fishing and trade presence in the Indian Ocean has been credited with creating and expanding the Soviet Navy's support infrastructure within the region. One version of the argument is as follows.

Moscow clearly has a growing need for more ports-of-call, preferably with repair facilities, as its naval and mercantile presence has been increased. In many cases a start has been made with visits by an occasional merchant or fishing vessel; once this practice is established and the Soviet ensign has become familiar, a warship visit is arranged. Finally, the visits become so commonplace that host countries would find it difficult to object, particularly if they are economically or militarily beholden to Moscow or its allies.

1 See for example the Soviet Union's letter of protest, dated 18 June 1974, addressed to the Secretary-General of the United Nations concerning document A/AC.159/1 Report of the Secretary-General of the United Nations on the Military Presence of the Great Powers in the Indian Ocean. Besides routine training cruises the Soviet letter reports that its naval vessels are engaged in 'the search for and recovery of Soviet space craft that splash down in the Indian Ocean. It must also be borne in mind that transit routes from the European part of the U.S.S.R. to the Soviet Far East pass through the Indian Ocean'. In connection with its merchant marine activities the Soviet Union is 'conducting scientific investigations in the region'. The Soviet letter is reprinted in Strategic Digest, August 1974, p.17.


3 'Moscow's Expanding Mercantile Role', p.4.
While this version of events has some validity it is important to note:

1. The fishing and merchant fleets make their calls for sound economic reasons.

2. The step from fishing agreements to facility rights for warships is not automatic. Lee Kuan Yew stated in 1967 that he was prepared to offer Singapore's dockyard facilities to ships of all nations, but, was critical when a Soviet destroyer arrived unannounced in July 1971, and said that Soviet naval vessels would not be allowed to make use of the island's services. Since then Mr. Lee has obviously toned down his previous tough stance. In the period August 1973 - 18 November 1974 the Soviet Navy made 15 visits to Singapore, presumably for minor repairs at that country's extensive dock facilities, which are readily available to vessels from all nations prepared to pay. Presumably the Soviets, since July 1971, have complied with the necessary formalities and announced their arrivals.

3. Should the Soviet or any other Navy need to take on stores, water, fuel and perhaps relieve the ships' crews from the monotony of life at sea, it can do this at most ports in the world on a payment for service basis.

4. While Soviet naval access to port facilities is undoubtedly important and suffices for normal peacetime requirements such use may well be refused at the discretion of the country involved, and in particular, in times of crisis or conventional war, when they are most needed.

5. The use of facilities is not to be equated with the automatic right of access to ports or with the establishment of a fully-fledged naval base which offers a legally guaranteed security of tenure.

1 ibid., p.5.
2 See Appendix IV.
Growing Soviet Concern over the Indian Ocean Area

Soviet warnings that the US Navy intended to establish a major naval presence in the Indian Ocean predated the initial operational deployment of the Polaris A-3 missile.¹ Charges that the United States planned to establish an Eighth Fleet for operations in the Indian Ocean following the Sino-Indian border war appeared in the Soviet English language press.²

An article in *International Affairs* claimed

According to Indian press reports (uncited) the U.S.A., and Britain, while making much of their military aid to India, tried to extract important concessions from her during the Indian-China conflict. Among them, permission for foreign air force units or aircraft carriers to base themselves on the Andaman and Nicobar Islands, this being a condition for further supply of certain types of weapons to India.³

¹ That these warnings did in fact correspond to the intentions of some sections within the US Navy has recently been confirmed. This is not to suggest that the Soviets knew of such plans in detail. Rear Admiral La Rocque, U.S.N. (retired), has recently testified that: 'Plans for moving into the Indian Ocean date back to the early 1960s and even before'.

During this period La Rocque was serving as Assistant Director, Strategic Plans Division in the Office of the Chief and Naval Operations, and would have known of such developments.

In a printed statement submitted to the hearing at which La Rocque testified a former 'civilian assistant director of CNO's Long Range Objectives Group' Mr. S.B. Barber wrote: 'I detected a vacuum of realistic planning to meet possible future national and navy needs in the Indian Ocean, and in 1960 initiated through Admiral Burke the political efforts which kept Diego Garcia under British control (rather than automatically becoming a dependency of remote Mauritius)...'


² 'A Dangerous Shield', *New Times*, No. 6, 1963, p.22. See also 'Sino-Indian Conflict Draws Navy Eye', *Christian Science Monitor*, 22 December 1962, for an American report on US Navy thinking about the need for 'a carrier amphibious force in the vast Indian Ocean'.

New Times in mid 1963 and 1964 reported U.S. - U.K. negotiations in London on the establishment of naval and air bases in the Indian Ocean and cited the Seychelles, Maldives, Andaman and Nicobar Islands as potential sites.¹

The Soviet media carried reports of the Concord Exercise in 1964, involving five ships of the U.S. Seventh Fleet in the Indian Ocean. The exercise was linked with the alleged continued search for bases in the region and the 1963 Pentagon decision to convert the Indian Ocean into a sphere of regular operations for its Seventh Fleet. An appropriate quotation from the American (non-governmental) Navy League publication Navy Magazine, 'What is really, and obviously needed, of course is a permanent Indian Ocean Fleet including a combat-ready Navy-Marine amphibious element', was also cited.²

The planned V.L.F. communications base at North West Cape in Western Australia, construction of which began in mid 1963, brought forward evidence of Soviet concern directly related to the long range Polaris A-3.³

The powerful radio transmitters installed there (North West Cape) will help U.S. submarines darting to and fro in the Indian and Pacific Oceans to train their lethal Polaris missiles on diverse targets.⁴

The Soviet realisation of the potential use of the base for SSBN communications and control was accompanied by the almost ritual threat that such communications bases 'turn the country into a target for nuclear retaliation'.

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Soviet commentators also noted

The special US Navy radio station near Asmara, Ethiopia has recently been enlarged: it maintains communication with submarines and surface vessels in the Eastern Mediterranean, the Red and Arabian Seas, the Persian Gulf and the Western part of the Indian Ocean.¹

However Soviet commentators were, in the main, cautious in their Polaris related statements concerning the Indian Ocean. It was 'not excluded that nuclear submarines will appear in this area too'² but it was rarely firmly stated that they were stationed there, because 'the American Navy has no support points in the Indian Ocean area which could be used for basing missile equipped submarines'. However the Americans were expected to rectify this position, either in cooperation with the British, or, by an agreement with South Africa or some unspecified Persian Gulf State.³

The necessity for a support point within the Indian Ocean area itself, at which one of the US Navy's SSBN tenders could be based, is easily understood. The submarines need to restock stores, rotate crews and maintain and check equipment. Without a forward facility, Guam, 5,760 nautical miles from the middle of the Arabian Sea, the most likely patrol area for SSBNs, is the closest support point available. (This assumes that the submarines transit the shallow Malacca Strait which, despite its shallowness, is a major thoroughfare for heavily laden tankers and cargo vessels.) Estimating an underwater cruise speed of 20 knots made good it would take an SSBN 12 days to make the journey. Allowing for the return journey this would mean an on station time of 36 days out of a total 60-day deployment.⁴ An on station time for US Navy SSBNs in other areas is usually greater than 55 days.

² Yeremeneyev, L., 'U.S. Nuclear Submarine Fleet', International Affairs, Moscow, April 1964.
³ ibid.
⁴ 'U.S. Navy "Polaris Missiles and Men"', p.17.
per patrol. Should the route be south about around
Australia the on station time is a mere 20 days, assuming
a 60-day deployment. One authority has suggested that a
15 knot transit speed is more likely for nuclear powered
submarines.¹ On this basis the figures would be 28 days
on-station via the Malacca Strait and 7 days on-station
via the south about route. With the currently available
facilities, an Indian Ocean patrol area would detract from
the total retaliation capability at any given point in time.
This is not to say that SSBNs have never been in the Indian
Ocean but it strongly suggests that such deployments are
rare.²

Soviet naval planners would have been derelict in
their duty had they not set this calculation alongside
the facts of a sporadic U.S. naval presence, which
appeared a prelude of things to come, U.S. - U.K.
investigations of Indian Ocean islands for base facilities
and, most important of all, the U.S. communications
facilities being established in the area.

Prior to the construction of the North West Cape
facility the Americans had established V.L.F. stations at
Jim Creek, Washington, Cutler, Maine and had updated
existing V.L.F. stations at Balboa, Hawaii and Annapolis.

¹ McCGwire, Michael. 'The Economic Costs of Forward
Development', Soviet Naval Developments, Centre for Foreign
² Admiral Zumalt said that US Navy SSBNs 'won't' operate
in the Indian Ocean area in the course of his testimony
Proposed Expansion of U.S. Military Facilities in the Indian
Ocean, See p.136 and 137. Later he states: 'There is no
facility being put in which is called a submarine-support
facility. A tender, a submarine tender, could go to that
area but we have no current plan to do so'. p.150.

See also testimony of J.O. Zurhellen, Deputy Director,
U.S. Arms Control and Disaramament Agency, p.16, ibid.,
for a denial of United States SSBN deployments to the region.
But a chart prepared by the Navy and tendered in evidence
at the same hearings contained a notation that SSBNs had
been specifically excluded from the ship day calculations
(p.30) and Rear Admiral La Rocque produced evidence to
suggest that U.S. Navy SSBNs had used the Indian Ocean area
on patrol, p.92.
These stations gave a coverage of all except the Western and Southern Pacific and the Indian Ocean.

Early considerations for facilities to correct this deficiency were slanted towards a new V.L.F. site in the Marianas Island Group. This consideration even reached the point where the offices of the Secretary of Defense gave approval for such a project. Continued engineering analysis however, indicated that such a facility in the Western Australia would have great advantages over one in the Marianas.

Although there is no clear statement that North West Cape was preferred to Marianas base because of the superior coverage of the Indian Ocean region it is a reasonable inference that this was the major conclusion of the 'engineering analysis'.

By late 1963 Soviet military planners and the top political leadership must have been aware of the possibility of future deployments of SSBNs carrying the Polaris A-3 in the Indian Ocean. The clue, which would indicate a firming of intention to deploy, would be the establishment of a base for a SSBN tender in the region.

The Soviet Diplomatic Campaign

To counter the possibility of the United States creating a Holy Loch type facility in the Indian Ocean the Soviet Union launched a diplomatic/propaganda campaign designed to support the aspirations of the littoral states for an end to colonialism and the elimination of foreign bases in the area.

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1 Welcome Aboard the U.S. Naval Communications Station Harold E. Holt. - a booklet for newly assigned personnel to the Harold E. Holt Communications Base, p.4.

2 The inference that the V.L.F. station at North West Cape is to communicate with SSBNs is supported by a recent joint statement issued by the Australian Deputy Prime Minister and Minister of Defence and the United States Secretary of Defense on 10 January 1974 on the United States naval communications centre at North West Cape. It was noted: '...that one important function of the station was to serve as a key element in a complex system of communications supporting the global balance. They noted the importance of effective and reliable deterrence for the promotion of stable relations among the powers.'
In July 1963 Khrushchev sent a message to the Heads of State and Government of African countries taking part in the Addis Ababa Conference of the O.A.U. In the message Khrushchev highlighted the common aspirations of the African states and the U.S.S.R.; the ending of the arms race, the policy of general and complete disarmament, economic cooperation, the liquidation of foreign military bases in Africa and opposition to colonialism and racial discrimination. The message also supported the concept of a nuclear free zone in Africa.

The Soviet government believes in particular that if the African states, in developing certain U.N. resolutions on recognition of Africa as a nuclear free zone, conclude an agreement prohibiting the use of African territory, territorial waters and airspace for the storage, testing, shipment and launching of nuclear weapons and of African ports for the permanent or temporary stationing of ships bearing nuclear weapons then all nuclear powers will be obliged to respect such an agreement and assume definite pledges.1

Such a proposal, if it attracted support, would have a potential asymmetric impact on the super powers. The Soviet Union would gain little benefit, vis-a-vis the United States, from establishing its existing nuclear weapons, especially its ship and submarine based ones - in the Indian Ocean. The proposal encouraged African states on the Mediterranean littoral to continue their campaign for opposition to SSBN deployment in that sea while initiating a similar campaign in the East African states to be directed towards the Indian Ocean.

The introduction of U.S. Fleet units into the Indian Ocean was presented by the foreign language media as an attempt to force the non-aligned countries from their chosen political course. The 'indignation' of the Indian,

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Ceylonese, Burmese and Indonesian governments was favourably recorded.¹

In October 1964, at the Conference of the Heads of Non-Aligned States, Mrs. S. Bandaranaike, the Ceylonese Prime Minister, proposed a successful resolution calling for the denuclearisation of Africa, the Indian Ocean and the South Atlantic. The resolution declared, inter alia, that the establishment of new bases in the Indian Ocean would constitute a menace to the peace, security and independence of the littoral states.²

The Soviet Union presented a memorandum 'On Steps to Further Ease International Tension and to Limit the Arms Race' to the United Nations in December 1964.³ Section 3 of the memorandum 'The Liquidation of Military Bases on Foreign Bases on Foreign Soil' denounced

The attempts of certain states, first and foremost the U.S.A. and Great Britain, to establish new military bases in the Indian Ocean despite the clearly expressed will of the peoples of the region.

and Section 6 'The Establishment of Denuclearised Zones' specifically mentioned the Mediterranean Sea and the Indian Ocean as regions that could be established as nuclear free zones. This was in contrast to a similar memorandum of January 1964 submitted to the Committee of 18, in which only the Mediterranean Sea was specifically mentioned.⁴

Geoffrey Jukes has discussed the December 1964 proposal in some detail⁵ and it is not intended to repeat his

¹ 'U.S. Seventh Fleet' International Affairs (Moscow) July 1964. Primakov, Ye. 'The Indian Ocean and the Pentagon's Plans', Pravda, 10 January 1964.
³ Pravda 9 December 1964 and Izvestia 9 December 1964.
comments here. However it should be remembered that on 1 December 1964 the third SSBN advance anchorage site at Apra Harbour, Guam, became operational with the USS Proteus as tender.  

Of all the seas in which Polaris submarines could be deployed the U.S.S.R. chose to mention only those in which Polaris submarines had most recently gained the capability to operate. Moreover these seas were abutted by a number of non-aligned nations which had accepted the Ceylonese proposal some two months earlier and which could therefore be expected to support the Soviet initiative. These seas were also ones which, while offering a range of Soviet targets to US SSBNs, did not offer the Soviet Union any comparable range of US targets.

The issue appears to have hung fire from 1964 to 1968. The Soviets continued to offer general support for non-alignment and the desires of Third World countries to remain free from external, i.e. United States pressure, in the form of a naval presence. Britain established the British Indian Ocean Territory (BIOT) in 1965, by detaching the Chagos archipelago from Mauritius and the islands of Aldabra, Farquhar and Desroches from the Seychelles, as part of a move to substitute unpopulated island base areas for the uncertainty of its existing bases in the third world littorals. This policy was an early casualty of Britain's financial difficulties.

In December 1966 under an Exchange of Notes the BIOT was made available for the defence purposes of the United States and United Kingdom Governments for an initial period of 50 years. The creation of the Territory attracted unfavourable attention from the littoral states notably India and Tanzania who regarded its creation as a tangible sign of increasing big-power presence in the Indian Ocean.

1 Polaris and Poseidon Chronology, p.9.
which could give rise to military confrontation.\(^1\)

The period saw no major incursions into the region by United States Seventh Fleet units, due no doubt to the demands of the Vietnam War. The only U.S. presence was that of the Mid East Force, two destroyers and a tender in the Persian Gulf, and these had been there since the late 1940s.

There were sound reasons why the Soviets themselves did not venture into the Indian Ocean at this time, although a naval presence was established in the Mediterranean.

Prior to December 1966 there was no concrete evidence, visible to both the U.S.S.R. and the littoral powers, suggesting that a move by the U.S. Navy into the Indian Ocean was imminent. The April 1967 announcement of the US-UK agreement on joint facilities in the BIOT meant that what had previously been a possibility, noted by the naval staff, was now a distinct probability, calling for the attention of the Soviet political leaders. One Soviet commentator expressed the apparent fears of the Soviet defence community:

A representative of the British Government announced that British and American bases would be built on these (BIOT) islands - they will be bases for the B-52 bombers and atomic submarines and also the navy - but it seems that Britain is only a middleman in these negotiations for the Pentagon...it has been decided to build joint bases on the island.\(^2\)

The commentary pointed out that these bases should not only be considered in military strategy terms, they would also enable the Americans and British to 'put political pressure on India, Pakistan, Ceylon, Tanzania and other

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\(^1\) Information Paper, Foreign and Commonwealth Office for 'The Indian Ocean in International Politics' Conference, Department of Extra-Mural Studies, University of Southampton, 17-19 May 1972.

Afro-Asian countries following an independent policy, thereby attempting to identify Soviet military-strategic concerns with the third world littoral powers concern to pursue non-aligned policies free of great power interference.

The joint facilities agreement not only provided a compelling reason for the Soviet political leaders to consider deploying their own naval vessels to the region, it also provided an opportunity to deploy at minimum political cost. The indications were that the US and UK intended to strengthen their position in the ocean, and these powers, despite the declared views of a majority of the littoral states, appeared to be completing the infrastructure required to make possible future deployment of SSBN forces in the region. In these circumstances a modest Soviet countermove, in the form of a naval deployment, could be expected to be viewed by third parties with sympathetic understanding rather than outright hostility. It is possible that the Soviet Union planned its forward deployment move for 1967. However following the closure of the Suez Canal in June 1967 the bulk of naval vessels for an Indian Ocean deployment would have to come from the Pacific Fleet based some 7,330 miles from Aden. The distances involved, the necessity for afloat support, and the initial absence of facility arrangements made this an extremely difficult undertaking, not to be attempted without some effort to prepare the way for the initial deployment. Fortunately for the Soviets this preparation was relatively straightforward. Naval aid to India had, by the beginning of 1968, already delivered landing ships, torpedo boats and submarines creating an

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1 ibid.
2 The actual figures are:
   2 'F' class submarines of a total 6 agreed to in August 1965
   6 Patrol craft
   2 Landing craft
appropriate climate for Admiral Gorshkov's visit to India in February 1968. During his visit Gorshkov made an extensive tour of Indian ports examining facilities and India's naval requirements. In particular he examined the port of Visakhapatnam and reacted 'sympathetically' to a request for assistance in its development. The following month the first Soviet naval vessels entered the Indian Ocean.

The Soviet Naval Presence

The known movements of Soviet naval vessels in the Indian Ocean from March 1968 until January 1972 have been reliably documented in a number of publications. Unfortunately since that date there is little hard information relating to specific entrances, exits and port calls. However the monthly totals are known for the period through to November 1974. Appendix I indicates the pattern of deployments and port visits within the Indian Ocean area from March 1968 until the end of 1971. Appendix II lists the major Soviet naval vessels deployed since 1971 by month of the year. Appendix III lists the ship days spent in the Indian Ocean by both the Soviet and the United States navies. Appendix IV offers some information on the number of port calls made by Soviet and United States vessels and Appendix V indicates the major Soviet naval combatants deployed to the Ocean during the Bangla Desh crisis.

1 'Soviet Naval Squadron to Visit India', Daily Telegraph, 15 March 1968.
6 Table taken from M. McCwire, 'Naval Deployment in the Indian Ocean', p.2.
The deployments into the Indian Ocean area were, initially, concentrated in the north-west, or Arabian Sea, area and a review of the post-1971 reports suggests that this is still substantially correct. An examination of port visits suggests that initial deployments were concerned to examine a wide range of facilities throughout the area. The subsequent concentration on Somalia (Berbera, Mogadishu), Sudan (Port Sudan) and South Yemen (Aden, Hodeida) in the period September 1969 to December 1971 (21 visits as opposed to 4 visits from March 1968 to October 1969) suggests that the available facilities and the political climate in these countries were judged sufficiently reliable to contemplate the establishment of a point d'appui for sustained forward deployment in the area.\(^1\)

Subsequent developments indicate the correctness of this view. Alleged communist complicity in the attempted Sudanese coup of July 1971 and the Soviet Union's subsequent verbal protests about the Sudanese Communist Party, previously the strongest in the Arab world, denied them the opportunity to develop Port Sudan.\(^2\)

The Soviet Union appears to have fared better in Somalia. On 27 April 1970 Radio Mogadishu announced the unveiling of an 'imperialist-backed' plot against the recently installed military regime.\(^3\) Ten days prior to this two Soviet vessels, including a Krupny SSM destroyer, arrived at Mogadishu for a five-day official visit. These vessels did not leave until the second week in May when the Said regime appeared well in control.\(^4\)

\(^1\) McCGwire, M. op.cit., p.7.
\(^2\) For a discussion of the coup see African Recorder, 18-31 August 1971, 2894-2899.
\(^3\) African Recorder, 18 June - 1 July 1970, p.2554.
this development Soviet usage of Somalian ports and the establishment of facilities dramatically increased to the extent that in 1973 97 visits to Somalia occurred, including visits made by oceanographic research and space related vessels.¹

According to Admiral Zumalt:

They have built a communications station near the Somalian port of Berbera to provide support for their fleet. At the same time they have increased their use of, and are expanding, naval facilities at Berbera, which currently include a restricted area under Soviet control, a combined barracks and repair ship and housing for Soviet military dependents. In addition, they engaged in building a new military airfield near Mogadishu, which could be used for a variety of missions.²

This has led some observers to claim that the facilities in the Somali Republic warrant the description 'base facilities' if not 'base'.³ However the important questions of when, how, and under what conditions these facilities can be used remain. It is probably correct that the present facility arrangements meet present Soviet requirements but what of future needs? The Soviets continue to maintain that they have no bases in the area:

Normal duty calls by naval ships at various ports for the purpose of replenishing their supplies are tendentiously depicted...as the establishment of Soviet bases in the Indian Ocean region.⁴

¹ From Appendix IV.
³ Soviet Naval Developments III Seminar, 8-11 September 1974, Summary of Proceedings, Ken Booth rapporteur (Department of Political Science, Dalhousie University (N.S.)), p.64.
⁴ Letter from the Permanent Representative of the U.S.S.R. to the U.N. addressed to the Secretary-General, 18 June 1974, in Strategic Digest, August 1974, p.17.
and the Somali Republic rejects as 'totally groundless and without foundation' the claims that it has offered a base to the Soviet Union.

(There are no foreign military bases on the territory of the Somali Democratic Republic and...the statements alleging the establishment of a foreign communications centre or naval and air base are totally unfounded. The port of Berbera, which is frequently quoted in the report has been recently rebuilt and modernised thanks to loans received from the Soviet Union... Considering the increasing volume of traffic activities of the aforesaid port and in view of the fact that the Suez Canal is hoped to be reopened, my Government has recently decided to further amplify it, again with loans and technical know-how from the Soviet Union. The port, when completed, will offer refuelling and bunkering facilities to all ships which might wish to make use of its services. To suggest, therefore, that an area of our national territory is under the 'restricted control' of a foreign power is not only contrary to our political philosophy but can be regarded as a conjectural exercise aimed at presenting an untrue portrait of the positive and neutral role that has been characteristic of my country's foreign policy.1

The Soviet practice of establishing a restricted area for its personnel while they are engaged in activities in foreign countries is not unique to Berbera. Soviet naval personnel engaged in the port clearance operations in Bangladesh were also housed in restricted quarters for the duration of their stay, a practice which is not unique to the Soviet Union. To date descriptions of the restricted areas and facilities of Berbera are sufficiently imprecise to leave in considerable doubt the claim that the Soviet navy has a base area here. Observers will have to content themselves with watching for the developments in this area to see whether the Somali version cited above is proved correct.

1 Letter from the Permanent Representative of Somalia to the U.N. addressed to the Secretary-General, 22 May 1974, in Strategic Digest, August 1974, p.15-16.
2 Interview with His Excellency Mr. S.A.M. Kibria, Bangladesh High Commissioner to Australia, 17 July 1974, 1030.
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² Interview with His Excellency Mr. S.A.M. Kibria, Bangladesh High Commissioner to Australia, 17 July 1974, 1030.
Since the beginning of 1970 the Soviets maintained a steady state pattern of operations involving a Kotlin destroyer and, since October 1970, a T-58 minesweeper backed by an Alligator tank landing ship which, in the absence of other support vessels, is apparently used in this role. On at least two occasions the T-58 has entered and left the Ocean with a 'F' class submarine suggesting that in some instances it plays the role of a submarine support vessel.

From January to August 1972 the Soviets maintained an average of two destroyers in the Ocean, a Kashin (SAM armed) and a Kotlin, but during the northern winter months this reverted to a single Kotlin destroyer. The Sverdlov and Kresta class cruiser which appeared in the aftermath of the Indo-Pakistani War of 1971 left the area in March and no cruiser returned until November 1972 when a single Sverdlov entered for a five to six month deployment.

During 1973 the Soviet Navy sent Petya class destroyer escorts into the region and from May until October of that year there were always two of these vessels plus one or two Kottins present. Following the October War a cruiser entered the Ocean and, together with four destroyers and escorts, this remained the basis of the Soviet surface combatant presence until July 1974 when a helicopter cruiser entered the Ocean around the Cape of Good Hope. This vessel was to act as a command ship during Soviet mine clearing operations at the southern end of the Suez Canal.

The Soviet submarine presence has been based on a single conventionally powered 'F' class submarine since May 1973. In times of regional conflict the number of conventionally powered units has increased to three. During the Bangladesh War an SSM armed 'J' class submarine appeared and remained in the Ocean until July 1972. A nuclear powered SSM armed 'E-II' class submarine was sent to the region at the end of 1971 but no other nuclear powered submarine appears to have entered the Ocean until the aftermath of the October War.
It is noticeable that whereas the older conventionally armed vessels tend to spend long periods in the Indian Ocean, between five and six months on average, the more sophisticated vessels visit less frequently and for shorter periods. The lengthy deployments of the Kotlins and associated vessels suggests that this is an enforced requirement given the shortage of Soviet surface units in relation to the requirement for distant operations.

The relative absence of more modern units, except in times of regional tension when Soviet vessels and U.S. Navy carrier task forces enter the Ocean in some strength, suggests that the level of maintenance and support facilities in the area, both ashore and afloat, is not adequate to cope with the sophisticated electronics aboard the post-1960 generation vessels. In this respect it appears that the Navy was ill prepared for its venture into the Indian Ocean.

The following comments by a Rear-Admiral suggest that vessels pressed into service, on this occasion for the visit to Ethiopian Navy Day in 1966, were ill equipped for tropical conditions:

Departing Port Suez in the late evening, and entering the Gulf of Suez we immediately encountered steaming conditions which were, for us, unusual: high temperature, high humidity and the quite high salinity of the waters of the Red Sea. The production of the distilling plants fell off while black oil consumption jumped. The temperature in the engine and boiler rooms passed 60°C, radio antenna insulation dropped, and communications equipment operation deteriorated. The intensive rusting which occurred on the exposed metal parts of the ship, the weapons, and the upper deck was...a cause of great deal of concern to personnel.

One could only wish that our naval shipbuilders had given serious thought to the introduction of the latest achievements of science and engineering, not only in ships which are under construction (emphasis added), but even in those which have been part of the fleet for a long time. How much work and materials would have been saved if the steel decks had been covered with non-skid coatings, if water and heat resistant paint had
been used! And nothing need be said beyond mentioning the need for air conditioning systems for ships compartments. Air conditioning was needed everywhere.¹

These comments raise serious questions about the fighting efficiency of the crew, and the accuracy of the electronic systems, after a six month deployment into the Indian Ocean.

The apparent use of Alligator tank landcraft and minesweepers as support vessels has already been commented on. While this may point to the ingenuity of the Soviet naval personnel it cannot obscure the fact that the Soviet Navy has given a low order of priority to its support fleet, suggesting that the need for such a fleet had not been recognised until events forced its belated consideration. As one author has observed 'The number of missions of the auxiliary fleet has sharply risen',² and this has required the decisive reorganisation of the fleet's rear services and has significantly changed the functions, organisation, and nature of the activity of each of its detachments.³

It appears to have been recognised that the violation of unity in the development of combat and support components of the fleet under modern conditions will inflict perceptible damage to the combat power of the fleet as a whole.⁴

and 'A great deal of attention is now being devoted to the building of not only warships but also auxiliary ships which are new in principle...'.

While it is true, as Admiral Zumwalt has recently observed, that the Soviet Navy can use merchant ships for some logistic support functions this does not mean that the Soviet Union does not require specialist vessels capable of not only supplying the fleet with all modern forms of material required for maintaining the prescribed combat readiness of the forces, but also of carrying out multi-skilled technical maintenance of the complex weapon and equipment systems if only so that the efficiency of its out-of-area operations can be increased.

If the data on ship days (Appendix III) are examined the most striking feature is the high number of support vessel days in the yearly totals. If the amphibious vessels are included in the support role, which, as has already been indicated, seems justifiable, the proportion increases even further. It should also be borne in mind that in most cases minesweepers are included among the vessels counted under the title Warships or Surface Combatants in testimony provided to Congressional Committees.

In 1972 and 1973 figures have been inflated by the presence of vessels deployed to the Indian Ocean during the Indo-Pakistan War and in the aftermath of the October 1973 war in the Middle East. While these increases show a Soviet capability to deploy additional warships for short times to the Ocean, when it is considered necessary, they should not be confused with the 'steady state' deployment.

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1 Balyakin, L.N., op.cit. (emphasis added).


Ship days are an extremely crude unit of measurement. 'Minesweepers are equated with aircraft carriers'.

The comparative figures of U.S. and U.S.S.R. ship days do not indicate that, with the exception of one Kresta II missile cruiser, the Soviet Union had kept its most modern and powerful vessels out of the Ocean whereas the United States has sent in aircraft carriers including the USS Enterprise, and the nuclear powered frigate USS Bainbridge.

It appears impossible to locate any but total data on the number of port calls made by Soviet naval combatants, including support ships. However there are figures available (in Appendix IV) for port visits of all Soviet vessels, including oceanographic research and space event support ships. A comparison with the United States Navy in terms of naval combatants and their support vessels is most revealing. In the period 1968-1972 the Soviet Navy never made more than 35 port calls per year to the Indian Ocean littoral states. In the same period the smaller U.S. naval contingent never made less than 135. Despite the rise in Soviet naval port calls in 1973 to 100, of which those to Somali ports, Iraq and Aden account for over a half, the U.S. Navy combatants almost doubled that figure.


'I claim to have invented that term 'ship days' in the Mediterranean in order to make it very impressive to Members of Congress and to the press and to the people of the United States.

Frankly, we sat around, the Commander of the Sixth Fleet and I, trying to figure out how do you demonstrate the fact that the Soviets are really a threat to us here (in the Mediterranean). There were just a lot of little ships, nothing bigger than a destroyer and an occasional cruiser, and it was not very impressive. We hit upon the happy idea to call them ship days, and when you did, it is very dramatic.

Well, when you do it in the Indian Ocean, they start out with practically none prior to 1968, and then show an increase over the years. It looks impressive, but it is really not because the biggest ships that the Soviets have had in there have been an occasional visit of a very old cruiser. What they have there are simply destroyers - a few destroyers, a few destroyer escorts and minesweepers and these are not very effective'.
If port calls are a more accurate indication of impact and influence in the region than ship days, then the United States clearly makes more use of its naval resources in the region for this purpose. The Soviet Navy, perhaps as a part of its low visibility posture, spends much more time at its open sea anchorages located east of Durban in the Seychelles and Chagos archipelagos, or the more sheltered anchorages south of Socotra, near the Seychelles, Mauritius and the Maldives. While its vessels resupply in these regions they are very much out of sight, and, possibly, out of the minds of the littoral states.

**Soviet Naval Activities in the Indian Ocean**

All weapons systems can be used for purposes other than those for which they were originally procured and deployed. This is particularly true of naval vessels. Moreover a naval deployment can create, in the minds of friends, expectations, and in the mind of the initiators, a sense of obligation, if not necessity, to respond to those expectations.

In the case of the Soviet naval deployment to the Indian Ocean it introduced an element of Soviet military power to the region thereby indicating that the Soviet Union, besides the United States and Britain, was also a naval power. The fact of naval presence has enabled the Soviet Union to indicate an interest in regional developments by undertaking timely regional deployments or, less dramatically, by arranging port visits, thereby demonstrating its presence and power in a friendly, but nonetheless, impressive manner.

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This naval power has been used on at least three occasions to indicate support of regimes friendly to the Soviet Union, during the Somali coup, the Bangladesh War and the October 1973 war. In addition specialist forces have been sent to the region to assist in mineclearing operations on at least two occasions, in the Bangladesh harbours of Chalna and Chittagong, and more recently at the southern end of the Suez Canal. More controversial is the influence of the Soviet naval visit which brought Admiral Gorshkov to the scene of the Iraq-Kuwait border dispute in May 1973.

The events surrounding the Somali coup have already been mentioned. It should be noted that an interpretation of these events in terms of a deliberate use by the Soviet Union of its prearranged, but extended, presence in Mogadishu to support the Said regime overlooks the point that any action taken by the commander of the vessels could be construed as a form of naval diplomacy. Had the ships set sail on 22 April, as originally intended, would it not be reasonable to suggest that the Soviet Union was withdrawing its support from the Said regime? Was there a coup attempt or was Said merely eliminating domestic opposition? To establish this as a clear-cut case of naval support for a regime under pressure, it would be necessary to establish that the Soviet vessels entering Mogadishu harbour on 17 April had been informed of the possibility of a coup, and that their visit was intended as an indicator of support for the regime. There is also the problem of interpreting the results. How much of his success in unmasking and defeating the plot did Said attribute to the impact of a supportive Soviet naval presence, as against the alertness of his internal security forces? Perhaps all that can be said is that, by leaving the vessels in harbour until mid-May, Somali-Soviet ties were further cemented.
During the Bangladesh crisis of December 1971\textsuperscript{1} the Soviet Pacific Fleet reinforced the already existing naval presence (Appendix II and V). The first 'reinforcement', that of 5 December, consisting of an additional minesweeper and a destroyer, was fortuitous. These vessels were undoubtedly sent from Vladivostok, some time in mid-November, as routine replacements for the destroyer and minesweeper which had been in the Ocean since the end of June. On 18 December a second Pacific Fleet detachment entered the Indian Ocean. They must have left Vladivostok on or about 7 December as they were sighted transitting the Tsushima Straits on the 9 December. A third detachment left Vladivostok on 13 December. These last two detachments were similar in composition, carrying a mix of SSM and SAM launchers; both included an SSG and an attack submarine.

It is probable, as McConnell and Kelly have argued, that the second of the reinforcements were sent to match the already existing British presence in the region, and the third detachment to mark the U.S. Task Force, which was formed on 10 December.\textsuperscript{2}

The Soviet Union's main concern seems to have been to prevent the crisis drawing in powers from outside the subcontinent. Clearly, from the first days of the war, India had demonstrated superiority on land, air and sea. Yet there was a concern that Pakistan's allies, initially Britain and subsequently the United States, might take steps

which would in one way or another mean their involvement in the conflict and which would lead to a further aggravation of the situation in the Hindustan peninsula.\textsuperscript{3}

\textsuperscript{1} The facts of this event have already been analysed by McConnell and Kelly 'Super-Power Naval Diplomacy' on whose work I have drawn for this section.

\textsuperscript{2} McConnell and Kelly, op.cit., p.1-3.

\textsuperscript{3} Tass Statement Condemning Pakistan, Moscow Home Service, 5 November 1971, 1100 GMT BBC SWB SU/3857/A3/1.
There is evidence, in the Anderson Papers, to suggest that the Soviet Union did not expect the United States to directly intervene in the war. If this is accepted then it seems clear that the Soviet detachments were sent simply to counter-demonstrate against the 'imperialists', to hedge against any unexpected intervention, and thereby to gain credit with the Indian government. However this is not to say that the super power naval demonstrations paralysed the supportive naval intervention of the other. The United States showed that it tilted towards Pakistan; the Soviet Union that it backed India, although this support stopped short of direct intervention, and did nothing to alter the events unfolding on the subcontinent.

In the third case, the naval deployments into the Indian Ocean following the October War, less information is available. None the less it would appear that the naval build-ups in the Indian Ocean occurred after the Middle East hostilities had concluded and were concerned with the Arab states' 'oil diplomacy' which followed the conflict.

Prior to the October War it appears as though the Soviet Navy had 13 vessels in the Indian Ocean (see Appendix II), a destroyer, two escorts, an 'F' class submarine, two minesweepers, a landing ship and six auxiliaries. A further eight vessels were employed in the Bangladesh mineclearing operation. On 31 October a U.S. Navy task force headed by the aircraft carrier USS Hancock entered the Ocean, accompanied by five or six destroyers and an oiler. The official announcements of

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1 Anderson quotes a CIA report of a meeting held on 13 December 1971 between 'top Indian officials' and the Soviet Ambassador to India, Pegov. According to the report Pegov assured the Indians that the U.S. task force was 'an effort to bully India to discourage it from striking against West Pakistan, and at the same time to boost the morale of the Pakistani forces'. Intent on doing some morale boosting of his own Pegov noted 'the Soviet Union will not allow the Seventh Fleet to intervene'. Anderson, Jack and Clifford, The Anderson Papers, (Random House, New York, 1973), p.266.

the U.S. government denied that the move was a response to the Soviet build-up in the Mediterranean, which was placed at over 90 ships.\(^1\) Rather it stressed the importance of asserting rights of transit through the Malacca Straits. There was no public mention of the Soviet presence in the Indian Ocean as a justification for the move.\(^2\)

The Soviet media confined itself to reporting the condemnation this display of naval might had aroused in the countries of Africa and Asia.\(^3\)

On 13 November a Soviet force entered the Indian Ocean. It consisted of a Sverdlov SAM cruiser and a guided missile destroyer accompanied by an oiler.\(^4\) Although it is likely that this was a normal rotation, for it is normal Soviet practice to send a Sverdlov to the Indian Ocean in November/December, it was noted that 'the class of ships going in is superior to anything the Russians have there now'.\(^5\)

Details of the subsequent Soviet deployments are scanty but we do know that during December additional submarines, two 'F' class and one 'E' class nuclear powered submarine armed with SSMs entered the Indian Ocean accompanied by two auxiliary vessels. The combatant force remained at this strength, one cruiser, two destroyers, two escorts, three 'F' class, and one 'E' class submarine, until March when one escort or destroyer,

\(^1\) Admiral T.H. Moorer, USN, Chairman J.C.S. United States, Military Posture for F/Y 1975. Section on the Middle East - stated that the peak strength of the Soviet Naval force in the Mediterranean was 96 ships including 29 modern surface combatants and 23 submarines.


\(^5\) The Australian, ibid.
an 'F' class and the 'E' class vessels left the area. During this period American carrier task forces remained in the Indian Ocean. The USS Hancock was replaced by the Oriskany, and the Kitty Hawk arrived in March, about a month after the Oriskany had left the region.

U.S. Secretary of Defense Schlesinger, in a statement on 30 November 1973, announced that the presence of U.S. warships in the Indian Ocean was to be 'more frequent and more regular than in the past'. The initial U.S. task forces appear to have spent most of their time in operations off the Oman and Saudi Arabian coasts. As Saudi Arabia was at the time playing a leading role in the oil embargo on the United States, and the supporters of Israel, and threatening to cut back production rates at the oil head, the significance of this deployment needs little elaboration. Two destroyers from the task force visited the Ethiopian Red Sea port of Massawa. This involved transiting the Strait of Bab-al-Mandeb, which the Egyptian Navy had blockaded during the second week of the war.

It is possible that the Soviet naval presence in the Indian Ocean region was deployed in support of this blockade. Although small in size and lacking air cover, the Soviet naval force may have been seen as a partial guarantee against American naval intervention in the area. It would have been reasonable for the Soviet units to move towards the area of conflict while keeping a discreet distance.

1 The Australian, 5 December 1973.
5 ibid.
6 ibid. Although this was an undeclared blockade, it appears as though at least one American merchant ship seeking to sail through Bab-al-Mandeb was fired upon by an Egyptian destroyer. See Abir, Mordachi 'Sharm al-Sheikh Bab al-Mandeb: The Strategic Balance and Israel's Southern Approaches', Jerusalem Papers on Peace Problems, No. 5, March 1974, p.5.
Interpretation of such a move would be subject to dispute but the consequences, for any subsequent Western involvement, must have been to complicate any intended action and to close off a range of dramatic options for fear of risking an open naval encounter between the two superpowers.

The deployment of aircraft carriers off the Saudi Arabian-Oman coast was apparently related to the Arab nations 'oil diplomacy'. It gave some substance to Secretary of Defense Schlesinger's remarks, during an interview on 6 January 1974, that there was some risk of the use of American military power in response to a rising public demand for action against the Arab oil boycott. In a subsequent interview on 9 January 1974 Schlesinger commented 'I regard the likelihood of that as extremely low'. The Arab states protested that the original statement was 'reminiscent of gunboat diplomacy' and there were reports of Saudi Arabia taking 'security measures against possible foreign invasion of the sources of oil production' all of which was broadcast back to Arab states by the U.S.S.R.

Although there is no detailed information available concerning Soviet naval activity, it can be stated with a reasonable degree of confidence that they kept close to the American task forces. The Soviet Union supported the oil boycott, and urged its continuation after the Israeli fall-back due to occur on 21 February. Such statements probably required some continuing symbol of Soviet protection, as a reassurance to the Arab states, if they

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1 The Age, 12 January 1974.
3 e.g. 'Continued Need for Oil Embargo after Disengagement', Radio Peace and Progress in English 1430 GMT, 29 January 1974, BBC SWB SU/4514/A4/1.
were to be effective. Moreover, Soviet vessels were seen to leave the Indian Ocean in the wake of the Oriskany task force in February 1974, suggesting that they had been marking this force during its tour. ¹

What can be made of this coming and going? It would seem as though, as in December 1971, the two super powers' naval forces observed each other closely during the period of 'oil diplomacy', to ensure that neither intervened in a dramatic fashion. None-the-less the American task forces were not paralysed. The United States Navy tested the blockade of the Bab al-Mandeb Straits, added some weight to Secretary Schlesinger's remarks, countered any comfort the Arab leaders may have gained from the Soviet presence, and provided an indication of United States concern about developments in the region.

The only other naval activity in the region which has been described in terms of overt Soviet naval diplomacy occurred in April 1973. Admiral Gorshkov visited Iraq for the first anniversary celebrations of the Soviet-Iraq Treaty of Friendship and Cooperation. While Gorshkov was in Iraq, and during the course of the celebrations, four naval vessels visited Iraq, from 5th - 12th April. In themselves these were not remarkable events, moreover Gorshkov's visit must have been planned well in advance. The Commander in Chief of the Soviet Navy was an obvious choice for such a visit given the significant amount of aid the Soviet Union was making available for the development of harbour facilities at Umm Qasr. The visit of the naval vessels was equally appropriate, symbolising the military strength of Iraq's treaty partner.

However, a good deal of significance has been read into these events because during the previous month a long running border dispute between Iraq and Kuwait seemed about to erupt into open conflict as a result of the Iraqi occupation of a border post. The facts of the dispute and

¹ The Sydney Morning Herald, 14 February 1974.
The naval visits have been documented elsewhere\(^1\) and four explanations of the visit offered; that the naval visit was merely routine, that it was intended to deter third party intervention, that it was an attempt to pressure Kuwait into accepting Iraqi claims and that it was a demonstration of solidarity with Iraq. However there is insufficient evidence to justify any of these claims and it would appear that a fifth hypothesis is just as reasonable: The Soviet naval visit and Gorshkov's talks with Iraqi leaders, while indicating general support for the regime, had the effect of restraining Iraq in what could have developed into a regional conflict involving Iran and Iraq. Moreover it is possible that the Iraqi leaders, having made the arrangements for the anniversary celebrations, attempted to take advantage of the situation by staging a small scale incursion into Kuwait territory, calculating that the subsequent visit would reinforce their position at the conference table and safeguard against any Iranian or other power's intervention.

The Soviet Navy has also undertaken two minesweeping operations in the Indian Ocean area. The first of these involved clearing the Bangladesh port of Chittagong in the aftermath of the Indo-Pakistan War of December 1971. After the delays experienced in organising a United Nations supported clearance operation the Prime Minister of Bangladesh accepted a Soviet offer to undertake the task. A detailed account of Soviet operations and the magnitude of the task has been presented by Charles A. Petersen of the Center for Naval Analyses and the facts of the case as set out by him have been confirmed by the Bangladesh High Commission in Canberra.\(^2\) Although the clearance and

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salvage operation took much longer than anticipated the delays can be accounted for. Not only were the Soviet crews relatively unsophisticated in demolition techniques, compared with the Dutch who cleared Chalna, but they had to contend with high water temperatures and silting which not only reduced visibility during the monsoon months but also filled ships with silt. Moreover the Bangladesh Government was anxious to salvage as many of the wrecks as possible and requested the Soviet team to raise vessels rather than demolish them underwater. The Bangladesh authorities also admit to having added more vessels to the list after the original agreements had been made.

Despite these delays, which gave rise to concern that the Soviet Navy was exploiting its presence to establish a naval base, the port clearance group began to leave in April 1974 and had withdrawn completely by July 1974. During the course of the operation there was no evidence of other Soviet vessels attempting to take advantage of the situation by paying frequent port calls; in fact only two such visits are recorded for the period August 1973 to 18 November 1974.1

During August 1974 a second Soviet mineclearing operation was undertaken, at the southern end of the Suez Canal, as part of an effort, involving primarily the U.S. Navy and the Royal Navy, to prepare the canal for reopening. Seven minesweepers, five auxiliary vessels and two floating cranes were sent to the area where they were joined by the helicopter cruiser Leningrad which besides providing its helicopters also acted as a command centre for the operation.2 The Leningrad left the Ocean during November although it appears that other vessels remained for a longer period.3

1 Appendix IV.
3 See Appendix III.
Besides undertaking the activities outlined above the Soviet naval presence has had an impact in other more subtle ways. The number and distribution of Soviet port visits (Appendix IV) suggest a desire to remain relatively unobtrusive in the region as a whole, while concentrating on certain states, Somalia and Iraq, which are valued for their naval facilities, and in the case of Iraq, for its proximity to the Soviet Union and its oil. However the fact remains that whereas prior to 1968 there was no permanent Soviet military presence in the region, post-1968 such a presence has been in evidence and is now permanent, if low level. This symbol of Soviet power and interest in the region has shown a limited ability to increase in numbers from time to time and Soviet prestige has undoubtedly benefited from the Chinese and American Governments' tendency to overreact to these increases.

These aspects of the naval presence are essentially an adjunct to the economic and military aid programmes, and to the Soviet Union's diplomatic efforts in the region, which have enabled them to conclude Treaties of Friendship and Cooperation with Egypt (April 1971), India (August 1971), Iraq (April 1972) and Somalia (October 1974). These treaties are the fruits of a policy designed to cultivate selected countries in a region of strategic significance to the Soviet Union, rather than an attempt to seek security and influence through more universalist collective security arrangements, such as the apparently abortive Asian collective security scheme of April 1972.

1 Canberra Times, 1st November 1974 for report of Somalian ratification of the treaty signed on 11 July 1974.
An examination of the use of the Soviet Navy to influence\textsuperscript{1} regional affairs should not obscure the fact that the Soviet Union has been, and may still be, genuinely concerned about the possible establishment of a permanent U.S. SSBN presence in the Arabian Sea. Its naval vessels, oceanographic ships and fishing fleets are engaged, among other things, in gathering data on the topography of the ocean floor and the salinity, temperature variations and currents in the water. Soviet vessels not only keep track of other powers naval vessels in the ocean, but they also gather data on the quantity and characteristics of the electronic emissions from communications facilities and radars, both shore and ship based. Should it ever become necessary and feasible for the Soviets to conduct strategic ASW operations in the region they will have a reliable data pool at their disposal.

The Soviets have raised the spectre of a naval arms race in the area but, as has been pointed out, they have acted at a time and in a manner such that they have been largely absolved from blame for introducing this possibility. Soviet naval vessels first entered the Indian Ocean a full year after the US-UK agreement to establish joint facilities in the BIOT. Moreover, by presenting a low combat potential, and acting in a way designed not to rouse regional anxiety, the influence may be exerted in the sense that the presence of the Soviet Navy, where there was none before, has affected the behaviour of the littoral states simply by being there. However if the term influence is used in a more specific way suggesting that the process of influencing has been 'successful' then we need to demonstrate that despite original intentions to the contrary an actor's behaviour does conform within reasonable limits to that desired by the influencing party.
Soviet activity appears to have been accepted by the majority of littoral states as perhaps regrettable but certainly not threatening. By maintaining a low level presence the Soviet Union has helped create a climate of opinion in the region which, while in favour of declaring the Indian Ocean a zone of peace and a nuclear free zone, is not unduly hostile to Soviet activities.

The Soviet Union in some respects appears to enjoy the best of all possible worlds in the region. Its vessels come and go and can be used in support of Soviet commercial, scientific, military and diplomatic interests, while at the same time some of the activities of its rival, the United States, are subject to open questioning, suspicion and at times denunciation. In particular the American proposal to establish a naval base at Diego Garcia has been viewed with concern, not only in the region, but in some sections of the American Administration and Congress. In addition the Soviets can take some comfort from the fact that to date no SSBN tender has been stationed in the Indian Ocean and therefore it is unlikely that the area has become a regular patrol ground for SSBNs.

1 Mr. William Colby, Director of the CIA, has testified that the Soviet naval presence is still small and that a typical pattern of operations is for vessels to spend up to 80 percent of the time riding at anchor or in port. The Australian, 5 August 1974.

2 Mr. Weiss supplied a table to the Hearings, Proposed Expansion of U.S. Military Facilities in the Indian Ocean, p.95, which indicated that of the 30 regional powers surveyed only 6 were favourably disposed to the proposed upgrading of Diego Garcia.

The U.S. Senate on 17 December 1974 passed a Military Construction Appropriations Bill 85 votes to nil but vetoed any money being spent on Diego Garcia subject to a Presidential declaration that the base is essential to the national interest. Canberra Times, 18 December 1974. Prior to this the House of Representatives had cut the Diego Garcia appropriation by half. A prominent member of the U.S. Administration, the Director of the CIA, Mr. William Colby, has also opposed the establishment of the base arguing that 'If we were to set up a permanent establishment capable of supporting a regular force in that area, they would set up a countervailing force'. The Australian, 5 August 1974.
Soviet Expansion or Mutual Withdrawal

It has been suggested, usually in the context of supporting the establishment of a United States naval facility in Diego Garcia, that the opening of the Suez Canal will see a dramatic rise in the number of Soviet vessels deployed on a steady state basis in the Indian Ocean; or alternatively that the Soviet Union will be able to deploy a greater number of vessels to the region more rapidly if and when the necessity should arise.\(^1\) Whatever the merits of this as an argument for the upgrading of Diego Garcia\(^2\) the proposition itself bears examination.

The distance from Vladivostok to Aden is 6,630 nautical miles by the shortest route. A vessel travelling at a speed of 15 knots will spend some 18 days in making the journey. The voyage from Sevastopol using the Suez Canal will take 7 days. Thus the amount of time spent in transit by a vessel will be considerably reduced and hence its on-station availability will be increased. Assuming a 66 percent operational availability for surface ships at base, and a 150 day deployment, a vessel from Vladivostok making the journey to Aden would have an on-station availability of 50 percent. From Sevastopol the on-station availability rises to 60 percent. If the length of deployment is 60 days then vessels from Vladivostok have a 26 percent in area availability while from Sevastopol the figure is 46 percent.\(^3\) Thus there is some advantage to the Soviet Navy if vessels use the Suez Canal route from the Black Sea, and this advantage becomes

\[^2\text{See Jukes, G., 'Big Pond Needs Small Fish', The Australian, 25 February 1974 for the argument that it has little merit.}\]
\[^3\text{Calculations of on-station availability = operational availability \times \frac{\text{deployment}}{2 \times \text{transit}}.}\]
more significant if shorter deployment times are used.¹

Against this advantage must be set the fact that the Black Sea Fleet has primary responsibility for maintaining the Mediterranean presence. To assume the role of providing an increased presence in the Indian Ocean would stretch the resources of this fleet, particularly the auxiliary units, which despite the use of Berbera, would still be necessary.

The naval strength of the Black Sea Fleet including auxiliaries is shown in the following table. From this table it can be seen that to deploy any major surface fleet vessel on a permanent basis to the Indian Ocean from the Black Sea Fleet would require either a weakening of the Mediterranean presence, or a substantial increase in the size of the Black Sea Fleet at the expense of other fleet areas.

Whereas some use of the Black Sea Fleet vessels is to be expected, it is unlikely that there will be any dramatic increase in the number of vessels in the Indian Ocean on a steady state deployment. This is primarily because the Soviets are unlikely to weaken their Mediterranean presence, where their vessels have a primary mission of countering the Sixth Fleet aircraft carriers and conducting ASW exercises. Nor are the Soviets likely to draw large numbers of vessels from their other fleet areas where, one assumes, they have been assigned for a purpose. It is possible that the Pacific Fleet could be an exception to this proposition, for at present the Pacific Fleet is the home base of most of the ships deployed in the Indian Ocean. Therefore it is possible that these vessels could be transferred to the Black Sea Fleet.

¹ This would seem desirable if the more modern and sophisticated vessels of the Soviet Fleet were to be used in the region. There are also major advantages for auxiliary vessels which may be able to shuttle back and forth rather than accompany the combatants for the duration of their deployment.
Major Combatants and Auxiliaries available in the Black Sea Fleet 1st July 1973 (Estimate only)

<table>
<thead>
<tr>
<th></th>
<th>Berman¹</th>
<th>Janes²</th>
<th>Berman in Mediterranean from R.S.F. ³</th>
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<tbody>
<tr>
<td>W cruise missile submarine</td>
<td>4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>R</td>
<td>6</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>W</td>
<td>14</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>Q</td>
<td>10</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Kiev air capability ship</td>
<td>1+1</td>
<td>1+1²</td>
<td>-</td>
</tr>
<tr>
<td>Kara missile-firing cruiser</td>
<td>2</td>
<td>1+2³</td>
<td>-</td>
</tr>
<tr>
<td>Moskva ASW cruiser</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sverdlov SAM cruiser</td>
<td>3</td>
<td>(4)</td>
<td>-</td>
</tr>
<tr>
<td>Chapayev</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Kirow</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Kresta I missile firing cruiser</td>
<td>1</td>
<td>1</td>
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<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Kildin</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Kotlin</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Skory</td>
<td>10</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Grisha</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>T-58, T-43 Minesweeper</td>
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<td>40</td>
<td>1</td>
</tr>
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<td>Alligator</td>
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<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Polnocny</td>
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<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Landing Ship</td>
<td>55</td>
<td>45</td>
<td>1</td>
</tr>
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<td>Ugra</td>
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<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Lama</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Donpz, Oskol</td>
<td>8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fleet Oilers</td>
<td>8</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Light Cargo</td>
<td>15</td>
<td>3</td>
<td>-</td>
</tr>
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<td>Int. Ships</td>
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<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Hydrographic Research</td>
<td>15</td>
<td>not listed</td>
<td>3</td>
</tr>
<tr>
<td>Fleet Tug</td>
<td>2</td>
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<td>1</td>
</tr>
<tr>
<td>Water Carrier</td>
<td>6</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

¹ Robert Berman, 'Soviet Naval Strength and Deployment as of 1st July 1973', op.cit.
² Jane Fighting Ships 1973-4, p.530.
³ To date the operational zone for classes building at Black Sea construction yards, the Kiev and the Kara, are not known with any certainty so they have been omitted from the following discussion.
⁴ The submarine contingent of the Soviet Mediterranean presence is supplied by the Northern Fleet because of the limitations, under the Montreux Convention, of deployment from the Black Sea to the Mediterranean. Don class submarine supply vessels also move down from the Northern Fleet as do the ship repair vessels of the Dnepr and Oskol classes.
Any crisis which escalates to the stage of conventional war, or war at sea between the super powers, will in all probability see NATO attempts to blockade the Turkish Straits thereby denying the Black Sea Fleet transit.

The above argument, in terms of increased capabilities, or steps that would be required to increase capabilities, does not take into account Soviet intentions. If the argument that the Soviet Navy enjoys the best of all possible worlds in the Indian Ocean region is accepted, then the possibility must be taken into account that the Soviet Union has no intention of dramatically increasing its steady state deployment in the region. Any such move may well jeopardise the present regional climate of opinion which works in favour of the Soviet Union. Many of the American domestic critics of the Diego Garcia proposal have based their opposition on the fact that the present Soviet deployment is small and relatively insignificant. However this opinion may well be changed by a dramatic and sustained increase in Soviet activity. One critic of the current proposal to upgrade facilities at Diego Garcia has written:

(W)e should not as yet transform Diego Garcia from an important communications facility to an active naval base. Let the Russians bear the onus for precipitating a naval race in the Indian Ocean, which none of the littoral states desire. Their level of activity does not yet persuade the countries in the area that they are provoking such a race. If we proceed now...we would be held responsible. If, after Suez is reopened, they massively increase their naval presence, we should proceed as the President now suggests. It is important for our long run political, economic and defence relations in the area...that they are seen responsible for whatever competition may ensue.

These arguments apply to the improbability of a major escalation of the Soviet Navy's Indian Ocean presence on the opening of the Suez Canal but some elements also apply to task specific deployments. A major crisis involving NATO may see the closure of the Turkish Straits: in any case no Soviet naval planner could count on the ability to use the Straits unhindered in these conditions. In a future Middle East flareup there is no guarantee that the Suez Canal would be available for transits to the Indian Ocean, and in such a situation the Black Sea Fleet is likely to be fully occupied in the Mediterranean.

In regional crises, such as occurred in December 1971, neither the Turkish Straits nor the Suez Canal are likely to be denied the Soviet Fleet, but then neither is the Suez Canal likely to be denied the United States. In a repeat round of Arab-Israeli hostilities it is quite possible that the Suez Canal will be closed or blocked to all vessels.

Dr. Kissinger has recently noted 'The Soviet Union has not been pushing for a reopening of the Suez Canal'. (It is arguable that they refrained because others, most notably the United States, have been urging the opening of the Canal). Kissinger acknowledged that it would be easier for the Soviets to transit war ships from the Mediterranean to the Indian Ocean with the canal open, but this would not be a vast disadvantage to the United States which could also transit its ships in the same fashion. He questioned whether much political advantage would flow to the Soviets once its ships were able to transit the canal. ¹

It is true that the Sixth Fleet aircraft carriers will not be able to transit the Canal, and hence the United States naval presence would be denied one of its most versatile tools, but this denial does not confer impotence

¹ Transcript Report of Secretary of State Kissinger's News Conference, 6 June, 1974, p.5; provided by U.S.I.S.
on such vessels as can make the transit. Should the situation be deemed sufficiently serious to warrant the presence of an aircraft carrier one could be sent from the Pacific Fleet and, given a transit speed of 25 knots, it could join an American force in the Arabian Sea within 9 days.

If there appears to be little danger of a sudden, unmatched, upsurge of Soviet vessels in the Indian Ocean how likely is it that the Soviet Union and the United States will be able to reach some agreement on a mutual withdrawal or a limited presence in the Indian Ocean?

On 11 June 1971, Brezhnev gave some precision to the previously vague calls that the Indian Ocean be declared a zone of peace, or a nuclear-free zone, which as we have seen date from 1963-4. He said:

We have never considered, and do not now consider it an ideal situation for the navies of the great powers to cruise for long periods, far from their own shores and we are prepared to solve this problem, but, as they say, on an equal footing. On the basis of such principles (equal footing) the Soviet Union is ready to discuss any proposals. 1

Brezhnev specifically mentioned the Mediterranean and the Indian Ocean as well as 'other seas' in this passage of his speech. He also criticised the attitude of American politicians who, while complaining about the Soviet Navy, 'consider it normal and natural' for the United States Navy to be constantly deployed far from its home bases.

Following Mr. Brezhnev's call for restraint in naval deployments the United States sought some expansion and clarification of meaning. Mr. Alexis Johnson, Under-Secretary of State, informed the Senate Foreign Relations Committee of such an approach which had led to discussions following the 11 June speech. 2

however claimed that the discussions had not proceeded to any great extent.\footnote{ibid.}

In May 1972 Gorshkov and U.S. Secretary of the Navy, Warner, signed an agreement on the prevention of incidents at sea. This, however, only covered the behavior of vessels of the two navies when they met at sea but did nothing to regulate their deployments.\footnote{For the text of the agreement see 'President Nixon in Moscow: A Summary of Major Statements and Agreements during President Richard Nixon's Visit to the Soviet Union, May 22-30, 1972', p.8-10; (provided by the U.S.I.S.).} There is no public evidence that the issue of limiting deployments was raised at the time.

In testimony to the House Foreign Affairs Subcommittee on the Near East and South Asia, Mr. J.O. Zurkellen, Deputy Director of the Arms Control and Disarmament Agency, stated that to date the Soviet Union still had not clarified the issue. He claimed the United States remained interested in mutual restraint 'perhaps in the form of explicit understandings to avoid competition while safeguarding our respective interests in the Indian Ocean'.\footnote{Hearings: Proposed Expansion of U.S. Military Facilities in the Indian Ocean, p.4 and 6.}

At the United Nations the great powers and their major allies (excepting Australia and New Zealand in 1973), have abstained from voting on resolutions proposed by littoral states to declare the Indian Ocean a zone of peace, which have, none the less, been carried by increasing majorities on each occasion. One explanation for this apparent lack of enthusiasm on the part of the Soviet Union is that Brezhnev's proposal was mere propaganda. This is, of course, a possibility that cannot be rejected out of hand, but it is also likely to be an oversimplification.

To dismiss the proposal in this way is to avoid examining some of the difficulties which face the Soviet Union in this matter. Insofar as the United Nations...
resolutions are concerned they are declaratory, in principle, resolutions which do not relate to the concerns or interests of the great powers themselves, or provide any specific indication as to how the laudable goal of a zone of peace is to be achieved. This is in part because the supporters of the motion have no consensus views on what a zone of peace implies for them and the great powers, but more importantly it stems from a realisation that any naval agreement which may eventually be arrived at will be struck by the great powers themselves, with full regard for their own interests. In this process the littoral powers will do no more than play a role in keeping the issue before the eyes of the great powers.

A formal agreement between the super powers would have to permit transit of, and occasional deployments to, the Indian Ocean, and allow port calls to the littoral states, if the principle of freedom of the seas was to be maintained. There may be a restriction on permanent deployments, or perhaps on the number of ship days permissible in the ocean. Certain types of vessel could be excluded completely, or allowed entrance on a relatively restricted basis.

Although aspects of such a treaty, if and when it was negotiated, may contain provisions, such as the permanent exclusion of SSBN support facilities from the Indian Ocean, which would appear attractive to the Soviet Union such potential benefits are only available at a price. The treaty may impose some limitations on present Soviet naval activity or on Soviet ability to intervene in the region.

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2 See Bull, Hedley, 'The Indian Ocean as a "Zone of Peace"', paper presented for the National Seminar on the Indian Ocean, J. Nehru University, February 1974 for further elaboration.
This however is essentially a technical matter, capable of being avoided or skirted by a competent negotiator, and does not account for Soviet reluctance to enter into even preliminary discussions. Perhaps a more important concern is the fact that such negotiations would, as an end result, confer legitimacy on such U.S. naval presence as was agreed to under the treaty. Moreover an agreement arrived at by the Great Powers, and formally acknowledging Soviet-United States rights to a defined presence in the region would smack of that Great Power collusion and struggle for hegemony about which the Chinese have warned.¹

If one considers the economic, diplomatic and strategic benefits and losses to each side occasioned by mutual restraint it appears that both may see they have common interests in a low level presence. The mutual understanding may result not in a treaty but rather in a continuation of the situation as it has evolved over the last six years. That is the super powers will continue to deploy to the Indian Ocean in small numbers under normal conditions, but retain the option to intervene in larger numbers should circumstances warrant it.

¹ e.g. Report of Hsinhua article in The Australian, 21 December 1974.
CHAPTER X

CONCLUSION

The brief survey of Soviet naval deployments indicates a generally defensive posture in that a major concern has been to gain operational experience in waters of potential significance in any future war between the super powers. The timing of the initial establishment of deployments, their order, the type of combatants involved and the activities of Soviet vessels indicate that besides gaining broad area familiarization the Soviet Navy has kept the attack carrier task forces under close observation.

The Indian Ocean case, which can be seen as part of this pattern, indicates some of the severe limitations under which Soviet naval forces operate on distant deployment. Such deployments were undertaken prior to the provision of an adequate auxiliary fleet and necessitated an attempt to establish a reasonably secure naval facility in the region. The observed idleness of vessels on deployment is a further indication of weakness in the Soviet Navy. Were the Soviet presence to increase this could only be done by diverting vessels from other operations. Given the major problems of block obsolescence facing the Soviet Navy, the apparent short fall in almost all classes of vessels engaged in other operations, and the fact that the naval presence as presently constituted appears to be fulfilling Soviet requirements and within Soviet means it seems reasonable to suggest that any sustained dramatic build up in the Soviet presence will be a reaction to moves made by the United States.


**APENDIX I**  
**SOVIET NAVAL DEPLOYMENTS IN THE INDIAN OCEAN**  
**MARCH 1976 - DECEMBER 1977**

### SURFACE SHIPS

<table>
<thead>
<tr>
<th>Class</th>
<th>Country</th>
<th>Deployment</th>
<th>Ports Visited</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-58</td>
<td>Russia</td>
<td>March 1976</td>
<td>Mombassa</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Colombo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Karachi</td>
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<td></td>
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<td>Mysore</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>Aden</td>
</tr>
<tr>
<td></td>
<td></td>
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### SUBMARINES AND TENDER

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<th>Class</th>
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<td>B-58</td>
<td>Russia</td>
<td>Sub</td>
<td>11-20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sub</td>
<td>21-25</td>
</tr>
</tbody>
</table>

**Note:** Where there is no encompassing bracket, the location of the port name indicates the month of the port visit, the dates (when known) being shown in parenthesis.
### APPENDIX II: SOVIET INDIAN OCEAN PRESENCE

In the Indian Ocean, the Soviet Union has no naval bases; the ships in positions there are drawn from the Pacific and Atlantic Fleets. Deployments from October 1971 to March 1973 were:

<table>
<thead>
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<th>Type/Class</th>
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<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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<th>Oct</th>
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<tr>
<td><strong>Cruiser</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(i) Kynda</td>
<td>1</td>
<td>1</td>
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### APPENDIX II (Continued)

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Mr. Barnard provided the following information on 31 May 1973: -

In addition, some five minesweepers, five salvage ships and one oiler have been engaged in port clearance operations in Bangladesh since April 1972.

On 22 October 1973 he added the following: -

These numbers do not include the naval salvage and minesweeping force which, since April 1972, has worked in the port of Chittagong in Bangladesh. This force, which reached its peak in October 1972, at present comprises 1 oiler, 2 minesweepers and 5 salvage vessels.

(2) Soviet naval ships had access to commercial facilities in ports of a number of countries in and around the Indian Ocean. In recent years Soviet naval vessels have visited Egypt (Red Sea ports), Ethiopia, India, Iran, Iraq, Malagasy, Singapore, Somalia, Sri Lanka, Tanzania and the Yemen Arab Republic.

(3) Up to the present time the Soviet Union has sought to develop relationships with those countries in and around the Indian Ocean which allow it, on request, to use their port and airfield facilities for the repair and resupply required to supplement its afloat support. There are reports of a Soviet communications station having been established in Somalia.
### APPENDIX II (continued)

**SOVIET INDIAN OCEAN PRESENCE**

Source: Hansard, Australian (Federal) Parliament, 5 December 1974

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(2) The total number of ship days spent by Soviet naval vessels in the Indian Ocean throughout the period was:

- **Surface combatants**: 9,067
- **Submarines**: 836
- **Landing Ships**: 388
- **Auxiliaries**: 2,856
- **Minesweeping group, Bangladesh and Red Sea**: 3,588

**TOTAL**: 10,775
The total figures for Soviet Naval Ships visiting the Indian Ocean since 1968 are as follows:

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From 1 August 1973 until 18 December 1974 the following Soviet naval ships visited the Indian Ocean. The figures represent totals only.

- **Cruisers (including 1 helicopter cruiser)**: 4
- **Destroyers**: 8
- **Submarines** - Diesel powered: 4, Nuclear powered: 3
- **Minesweepers**: 4
- **Landing Ships**: 2
- **Auxiliaries**: 29
- **Miscellaneous vessels employed in minesweeping operations in Bangladesh and the Red Sea**: 20
## MONTHLY TOTAL OF SHIP DAYS FOR SOVIET VESSELS IN THE INDIAN OCEAN

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<td>31</td>
<td>30</td>
<td>31</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td><strong>Auxiliaries</strong></td>
<td>113</td>
<td>129</td>
<td>159</td>
<td>182</td>
<td>230</td>
<td>168</td>
<td>149</td>
<td>140</td>
<td>136</td>
<td>152</td>
<td>221</td>
<td>236</td>
<td>185</td>
<td>250</td>
<td>346</td>
<td>100</td>
</tr>
<tr>
<td><strong>Minesweeping group, Bangladesh and Red Sea</strong></td>
<td>248</td>
<td>240</td>
<td>248</td>
<td>240</td>
<td>232</td>
<td>248</td>
<td>224</td>
<td>236</td>
<td>180</td>
<td>154</td>
<td>108</td>
<td>310</td>
<td>399</td>
<td>341</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>578</td>
<td>579</td>
<td>624</td>
<td>670</td>
<td>834</td>
<td>788</td>
<td>682</td>
<td>663</td>
<td>557</td>
<td>649</td>
<td>569</td>
<td>627</td>
<td>692</td>
<td>897</td>
<td>950</td>
<td>406</td>
</tr>
</tbody>
</table>

Source: **CPD, House of Representatives, 5 December 1974, p.4728.**
APPENDIX III

Ship Days in the Indian Ocean: Soviet Navy

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Warships</td>
<td>1,370</td>
<td>1,190</td>
<td>3,220</td>
<td>3,160</td>
</tr>
<tr>
<td>Amphibious</td>
<td>300</td>
<td>290</td>
<td>270</td>
<td>320</td>
</tr>
<tr>
<td>Support</td>
<td>3,260</td>
<td>2,490</td>
<td>5,350</td>
<td>5,520</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4,930</td>
<td>3,970</td>
<td>8,840</td>
<td>9,000</td>
</tr>
</tbody>
</table>

Warships excluding Bangladesh minesweepers: 1,460 1,825

Notes:
1. Ship Days: the sum of the number of days each ship spends in the Indian Ocean.
2. Included in the category 'warships' are minesweepers present in the Indian Ocean but not engaged in the Bangladesh operation.

As a basis of comparison:

Ship Days in the Indian Ocean: US Navy*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Warships</td>
<td>782</td>
<td>675</td>
<td>967</td>
<td>1,392</td>
</tr>
<tr>
<td>Amphibious</td>
<td>- 183</td>
<td>23</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>374</td>
<td>479</td>
<td>447</td>
<td>744</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,246</td>
<td>1,337</td>
<td>1,437</td>
<td>2,154</td>
</tr>
</tbody>
</table>

Sources:
1. Unclassified US Department of Defense material, provided by USIS, April 1974.
'The Indian Ocean: A New Naval Arms Race?'
Christian Science Monitor, 13 December 1973, estimated that there were 20 Soviet naval vessels in the Indian Ocean, of which half were auxiliaries.

* The US Navy does not send minesweepers to the Indian Ocean.
APPENDIX IV

INDIAN OCEAN PORT CALLS: COMBATANTS AND AUXILIARIES ONLY

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Soviet Navy</td>
<td>11</td>
<td>18</td>
<td>18</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>US Navy</td>
<td>152</td>
<td>135</td>
<td>177</td>
<td>161</td>
<td>184</td>
</tr>
</tbody>
</table>

Source: Unclassified US Department of Defense material provided by USIS, April 1974.

During the period August 1973 to November 1974 Soviet naval vessels are known to have conducted port visits in Indian Ocean littoral countries as follows:

- Bombay (India) .... 1 (2 ships)
- Madras (India) ..... 1 (3 ships)
- Chittagong (Bangladesh) .... 2 (1 ship)
- Colombo (Sri Lanka) ..... 5 (6 ships)
- Massawa (Ethiopia) ..... 1 (1 ship)
- Mombassa (Kenya) ..... 1 (3 ships)
- Port Louis (Mauritius) ..... 7 (12 ships)
- Singapore ..... 15 (14 ships)

Soviet naval vessels visited other ports in the north-western Indian Ocean, including Iraq, Somalia, and the People's Democratic Republic of Yeman, and Egyptian Red Sea ports, but details of those visits are not available.

APPENDIX IV (Continued)

FIGURE 2: UNITED STATES AND SOVIET PORT CALLS IN THE INDIAN OCEAN

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>14</td>
<td>0</td>
<td>13</td>
<td>1</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>India</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>2</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Iran</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Iraq</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Kenya</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Malagasy Republic</td>
<td>6</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Maldives</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mauritius</td>
<td>18</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Pakistan</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Seychelles Islands</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Somalia</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>South Yemen</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sudan</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>UAR (Port Suez)</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Yemen</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>71</strong></td>
<td><strong>42</strong></td>
<td><strong>71</strong></td>
<td><strong>68</strong></td>
<td><strong>65</strong></td>
<td><strong>97</strong></td>
</tr>
</tbody>
</table>

1 Bangladesh is omitted since activities at Chittagong are not considered normal port calls.
2 The large increase in Soviet visits to Somalia in 1973 reflects the use of Berbera for naval support.

Note: Port calls by oceanographic research and space event support ships are included. This explains the discrepancies between these and other figures provided which only indicate combatants and their auxiliaries.

McConnell and Kelly's study of naval diplomacy during the Indo-Pakistan War of December 1971 lists the following Soviet vessels as being deployed:

**MAJOR SOVIET COMBATANTS DEPLOYED INDO-PAKISTAN WAR**

<table>
<thead>
<tr>
<th>Deployment as of</th>
<th>Vessel</th>
<th>Arrival in Ocean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 December 1971 (Prior to War)</td>
<td>Kotlin destroyer</td>
<td>29 June</td>
</tr>
<tr>
<td></td>
<td>T-58 minesweeper</td>
<td>30 June</td>
</tr>
<tr>
<td></td>
<td>F class submarine</td>
<td>Late November</td>
</tr>
<tr>
<td></td>
<td>Alligator tank</td>
<td></td>
</tr>
<tr>
<td></td>
<td>landing ship</td>
<td>mid November</td>
</tr>
<tr>
<td>5 December 1971</td>
<td>Kotlin SAM destroyer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T-58 minesweeper</td>
<td></td>
</tr>
<tr>
<td>18 December 1971</td>
<td>Kynda missile cruiser</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(8 SSM launchers,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 SAM launchers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kashin destroyer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4 SAM launchers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J Class submarine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4 SSM launchers)</td>
<td></td>
</tr>
<tr>
<td>Late December - early January 1972</td>
<td>Kresta I missile cruiser</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4 SSM launchers,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 SAM launchers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kashin SAM destroyer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F class submarine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSM submarine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(If a J class,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 SSM launchers;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>if EI,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 SSM launchers;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>if EII,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 SSM launchers).</td>
<td></td>
</tr>
</tbody>
</table>

CHAPTER XI

INTRODUCTION

Gorshkov's series "Navies in War and Peace" is an unprecedented event. Its authorship alone is sufficient to capture attention but it is, moreover, the first detailed Soviet analysis of the role of navies to have appeared in an open source.

The following discussion asks a series of questions: Why and for whom was the series written? What has Gorshkov to say on the importance of the Navy in relation to other branches of the armed services? What is the role of sea power in war and peace? How does Gorshkov as Commander-in-Chief of the Navy view arms limitation? The answers to these questions, although interesting in their own right, provide useful information on Gorshkov's attitude to those broader issues with which we have been concerned in this present study: the implications for the Soviet Navy of the major changes in the naval environment since World War II, the significance afforded the navy in Soviet strategic doctrine, the navy's development and capabilities to meet the demands of the changed environment and the political leadership's responsiveness to the needs of the navy.

Besides noting what Gorshkov has to say it is important to note the stylistic devices which he uses. It is shown that Gorshkov is arguing, educating, attempting to convince his readership of the soundness of his overall view that a super power must have a strong navy, that possession of a strong navy can confer great advantages to a state in war and peace and, most significantly, that a strong navy requires a firm and continuing policy commitment from the political leadership if it is to be created and maintained. Only if such a commitment is forthcoming will the navy be able to play its unique role in ensuring a continued super power status for the Soviet Union, and such a commitment can only come from a deep seated appreciation of the role and importance of the navy as an arm of policy in war and peace.
CHAPTER XI

An Analysis of 'Navies in War and Peace'

by Admiral S.G. Gorshkov

General Comments on the Series

The series of articles 'Navies in War and Peace' which appeared under the name of the Commander-in-Chief of the Soviet Navy were published in the monthly naval journal Morskoy Sbornik from February 1972 - February 1973. By its very size and the attribution of its authorship, it is an unprecedented series. Its subject matter, in the main a selective historical account of the role of navies in war and peace, marks a departure in Soviet naval writings for it is the first detailed Soviet analysis of the role of navies in peacetime to have appeared in an open source.

The unprecedented nature of the series poses the question: why was it written? Previous analysts of the

1 The series has been translated in the U.S. Navy's Selected Translations from Morskoy Sbornik. I have used this translation for all articles except the last, i.e. that of February 1973. Here I have used the JPRS translation which appeared in the series Translations of USSR Military Affairs No. 905.

All citations of the series in the text will take the following form - M.S./month of Morskoy Sbornik in which the article first appeared/year/page number of translation. This will combine sufficient accuracy, for those wishing to follow up footnotes, with brevity.

Further translations of the series as a whole can be found in USNIP from January 1974 - November 1974, and the United States Naval Institute has published the articles under the title Red Star Rising at Sea (Annapolis, 1974).

2 Gorshkov's own statement of intent occurs early in the first article. 'We do not intend to cover the history of the naval art, much less define the prospects for the development of naval forces. We intend only to express a few thoughts about the role and place of navies in various historical eras and at different stages in the development of military equipment and of the military art, in order, on this basis, to determine the trends and principles of the change in the role and position of navies in wars, and also in their employment in peacetime as an instrument of state policy'. M.S./2/1973/p.11.
series have divided into those who claim that Gorshkov is announcing a series of new departures in Soviet military doctrine and naval missions and subsequently advocating an increase in resource allocation to the Navy, and those who see Gorshkov as advocating not only an increase in resource allocation to the Navy, but also the elimination of constraints on its operations, by educating and persuading the relevant publics: the Navy, the remainder of the Armed Forces and the political leadership.

Without becoming enmeshed in this debate it can be pointed out that if Gorshkov is announcing, as opposed to advocating, then he hardly needs to do so by way of eleven articles covering events from 'ancient times' to the present. If he is announcing something, it is a wonder that this announcement is not clear for all to see. (If Western analysts cannot agree on whether he is announcing, how much more difficult the task of the serving officers of the Soviet Armed Forces, who not only have to pick that there is an announcement but then delve through the material to divine what in fact is being announced.)

Following the 23rd Congress of the CPSU in 1966, Gorshkov claimed:

Unified views with respect to the tasks the fleet will have in modern war, as well as with respect to the methods for conducting naval operations, have been developed, and have been based on the general axiomatic provisions of Soviet military doctrine.

---


As we have seen, Gorshkov indicated that the fleet was to be balanced, comprised of submarines, naval aviation and surface ships, capable of offensive operations in nuclear and non-nuclear war and of protecting the State interests of the Soviet Union in time of peace.1

Gorshkov's recent series begins with an editorial observation.

In the opinion of the editorial board these articles will foster the development in our officers of a unity of views on the role of navies under various historical conditions.2

While not denying that despite the claims of May 1966 Gorshkov may still need to foster a unity of views within his own service the current series makes it evident that he is setting himself a wider audience than his subordinate naval officers.

After observing:

the experience of history attests to the fact that each branch of the armed forces makes its own certain and always discernible contribution to victory. To achieve victory the presence of all branches of armed forces properly organised, equipped and trained is essential …

Under today's conditions … it (victory) is a matter of harmonious combined developments and rational balancing of all branches of the armed forces, and it is precisely because of this that the principle of concerted action of all branches of the armed forces is the basis of the Soviet military doctrine. Only by co-ordinating efforts can they achieve victory.3

Gorshkov continues:

An analysis of the employment of various branches of armed forces in time of war


2 M.S./2/1972/p.7.

3 ibid., p.10-11.
or in peacetime is of definite interest from the point of view of both the development of the military art and the knowledge by the command personnel of specific features with which each of the branches of the armed forces is imbued.

... such an understanding fosters the development of a unity of operational views in the command personnel of the armed forces and is the immediate and most important condition for skill in acting in concert.¹

Clearly then he wants to be read by, and to persuade, the command personnel of the armed forces. Moreover, he wants to influence the leadership of the CPSU and in particular those concerned with foreign and defence policy. The history of the Russian and Soviet fleets are written in such a way as to stress the importance of relevant government policy decisions on the development of the Navy and the impact of these decisions, for good or ill, on the outcome of subsequent wars or foreign policy initiatives of the regime.

Although entering the modest disclaimer 'the focus of attention on the Fleet does not in any way imply any sort of unique importance of naval forces in modern armed combat'.² Gorshkov is at pains to point to the unique properties of the Navy as a branch of the Armed Forces. In time of war,

The hallmark of naval forces is their high degree of manoeuvrability, and ability to concentrate secretly to form powerful groupings which are of surprise to the enemy.

and in nuclear war, 'naval forces are more stable against the effects of nuclear weaponry'.³

Indeed,

Missile-carrying submarines, owing to their great survivability in comparison with land based launch installations, are an even more

¹ ibid., p.11.
² ibid., p.11.
³ ibid., p.7.
effective means of deterrence. They represent a constant threat to an aggressor who, by comprehending the inevitability of nuclear retaliation from the oceans, can be faced with the necessity of renouncing the unleashing of nuclear war.¹

Hence the navies have been 'catapulted into the front ranks of the diverse modern means of armed combat'.²

In peacetime states continue to use the Armed Forces 'as the instrument or weapon of their policies'³ but here too the Navy possesses 'special features'. Not only can it 'be used in peacetime for purposes of demonstrating the economic and military might of states beyond their borders', but it remains 'the solitary form of armed forces capable of protecting the interests of a country overseas'.⁴

The development of the Navy as a branch of the Armed Forces depends on 'a nation's economic capabilities and political orientation'.⁵ It is this political orientation and the need for policy decisions to be made which is of basic concern to Gorshkov, for only if the Navy is adequately funded can it realise its potential in war and peace.

Gorshkov's writing of the series at this particular time was undoubtedly a response to a variety of factors. Two which will be commented on here, for they affect that which follows, are his concern about the relative strengths of the Soviet Navy and the U.S. Navy in the foreseeable future, and his concern over detente and the budgetary implications of detente for Soviet naval construction.

The Soviet Navy now faces a significant problem of block obsolescence. The naval units of the immediate post-war construction programmes are now at least 20 years old.

---
¹ M.S./2/1973/p.20.
² M.S./2/1972/p.7.
³ ibid., p.8.
⁴ ibid., p.11.
⁵ ibid., p.8.
and must be due for retirement soon.\(^1\)

Moreover as we have seen the more recent Soviet naval vessels appear to suffer from a number of defects, which may prohibit them from operating effectively in a hostile environment.\(^2\) Of equal concern is the fact that there appear to be considerable numerical short falls in certain types of units which must play a significant role in any future conflict with a major naval power. These include SSNs, ocean going surface units, support vessels and sea based aviation, while Soviet ground based naval aviation requires protection when operating at a great distance from base.

At the same time Soviet writings on American naval programmes\(^3\) indicate an awareness that the United States is undertaking a major naval construction programme which will see a significant increase in the size of the U.S. Navy relative to the Soviet Navy. It is also well known in Soviet circles that since FY.1971/2 the U.S. Navy has attracted the

---

1 See the concluding section of Chapter VIII above.

2 Gorshkov, of course, is in no position to highlight these defects but there are a variety of statements throughout the series which suggest that he is dissatisfied with some major aspects of his fleet. We are told that a modern fleet must be based on -
   a) scientific predictions of the development of science and technology.
   b) the probable conditions of combat employment of naval forces which must include the capabilities of the likely enemy forces, and
   c) the realisation that the construction of a ship takes years.
See M.S./5/1972/16-17, M.S./8/1972/5, M.S./8/1972/8, and for Lenin's views used to confirm these thoughts M.S./6/1972/4-5. Moreover only the navy and its various experts can hope to be fully conversant with the vast array of data and analysis subsumed under points a) and b). Gorshkov then is telling the political leadership that if they want a modern fleet they must acknowledge the areas of naval expertise and be prepared to build to naval recommendations rather than intervening and thereby disrupting the product of scientific and technical analysis.

largest slice of the U.S. Defence Budget.¹

Gorshkov's concern about détente is due to a number of factors. He may not have approved the welcome afforded President Nixon in Moscow in 1972, which occurred after the mining of the North Vietnamese ports, especially if his first reaction was to attempt to clear the mines.² Such bonhomie at the summit contrasts with Gorshkov's claim that

Like a red thread the idea runs through all Lenin's directives, letters and orders concerning the need for firmness and purposefulness in carrying out intended plans, and the falseness of any kind of wavering and indecisiveness at the crucial moments of the struggle.³

Moreover the only restraint on the U.S. imperialists in their bid for world supremacy is the growth in might of the U.S.S.R. which not only secures the socialist bloc but is also a force in favour of revolutionary progress and overall peace.⁴ This militarist conception of world politics, based solely on armed might, is reinforced by Gorshkov's view that foreign policy negotiations always result in an outcome favourable to the militarily most powerful of the negotiating sides.

Gorshkov would obviously regard it as a disaster if the politician's pursuit of détente resulted in the rejection of future naval construction programmes or limitations on deployment which may be forced on the grounds that such cut backs were essential as a gesture in favour of détente or that détente made such cut backs possible. There is no indication in the series that Gorshkov agrees with Teplinsky's assessment that there can be 'a real escape' from the arms race 'by other, peaceful means, in accordance with the spirit of the Moscow Agreements' or that 'universal peace and ...

¹ ibid. p. 77.
² Dornberg, J., Brezhnev, p. 265.
³ M.S./6/1972/6.
⁴ M.S./12/1972/3.
delivering mankind from the threat of a new world war' can be achieved by following Brezhnev's call of June 1971 to seek a degree of restraint among the naval powers in their policy of forward deployment of naval forces.¹

A review of the series concentrating on those aspects of Soviet naval development which have been underlying themes in the preceding pages: the weight to be afforded the Armed Forces including the Navy in the distribution of scarce resources, the status of the Navy vis-a-vis other branches of the Armed Forces, the role of the Navy in war and peace and the question of size and composition of the fleet, establishes the preferred future of Soviet naval development as envisaged by Gorshkov in 1972-3. However, the argumentative style of the series suggests that much of Gorshkov's preferred future for the Navy is not shared by significant others.

The Status of the Soviet Navy within the Armed Forces

The Soviet Navy and its Russian predecessor has been, and still is, the junior service within the Soviet defence establishment. The Ministry of Defence is dominated by Army officers: the Navy has but one member on the Supreme Military Council: the Navy still occupies its traditional place at the end of the listings of services in all official speeches and publications.² Other indications of this junior service status are the titles in the 'Officers' Library' series announced in 1965, which contains not a single volume on the Navy,³ and the fact that the Naval Academy is only one of 15 arms-of-service academies at the command and staff

¹ Teplinsky, op.cit., p.80.
³ For a recent example of a listing of armed forces see General Sokolov, statement on Armed Forces Day 1973, BBC, SWB, SU/4230/C/4, 26 February 1973.

level.  
The fact that this junior service status has had implications for decisions on funding new vessels and has even resulted in scarce construction yards being diverted from military to mercantile use has been indicated previously.

In post-1965 statements on the Armed Forces, the Navy's SLBMs have been listed after the missiles of the Strategic Rocket Troops as 'our primary means of deterring an aggressor and a reliable shield protecting the world socialist system'. SLBMs are placed second to the land-based ICBMs in all but naval writings and quite pointedly the non-SLBM components of the Navy are listed after Ground Forces, Air Defence Forces, and Air Force. The view of the military establishment is clearly indicated in all three editions of Military Strategy, which states that despite the fact that military operations in naval theatres will be conducted on a large scale 'these operations can hardly have a decisive effect on the outcome of the war'.

Gorshkov's opening paragraphs are designed to shake these prevailing attitudes. Not only has the revolution in military affairs meant an 'incredible increase' in the capabilities for conducting naval combat operations but navies have been 'catapulted ... into the front ranks of the

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1 Scott, H.F., Soviet Military Doctrine: its formulation and dissemination, (Stanford Research Institute, June 1971) p.120-124.
5 M.S./2/1972/p.7.
diverse modern means of armed combat'.\(^1\) The manoeuvrability and ability to concentrate secretly and surprise the enemy, 'the hallmark of naval forces' not only has advantages of flexibility but it also renders them 'more stable against the effects of nuclear weaponry than land forces'.\(^2\)

A variety of factors, technical discoveries, the prevailing social and political system of the state, the geographical position of the state and its adversaries have 'a certain effect on the character and structure of the armed forces'.\(^3\) This character and structure are subject to change so that 'in some stages of the history of states ground forces have played the main role, and in others, the Navy'.\(^4\)

It seems apparent that Gorshkov accepts the present era as one in which navies should be afforded greater importance. If his reasoning is accepted the 'technical transformations' (the introduction of SLBMs upon nuclear powered submarines, the introduction of missile armament, and the increased vulnerability of land-based ICBM systems) and 'the enemy being opposed' (the trans-oceanic United States of America) are factors which, having changed in the recent past, require a change in the role and importance of the Navy. Moreover, if

- the results of the victory in a campaign or war can only be secured by ground forces capable of proving the reality of it by their actual presence\(^5\)

then a Navy will be required sufficient to ensure the safe transport of ground troops to a trans-oceanic land mass, such as America, in a situation where enemy submarines at least may still be operating.

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1 ibid.
2 ibid.
3 ibid.
4 ibid.
5 ibid. See also Sokolovsky, *Military Strategy*, H.F.S. trans. p.17, for the requirement to 'occupy enemy territory'.
Gorshkov draws attention to the development of fleets through history from slave galleys to nuclear propulsion. He makes the claim:

These stages of development of the fleet were not just stages in the technical improvement of warships: at the same time as the material technical base was changing, changes were also taking place in its place within the system of armed forces, in its basic mission, and in its role in the policy of the state in peacetime and in military operations at sea.

The implication seems obvious: the latest, and perhaps most significant, of these technological changes, the introduction of nuclear power to ballistic missile firing submarines and the arming of fleet units with missiles, ought to change the place and role of the Navy in the Soviet Armed Forces.

In the opening pages of the second of the articles Russia's Difficult Road to the Sea, Gorshkov attempts to explain the Navy's historic junior status. In part it was due to a lack of understanding fostered by a "centuries-old propaganda conducted by states that were inimical to Russia": a propaganda campaign which often found supporters among influential Tsarist high officials who held the view that the country did not need a powerful fleet and that expenditures for its construction and for maintaining it at the required state of readiness should be cut in every possible way.

Gorshkov indicates that the centuries-old propaganda campaign is still being wages by imperialists who assert:

That which the Soviet Union needs in way of military preparations differs from what we need. The USSR is a land power... While we are primarily a sea power and our needs are therefore different.

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1 M.S./2/1972/19.
3 ibid., p.9. The quotation is from Nixon and the Washington Post, 5 August 1970 is cited.
Proponents of the view that at best Russia only needed a coastal fleet are described as Tsarist satraps characterised by 'narrowness of thinking' and 'intellectual limitations'.\(^1\)

By implication present adherents to this view are to be tarred with the same brush.

Although Gorshkov is at pains to stress the need for a broad re-thinking of the role and missions of the Navy within the Armed Services as a whole it is by no means an easy task to discern at whose expense this re-evaluation should be made. The cost to the other services at times appears to be one of relative status alone. Rather than implying that other expenditures should be cut to divert more resources to the Navy, Gorshkov appears to argue for an increase in total defence expenditure with the Navy attracting the lion's share of the additional funds. Gorshkov may therefore find himself in an uneasy alliance with other branches of the armed forces, especially the ground forces. Both may unite on the need for additional defence expenditure based on the possibility of a protracted or conventional war requiring the use of general purpose as opposed to strategic force. Thereafter interests will diverge as each seeks to promote their own claims for the additional funds.

Gorshkov does attempt to reassure his non-naval readers that

\[ \text{the focus of attention on the fleet does not in any way imply any sort of unique importance of naval forces in modern armed combat.}^{2} \]

and his view that victory requires the presence of armed forces in occupation of enemy territory acknowledges the continued importance of the army in the nuclear age. Gorshkov, as we have seen, argues that the place and role of the branches of the armed forces do change through time. However, he also claims the history shows that 'each branch of the armed

\(^1\) ibid., p.10.
\(^2\) M.S./2/1972/11.
forces makes its own certain and always discernible contribution to victory. Moreover, he never suggests that the Soviet Union should, as others had done in the past, formulate its military strategy primarily on the basis of sea power.

The Peacetime Tasks of the Soviet Navy

Gorshkov demonstrates to his readers the importance of a strong navy, as a vital component of the Soviet deterrent forces, as a tool to be used in the pursuit of foreign policy objectives, and hence as a vitally necessary resource for any state which seeks the status of a great power. It is apparent that he is attempting to educate his readers - showing them in particular the foreign policy benefits which can accrue to a great naval power - in an attempt to persuade the political leadership that additional expenditure on the navy is justified. Moreover he seems to be calling for a more aggressive use of the Soviet Navy in peacetime. He wants it used consciously as a deliberate tool of foreign policy. In addition he also sees a role for the Navy in commerce protection, and an emerging role in protecting Soviet sea bed interests as they develop in the future.

Underlying Gorshkov's argument is the real-politik assertion that in the age of feudalism and capitalism all problems of foreign policy were always solved on the basis of and taking into account the military might of the 'negotiating' sides, and that the potential military might of one state or another, built up in accordance with its economic capabilities and political orientation, permitted it to conduct a policy advantageous to itself to the detriment of other states not possessing a corresponding military power.

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1 ibid., p.10.
2 M.S./2/1972/13. Holland, Spain, England, France, Japan and the U.S.A. are all cited as states which at some time or another have based their strategy on sea power.
This point is used to justify his important addition to Lenin's dictum:

Policy is the reason, while war is only a weapon, and not the opposite. Consequently it only remains to subordinate the military point of view to the political. (Lenin)

Viz: The basic and solitary means of waging armed conflict between states has always been the Army and Navy, which in peacetime continue to serve as the instruments or weapons of their policies.¹

It is important to note that the determinants of the military might of a state are its economic capabilities and its political orientation. Given that Gorshkov is in no doubt as to the present economic capabilities of the Soviet Union to sustain a large navy it seems clear that the variable of most concern to him is the political orientation, and in particular the specific policies of the state.²

While Gorshkov's initial point, that the armed forces can serve as an instrument of foreign policy, is generally applicable to all branches of military service, he suggests that the Navy is unique in that it possesses special features ... as a military force which can be used in peacetime for purposes of demonstrating the economic and military might of states beyond their borders and has been over a period of many centuries the solitary


² This is a theme of the series. It is strongly stated in the conclusion of the series, M.S./2/1973/25.
form of armed forces capable of protecting the interests of a country overseas.\textsuperscript{1}

Moreover Gorshkov notes that whereas other branches of the armed forces can mount impressive displays of military might, (exercises, displays and weapons testing), which might intimidate others by suggesting a 'potential threat'

warships of the imperialist powers which appear directly off of foreign shores represent a real threat of immediate operations ... The capability of navies to suddenly appear close to the shores of different countries and immediately proceed to carry out their assigned missions has been used for ages by various aggressive states as an important weapon of diplomacy and policy in peacetime, which in many cases has permitted the achievement of political goals without resorting to military operations by only threatening to initiate them.\textsuperscript{2}

He confesses that the intention of the series is in part to examine questions related to this specific feature of naval forces as a real component part of the military organisation of a state.\textsuperscript{3}

Clearly Gorshkov is going far beyond the previously current vague references to the role of the Soviet Navy in protecting 'state interests at sea'. Here he states an intention to link the role of the navy explicitly with the state’s prosecution of foreign policy objectives, as part and parcel of the overall military organisation of the state. The conclusion to be drawn is obvious: this role must be recognised and the navy's importance to the overall military organisation of the state should be acknowledged by additional funding and by the deliberate use of the navy to achieve foreign policy goals.

Undoubtedly the most important peacetime task of the Soviet Navy is its role as 'a formidable force for the

\begin{enumerate}
  \item M.S./2/1972/11.
  \item M.S./12/1972/5-6.
  \item M.S./2/1972/11 emphasis added.
\end{enumerate}
deterrence of aggression' which, if war should break out, is able to act as

a powerful instrument of defence in the oceanic areas ... constantly ready to deliver punishing retaliatory blows and to disrupt the plans of the imperialists. 1

As we have seen the ability to defend the Soviet Union from sea based nuclear attack launched by either C.V.A. task forces or SSBNs is overrated. None the less, there is an element of truth in Gorshkov's assertion that those who counted on

speeding up the development of their own naval forces and the creation of new problems which are difficult to resolve for the defence of the Soviet Union, have themselves been faced with even more complex problems with the strengthening of our Navy on the oceans. 2

Yet it is difficult to credit Gorshkov's assertion that the problem of countering the Soviet Navy's SSBNs is 'even more complex' than that which faces the Soviet Union. 3

In the Mediterranean Sea the Soviet Navy is 'ensuring the security of ...(our) own country' 4 and operating in such a way that it can 'nip aggression in the very bud'. 5 It also 'prevents the disturbance of the peaceful atmosphere in this region and plays a deterrent role'. 6 Specifically the Soviet naval presence is seen as countering the U.S. policy of 'supporting aggressors in their actions against freedom-loving peoples', 7 in which the main tool of support has been

1 M.S./12/1972/p.15, see also M.S./2/1973/p.16.
2 M.S./12/1972/p.15.
3 This assertion is more sustainable given the introduction of the D class SSBN with its 4000+ nautical mile missiles.
5 ibid., p.23.
6 ibid., p.24.
7 ibid., p.24.
the Sixth Fleet.

And if our enemies more and more often look at the Soviet Union and see it as a hindrance to their adventures, this means that it is carrying out the mission assigned to it.\(^1\)

The role of the present Soviet naval force in the Mediterranean as a 'decisive opposition to the threats to the security of peace loving peoples' is greatly exaggerated by Gorshkov. No doubt the presence of Soviet naval vessels in the Mediterranean prior to the October 1973 Middle East war, and their subsequent reinforcement during the hostilities, entered the calculations of U.S. decision makers and provided headaches for the Sixth Fleet Commander and his officers. None the less, it remains a fact that the United States Sixth Fleet was able to provide a vital command and control link for the airborne replenishment of Israel, that the carriers of the Fleet acted as supply platforms for the fighters ferried to the Middle East from the United States, that the carrier borne aircraft were able to provide air superiority, and that by stationing itself off Crete, the American naval force presented an unmatched capability to land and support ground forces. Moreover this group, once on alert, possessed the anti-aircraft, anti-submarine and anti-surface ship capabilities to ward off any counter activity from the Soviet naval units in the vicinity.

Compared to the American force, based around three attack carriers, the Independence, Roosevelt and Kennedy, the Soviet naval forces were overwhelmed. As one commentator has observed

> With the ships and aircraft of the Sixth Fleet operating in Condition III readiness, the possibility of a successful surprise attack and quick victory had been so substantially reduced as to effectively blunt the presence of the Soviet ships.\(^2\)

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1 ibid., p.23.
2 Miller, F.C. (Lt. U.S. Navy), 'Those storm-beaten ships upon which the Arab armies never looked', USNIP (March 1975) p.24. Much of the material for the preceding paragraphs was also taken from this article.
Gorshkov is concerned to stress the positive impact of sea power as well as its deterrent and protective functions. History shows that states which do not have naval forces at their disposal have not been able to hold the status of a great power for a long time.¹

Not only can a state use a strong navy to deter the outbreak of hostilities, to repel and defeat an aggressor should deterrence fail, but the possession of this capability strengthens the independence of a state during peacetime,² and enables it to conduct an independent global foreign policy and protect its interests beyond its borders. During periods of decline of the Tsarist Fleet, Gorshkov asserts that Russia lost the position of a great power following an independent and sovereign policy, and became instead a supplier of cannon fodder to imperialist plunderers who were fighting for interests alien to the Russian people.³ Conversely, during periods of naval strength 'the Fleet was the most powerful weapon of Russia's foreign policy'.⁴

Gorshkov concludes his survey of naval events prior to World War I with the observation every time the ruling circles in Russia failed to properly emphasise development of the navy and its maintenance at a level necessitated by contemporary demands, the country either lost battles in wars, or its peacetime policy failed to achieve its designated objectives.⁵

¹ M.S./2/1972/p.12. This point is reaffirmed (with specific reference to Tsarist Russia M.S./3/1972/p.8. In the concluding article of the series it is stated that Russia and now the Soviet Union as a 'great continental world power' needs a strong navy as an indispensable part of its armed forces. M.S./2/1973/p.16 and 25.
² M.S./2/1972/p.12.
³ M.S./3/1972/p.11.
⁴ M.S./3/1972/p.20. Gorshkov claims that as a result of Russian Fleet activity in the Mediterranean Sea during the Napoleonic Wars, Italy, Sardinia and Tunisia were drawn into the Soviet sphere of influence.
The root cause of the demise in naval power was the inability of the ruling circles to understand the importance of the Navy in achieving its political objectives,¹ i.e. a failure to support the Navy with a policy based on an appreciation of its unique role in the armed forces as an instrument of foreign policy.

Navies are also described as 'the most important element' in cementing an alliance system.² Although this point is made in a direct reference to the role of the U.S. Navy in the NATO alliance there are two important implications which Gorshkov may want his readers to draw. Firstly, the European NATO allies' perceptions of growing Soviet naval power may serve to weaken the alliance system if it is believed in Europe that the Soviet Navy can effectively counter the U.S. Fleet. Secondly, the socialist camp, which the Soviet Union claims to lead, is no longer confined to the Eurasian land mass. Cuba, North Vietnam and Chile were all in 1972 parts of a potential socialist camp, necessitating a strong oceanic naval force to bind the elements into an effective alliance system.

Closely related to the idea of a navy strengthening a country's foreign policy is the belief that navies are important as 'political instruments to create definite prestige in the international arena and in mutual relations with other states'.³

Not only is a strong visible navy important in 'strengthening the international authority of the Soviet Union', ⁴ it also acts as a floating exposition of a nation's economic development.⁵ Unlike the other branches of the

¹ ibid.
² M.S./12/1972/13.
³ M.S./5/1972/p.15. See also M.S./2/1972/p.11-12. 'It is impossible not to note how man's ability to comprehend the ocean and to use it for his own needs directly affects the growth of the political prestige of the country ...'
⁴ M.S./12/1972/p.17.
⁵ M.S./12/1972/p.4. 'The navy is a graphic indicator of the level of development of a country's economy'.

the Navy possesses the capability to vividly
demonstrate the economic and military power
of a country beyond its borders in peacetime.¹

and port visits can demonstrate the culture, personal and
economic development of Soviet citizens. 'It is impossible
to overestimate the significance of this ideological
influence'.²

Given the significance Gorshkov attributes to the role
of navies in peacetime, it is not surprising that he regards
the present international regime of the oceans with its
stress on freedom of the seas as more or less satisfactory.
In particular he asserts the 'viability of a 12-mile limit
for the breadth of territorial waters',³ warns against the
dangers of setting up supra-national consortia to control
exploration and exploitation of the sea bed⁴ and advocates
that in narrow straits the littoral powers should establish
appropriate corridors for the transit of ships⁵. These are
views broadly supported by other major naval powers concerned
to uphold the right of untrammelled passage for their warships
and merchant fleets at least in part so that they can benefit
from the political/diplomatic use of their fleet.

Gorshkov may draw some comfort from the fact that
Marshal Grechko has offered support for his general theme,
i.e. that the armed forces are an important instrument in
the implementation of foreign policy.

The carrying out of the foreign policy
programmes of the CPSU as formulated by
the Congress will depend greatly on the
defence capability of the Soviet state
and the state of its Armed Forces.⁶

¹ ibid., p.5.
² ibid., p.16.
⁴ ibid., p.13.
⁵ ibid., p.14.
⁶ Grechko, Speech before the 24th CPSU Congress, 2 April 1971,
cited in U.S. Senate Committee Print, Committee on the
Judiciary: Subcommittee to Investigate the Administration
of the Internal Security Act and other Internal Security Laws:
Soviet Disarmament Propaganda and the Strange Case of Marshal
There is a vague reference to the Soviet Army and Navy as one of 'the most essential factors' for the 'liberation struggle of the peoples', but this is far short of the recognition of the unique features of the Navy as a tool of foreign policy which characterises the Gorshkov series.

In a more recent article Grechko describes the foreign policy of the Soviet Union as a policy opposed to the imperialists and the policies of counter-revolution and oppression 'in whatever distant region of our planet it may appear'. Grechko also supports 'wars of national liberation' but at the same time specifically rejects the 'export of revolution'. Finally Grechko claims 'the external function of the Soviet state and its armed forces ... have now been enriched with new content'.

Some observers have construed this as an implicit endorsement of Gorshkov's position, yet the evidence for this is by no means convincing, at least at this stage. Both Gorshkov and Grechko imply that Soviet foreign policy interests are now global and both recognise a connection between armed might and foreign policy. None the less Gorshkov appears to be far more enthusiastic about this new role. He not only details the naval role in foreign policy at length but also points out why the Navy is superior to the other branches of armed service in supporting a global as distinct from continental foreign policy. On the other hand it is possible to read Grechko's article as a mere propaganda declaration in its foreign policy passages coupled with a desire to have

1 ibid., p.57.
3 ibid., p.90.
4 ibid., p.91.
5 ibid., p.90.
6 e.g. Weinland, R.G., 'Navies in War and Peace', Content, Context and Significance' in Admiral Gorshkov on Navies in War and Peace, C.N.A., (C.R.C.257) September 1974, p.17.
Government defence expenditure increased. ¹

Whatever comfort Gorshkov might gain from Grechko's comments has to be set against other possible doubts which may have been raised inside the Soviet Union against any expansion in the use of naval power for foreign policy purposes. The recent record could be used to argue for a reduction in this use of the fleet on the grounds that it has not been of benefit to the Soviet Union, but rather has resulted in some humiliation or at least been counter productive. Again there may be supporters of detente who would agree with Brezhnev's stated view that one means of curtailing an expensive naval arms race would be to reduce the distant deployment of naval forces. This argument could be supported by those who want defence expenditure directed to their own arm of service or who fear, not without reason, that in any naval race the United States could only emerge with an enhanced capability.

The naval aspect of the 1973 October war, as it affected the two super powers, has already been broadly discussed. Certainly, there was little in this event which could enhance Gorshkov's claims for the Navy as a tool of Soviet foreign policy, nor that would support the view that the Soviet naval presence had restrained the United States once the latter had determined a course of action. In this respect, the October war provided another occasion for a series of rival naval deployments in which the United States was able to use its naval forces to achieve its foreign policy objectives despite the presence of Soviet warships. Soviet vessels are essential as a counter to the C.V.A.s and possibly the SSBs attached to the Mediterranean Sixth Fleet and are doubtless justified on this ground alone. They can and have been used to enhance Soviet foreign policy in the region in periods of sub-hostile tension. None the less during periods of regional conflict, the 1967 war, the Jordanian crisis, and October 1973, the overwhelming presence of the U.S. Sixth Fleet

¹ Grechko, 'The leading role of the CPSU...', p.97.
has been such as to clearly indicate the dominance of the U.S. naval presence.

The general thrust of Gorshkov's argument, that naval visits indicate support for friendly regimes and add to the 'international authority' of the Soviet Union, is undeniable. Yet to the extent that naval visits imply support and commitment to friendly regimes it may involve additional commitments, or provide the visited regime with opportunity to undertake actions, without consulting the USSR, from which the Soviet government may find it difficult to dissociate itself. Moreover, Soviet support for Egypt during the Arab-Israeli dispute, manifested most obviously in Soviet arms aid but underlined by naval visits and the frequent use of Egyptian port facilities by Soviet vessels, did not stop President Sadat from cooling his relations with the Soviet Union and ultimately expelling Soviet advisers, denying the use of aircraft facilities and running down the availability of port facilities to Soviet naval vessels.

More generally critics could point to the fact that the increase in size and activity of the Soviet Navy has been used by the United States Navy to strengthen its case for additional expenditures which has resulted in the U.S. Navy commanding the largest service appropriation of the defence budget. The increased Soviet naval activity in the Indian Ocean has been used to justify the establishment of a U.S. naval facility at Diego Garcia, capable of supporting a carrier task force in the region and possibly allowing for the future establishment of an SSBN tender in the Indian Ocean.

The War Time Role of the Soviet Navy

The military technical revolution is constantly introducing new things in all areas of military affairs, but the final goals of armed conflict at sea remain the same: the defeat of the enemy and the destruction of his vital

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1 As I have indicated in Chapter X, it is possible that events surrounding the Somali coup and the Kuwait-Iraqi border dispute may have been of this latter sort.
forces and materiel (i.e. his ships with
their crews and provisions, and weapons
or shore objectives located within possible
range).\(^1\)

To achieve these goals, Gorshkov insists that it is
necessary to employ naval forces offensively,\(^2\) and when
conditions are such as to warrant a defensive naval strategy,
then the tactics pursued must be offensive.\(^3\) Lenin is used
to support this stress on the offense, surprise and maintaining
the initiative achieved by launching the first salvo.\(^4\) An
essential prerequisite for the offensive is to achieve mass
superiority of force.\(^5\)

To operate offensively, naval forces must be capable of
undertaking assignments 'beyond the limits of our own
coastal waters',\(^6\) to which end it is essential to gain and
hold 'control of the sea'.

\[\text{i.e. to achieve superiority of forces over}
\text{the enemy in the main sector and to pin}
\text{him down in the secondary sectors at the}
\text{time of the operation ... i.e., to create}
\text{such a situation that the enemy will be}
\text{paralysed or constrained in his operations,}
\text{or weakened and thereby hampered from}
\text{interfering with our execution of a given}
\text{operation or in our execution of our own}
\text{operational mission.}\(^7\)

\(^1\) M.S./2/1972/8.
\(^2\) M.S./4/1972/12, where the 'essence' of naval combat activity
is held to be 'active operations at sea'.
\(^3\) See Gorshkov's discussion of the Black Sea Fleet in the
Crimean war, ibid., for the necessity to use the fleet
defensively and M.S./8/1972/p.11 for a discussion of Soviet
naval art in the pre-war years in which 'tactical plans
were carried out strictly by offensive methods', despite
the overall defensive strategy of the era.
\(^4\) M.S./6/1972/p.4-7, esp. p.6.
\(^5\) ibid., Gorshkov tells us that the Leninist strategy contains
the following important principles in achieving victory 'be
stronger than the enemy at the decisive moment, at the
decisive point'.
\(^6\) Not to do so would imply remaining in the fleet areas and
conducting essentially defensive operations.
\(^7\) M.S./8/1972/9. Although the discussion of control of the
sea is in the context of the pre-WWII debates on naval theory,
Gorshkov nowhere indicates that this pre-WWII conception
has since been subject to significant change.
The operations to be carried out by the fleet naturally vary according to the type of war envisaged. Without stretching Gorshkov's series too far it is possible to suggest that he envisages three distinct types of conflict situation, in which navies have a vital role: local wars, conventional wars or a post nuclear exchange continuation of hostilities, and the initial stages of nuclear war. He also emphasises the importance of navies in the outcome of peace negotiations which conclude a war.

a) Local Wars.

Gorshkov's discussion of local wars is relatively brief and confined to the operations of the 'imperialist' fleets. However, these local wars are discussed in an extremely revealing context in the final article of the series. After reiterating the importance of the peacetime role of the Navy in defending 'the interests of the Soviet state and the countries of the socialist community' Gorshkov continues

This latter point is particularly important because local wars, which imperialism is constantly waging, remain within the orbit of the policy of imperialism. Today these wars can be regarded as a special form of the manifestation of the "flexible response" strategy. In seizing individual areas of the globe and in interfering in the internal affairs of countries, the imperialists are striving to gain new advantageous strategic positions in the world arena which they need for the struggle with socialism and in order to facilitate carrying out missions in the struggle with the developing national freedom movement.

Can a navy, whose task is to defend the security of the socialist bloc, stand aloof from these local wars by which imperialism attempts to gain new advantageous strategic positions for the struggle against socialism? Given Gorshkov's Real-Politik cast of mind, his obvious approval of Lenin's injunction to avoid any kind of wavering and indecisiveness at

the crucial moments of the struggle\textsuperscript{1} and the context of this passage, it is obvious that he is dismayed by this manifestation of the 'flexible response' strategy not primarily because of its impact on movements for national independence and progress but because of the strategic implications it has for the Soviet Union. This point is affirmed by his anxiety that despite the SALT talks, new naval bases were being constructed in Greece and elsewhere in the Mediterranean and Indian Ocean.\textsuperscript{2}

It would seem as though Gorshkov is anxious that the Navy be allowed to undertake more vigorous counter activity in these situations. He maintains that one role of the naval presence in the Mediterranean is to maintain a peaceful atmosphere in the region\textsuperscript{3} and that the Soviet Army and Navy are the instruments of a policy of peace and friendship of peoples, a deterrent to military adventurists and a decisive opposition to the threat to the security of peace loving peoples on the part of imperialist powers.\textsuperscript{4}

But, what to do if the deterrence effect of their presence should fail? As has been indicated earlier the Soviet Fleet has in the main restricted its activities to a close observation of the naval units of the intervening power. What it has not done is offer any direct opposition to the superior naval forces of its imperialist rivals. Gorshkov may well be advocating that this role be changed, an advocacy which would necessarily imply an increase in the size of the Soviet fleet so that its presence could match that of interventionist powers.

Gorshkov could argue that the increase in Soviet naval units in a region of local war, to the extent necessary to offset the present superiority of naval rivals and any

\begin{itemize}
\item \textsuperscript{1} M.S./6/1972/6.
\item \textsuperscript{2} M.S./2/1973/18-19.
\item \textsuperscript{3} M.S./3/1972/24.
\item \textsuperscript{4} M.S./12/1972/15.
\end{itemize}
reinforcements they send, would result in a more effective deterrent to imperialist intervention. He does warn 'under certain circumstances, such actions (local wars) carry with them the threat of escalation into a world war', but does not state that this must necessarily be a nuclear war. Whether Gorshkov himself draws this distinction is difficult to say although at times he does use the phrase 'world-wide nuclear war'.

Whatever conclusion one draws on this point, the fact none the less remains that the present, frequently demonstrated, inability of the Soviet Navy to effectively counter one of 'the more decisive operating methods' of the imperialists, must be a sore point with Gorshkov and an additional factor in his desire for a larger navy, as well as an additional point in his argument that government policy ought to provide him with the means to achieve that goal.

There is no direct evidence that Gorshkov is asking for a similar interventionist capability for his own fleet. In fact he specifically denies on numerous occasions that the Soviet Navy has been or would ever be used in such a way. None the less we should probably disregard the blatantly propagandist nature of these denials, especially in the light of the detailed discussion which is given to imperialist interventions. From this account it is clear that Gorshkov understands the basic requisites for intervention include artillery and missile firing surface ships, an ability to project air power into the region, an amphibious assault capability and a sufficient number of escorts to protect these forces. Clearly if the Soviet political leadership wants a direct intervention capability it will

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1 M.S./2/1973/21.
2 ibid., p.20.
3 ibid., p.21.
4 e.g. M.S./3/1972/24, M.S./12/1972/14-18, and perhaps a little more ambiguously M.S./2/1973/25.
5 M.S./12/1972/5-8 and 12.
need to step up Soviet naval construction, particularly in surface ships.

b) Conventional Wars or the Post-Nuclear Phase

It is not altogether clear whether Gorshkov envisages the possibility of a conventional war or a period following an initial nuclear exchange which involves the super powers' navies in a major struggle at sea. However, he does spend a considerable time discussing the first and second world wars, and in particular their naval aspects, (while maintaining that the main goals were achieved 'by armed combat on the ground fronts', suggesting that the lessons of the world wars are not totally inappropriate for the present. Moreover, we have noted the distinction between 'world war' and 'world-wide nuclear war' and as we shall see later there is a specific listing of missions for the navy in the event of 'world-wide nuclear war', which is distinct from any other listing of war time tasks.

In the First World War the British sought to blockade the German shores and maintain superiority at sea. Germany attempted to break the blockade, weaken the British navy in a war of attrition, and inflict a major defeat on the enemy, which would leave German forces free to operate on the high seas and eventually enforce a naval blockade on Britain.

During the Second World War navies again sought to disrupt the enemy's sea and ocean communications; to protect their own communications; to cooperate with the ground forces in defensive and offensive operations and to destroy groupings of hostile naval forces.

Gorshkov's discussion of the anti-communications (anti-SLOC) struggle at sea makes it perfectly clear that whereas submarines are by far the most effective weapons in

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1 M.S./11/1972/1, see also p.12.
2 M.S./5/1972/4-5.
3 M.S./11/1972/1.
this role, they require continual support from surface ships, naval aviation and the independent operations of Long Range Air Force against ship building and port facilities if the operation is to be carried out successfully. (By comparison, the operations of German cruise squadrons and individual raiders were less successful than had been anticipated in World War I and surface ships were little used in the anti-SLOC role in World War II.) Gorshkov does point out that at the beginning of both wars the submarine was underrated and that the vast majority of these vessels employed during the war were constructed in wartime. Undoubtedly there is a lesson here for those responsible for determining naval appropriations in the Soviet Union.

The submarine, although the most impressive naval weapon in the anti-SLOC role, was reduced in effectiveness because of the major ASW campaign undertaken by Britain and her allies. Gorshkov draws two main lessons from the ASW campaign. An effective campaign, which involves convoy protection of merchant shipping by surface escorts, air support, and to a lesser extent air attacks against submarine bases and the patrolling of routes used by submarines, can

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2 For World War I, M.S./5/1972/8 and 13, and for World War II, M.S./11/1972/10, and see also M.S./2/1973/19, for a summary of German experience during the two wars 'one of the reasons for the failure of the "unlimited submarine war" waged by the Germans was the absence of ... support' (from aviation and surface ships).
5 M.S./11/1972/7.
6 For World War I, see M.S./5/1972/2, the table on p.5, p.7-9 and p.13. For World War II M.S./11/1972/2, 6, and 10.
7 By contrast the Japanese did not mount a defence for her shipping and American submarines increased the effectiveness of their campaign against the Japanese lines of communication. M.S./11/1972/4 and 11.
8 M.S./11/1972/5, 7 and 15.
succeed in reducing the effectiveness of submarines provided a massive effort\(^1\) is made to achieve this objective. In addition the task of ASW was made much easier because the submarines were not provided with sufficient protective support from surface ships and aircraft.\(^2\)

Gorshkov makes two additional points which contain significant implications for possible Soviet submarine operations in a future conventional phase of war. Firstly, nuclear powered submarines have significantly increased the difficulties of mounting a successful ASW operation.\(^3\) Secondly, there was 'a great miscalculation of the German command' during World War I:

\[
\text{it did not employ submarines to sever the military sea shipping which was widely used by the Entente countries.}\quad 4
\]

Gorshkov also points to the role of naval aviation in the battle of sea communications.\(^5\) Whereas naval aviation played a secondary role in the anti-SLOC mission, 'in the defence of our own sea communications, it was number one'. In particular, aircraft carriers 'were first among the forces protecting ocean communications'. Gorshkov's general conclusion on aviation is important:

\[
\text{Aviation units which were included within the composition of the fleets operated significantly more effectively than those temporarily attached.}
\]

There can be little doubt that Gorshkov is seeking to make a number of points of contemporary relevance. Firstly, the number of SSNs needs to be dramatically increased for these are likely to be far more effective anti-SLOC weapons

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1 M.S./11/1972/5.
2 M.S./2/1973/19.
3 M.S./11/1972/6 and 8.
4 M.S./5/1972/9. In operations against the Japanese during the course of World War II, the Americans did not make this mistake. M.S./11/1972/17.
5 M.S./11/1972/7.
than conventionally powered submarines. Secondly, an effective anti-SLOC campaign can only be mounted if there is a significant increase in surface ships to provide the requisite amount of combat stability to submarines. Thirdly, naval aviation has an important role in the battle of sea communications, which it can only perform if it is clearly subordinate to naval command. Finally, in a future war, military shipping ought to be a primary target for submarine operations.

Third in Gorshkov's listings of the missions performed by navies during World War II, is the task of cooperating with the ground forces and in particular the carrying out of amphibious operations. He points out that strategic seaborne landings were often accompanied by major naval battles which sought to gain command of the sea\(^1\) and that such landings were only conducted in a favourable military-political situation.\(^2\) Moreover, air superiority became an 'indispensable condition' for the success of these operations.\(^3\)

On the other hand, Gorshkov points out that no sea borne landing was subjected to resistance based on a continuous series of powerful blows delivered at it from its concentration point to the moment it landed.\(^4\) The reasons for this failure of the defence; insufficient warning and the lack of sufficient means to attack the landing forces;\(^5\) have been overcome by the reconnaissance satellite, the SSM, and the missile armed submarine, which may employ conventional or nuclear warheads.\(^6\)

If Gorshkov is anxious to add to a major amphibious

\(^1\) ibid.
\(^2\) ibid.
\(^3\) ibid.
\(^4\) ibid., p.14.
\(^5\) ibid.
\(^6\) At least one aspect of the OKEAN exercise indicates that this is precisely the tactic employed against sea borne landings by the Soviet Union today.
capability to his navy’s role, as opposed to the small scale coastal landings of World War II, in which merchant ships and non-specialist naval vessels were employed, then his list of material requisites is enormous. Obviously a vast array of purpose-built landing vessels and transport craft are required together with a surface fleet, including carriers, capable of establishing or maintaining control of the sea. In such an operation, submarines obviously have a restricted role and, the main burden must be borne by a surface fleet. On the other hand, the requirements for defence against a sea-borne landing are probably satisfied by the vast array of vessels operating under the cover of land-based aircraft and within range of the coastal missile defence units, which are at present available to the Soviet Navy in its major fleet areas.

The destruction of attack groupings of the enemy’s naval forces, the last of Gorshkov’s points, was an important feature of naval campaigns, but for the most part this mission was an integral part of the battle over communications or a necessary prelude to an amphibious operation.2

Gorshkov stresses that World War II indicated a ‘clearly defined tendency in the growing threat of the destruction of ships in bases’.3 In the light of his repeated claim that the subsequent growth of navies must be based on an extrapolation of tendencies revealed in previous conflicts, and the subsequent technical and scientific innovations,4 it is not unreasonable to suggest that he sees this trend as being of major significance in the future. Implicit in this is the recognition of the importance of targeting enemy naval bases by ICBMs, the Long Range Air Force or naval aviation.

In addition, this tendency suggests ‘the need to disperse

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1 M.S./10/1972/9.
3 ibid., p.15.
forces and means in basing areas' and to bring about 'changes in methods of supporting them,' a call for increased expenditure on the support fleet.

Given that one cannot conduct an offensive naval strategy inside coastal waters, especially if the coastal waters are confined, as is the case with the Soviet Union, then Gorshkov must face the problem of controlling the access points to the high seas during a future conflict. Geographic dispersal² and the difficulties of intra-fleet manoeuvres,³ suggest that each fleet area, in cooperation with the ground forces, will have to deal with this problem on its own.⁴

Although Gorshkov does not specifically discuss this problem in a Soviet context, it is an underlying theme of much of his historical account of the Russian Navy. Moreover, in discussing the German Navy prior to the outbreak of World War I, he notes

Germany ... had a system of bases suitable for a defence against attacks from the sea, but they did not ensure direct access to the ocean ... The system of basing permitted a rapid concentration of forces in the Baltic or Black Seas (but the possibility of clashes with the superior British Fleet had to be considered when exiting beyond these limits).⁵

The similarity between the present position of the Soviet fleet and the German fleet hardly needs further comment, particularly when Gorshkov notes that the widespread system of British bases and their relation to German bases 'created favourable conditions ... for operations against its (Germany's) surface ships'.⁶

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¹ M.S./11/1972/15.
² M.S./3/1972/11.
³ M.S./10/1972/2-3. The context is World War II and although the Northern Sea Route is now open for considerably longer than the two to three months that then prevailed, the point is still valid.
⁴ M.S./3/1972/11.
⁵ M.S./5/1972/4.
⁶ ibid.
Gorshkov gives particular emphasis to the question of access to the Mediterranean from the Black Sea, which he notes has always been denied by the major naval powers. He ruefully notes that throughout the course of World War I the Black Sea Fleet actively prepared for the execution of one of the main missions in the South - the landing of a major landing force in order to capture the Bosporus. However, this operation was never carried out even though ships repeatedly approached the Bosporus and fired at objectives on its shores.1

Indeed, I get the impression, particularly from the historical account of the Russian presence in the Mediterranean,2 and the emphasis which Gorshkov places on the Mediterranean today,3 that he is advocating the capture of the Turkish Straits as a major strategic objective in the initial stages of a future war in Europe. Moreover, he appears to suggest that such an operation will require the coordinated efforts of all the general purpose forces, for too often in the past the lack of a coordinated attempt has resulted in the failure to capture the Straits, despite the obvious success of one or other of the branches of service in attaining its particular objective.4 This coordinated effort implies that for at least some operations in a future war, the Army should be prepared to accept the role of assistant to the Navy, a major historical reversal for both branches of service.

1 M.S./5/1972/12.
3 ibid., p.23-24. He refers to the Mediterranean as 'the foremost line of defence of the country when threats of aggression were arising from the South-West', ibid., p.21.
4 See for example, the discussion of the activities of the Mediterranean squadron from 1769-1774 and success of the Russian Army in the Russo-Turkish War of 1877-1878, M.S./3/1972/p.17-18 and 10-11 respectively. In both cases one or other branch of the armed forces posed a threat to Constantinople, but the absence of the other resulted in threat being withdrawn.
c) Nuclear War

The basic missions of the navies of the great powers in a 'world-wide nuclear war' are listed as participating in attacks of the country's strategic nuclear forces, weakening of the nuclear attacks by the enemy from the direction of the oceans, and participating in the operations conducted by ground forces in the continental theatres of military operations. In the process, the navies will perform a large number of complex and major missions.¹

The ability of the Soviet Navy to fulfil these missions in the period 1967/1968 has been discussed in a previous chapter and subsequent developments have been discussed in the context of recent Soviet ship construction. We have also noted Gorshkov's claims on the deterrent value of the SSBN and the advantages of SLBMs vis-à-vis ICBMs.

Although Gorshkov is probably well satisfied with the size and characteristics of his SSBN fleet, particularly since the introduction of the D class submarine and the American agreement to Soviet numerical superiority in this field at the SALT I negotiations, the question of countering enemy sea based nuclear attacks is still a major problem. The facts of geography impose limitations on the Soviet Union's ability to mount large underwater submarine detection systems and they also suggest that American SSBNs do not necessarily have to traverse geographic choke points.

Moreover, Gorshkov is well aware that the introduction of nuclear propulsion units has made the task of anti-submarine warfare far more complex in the post war period than it had been during World War II. The fact that German submarines were not driven from the seas until the destruction of the Nazi regime, despite the vast resources that were thrown into the ASW campaign and the tactical and technological innovations of ASW, is noted, and Gorshkov reminds his readers

¹ M.S./2/1973/20.
what must this superiority be today to counter nuclear powered submarines, whose combat capabilities cannot be compared with the capabilities of World War II era submarines.¹

If Gorshkov's purpose is to do no more than to advance the claim that an increase in SSNs is necessary for the anti-SLOC role, as is suggested by the context, it is difficult to credit that the implications for the Soviet Navy's anti-SLBM role are not fully appreciated. In addition, German U-boats had to approach their targets to distances of hundreds of metres: the modern SLBM has literally thousands of square miles from which to launch an attack. Moreover, the damage which could be inflicted by an SLBM armed with sixteen Poseidon type missiles each carrying ten independently targetted warheads during the final minutes of a war is horrendous, and totally incapable of being compared with the damage which the German U-boats were capable of inflicting during World War II.

This is not to suggest that Gorshkov is advocating a withdrawal from strategic ASW on the grounds of its impossibility and suggesting instead that the deterrent power of his own SLBMs be relied on to counter the threat. Indeed as we have seen in an earlier chapter, the Soviet Navy has given considerable attention to a damage limiting approach which would not only destroy a number of enemy SLBMs in base, but by destroying the navigational aids and the command and control links render surviving SLBMs much less flexible.

In the series of articles under review, he specifically claims

Submarines are becoming valuable anti-submarine combatants, capable of detecting and destroying the enemy's missile carrying submarines.²

¹ M.S./11/1972/5-6.
² M.S./2/1973/18. The context makes it quite clear that this is a reference to SSNs.
That is SSNs are a valuable component in damage limiting strategic ASW campaigns and although they cannot ensure 100% success, they are essential to the campaign.

Given the relatively slow building rate of SSNs in the Soviet Union, it is obvious that Gorshkov is advocating a larger SSN component in his fleet and that this component will have to be developed rapidly. Moreover, it should not be forgotten that SSNs in addition to this strategic task will also have to undertake anti-SLOC missions (although this may be only a secondary mission) and may be called upon to provide protection for the Soviet Union’s own SSBN forces. Whether the release of SSBN construction facilities as the SALT I limitations on these vessels are reached will enable SSN construction to increase at the desired rate is a moot point, but given the present size of the SSN fleet and the tasks it may be required to perform in a future war, it would not seem unreasonable for Gorshkov to be asking for more.

In so far as the anti-carrier role is concerned, there is nothing in the series to suggest a change from the basic requirements of the 1967/8 period. Nor is there anything available in the open literature to suggest that the problems associated with the cruise missile, its launcher platforms and mid-course guidance requirements, have been overcome. The introduction of horizon range missiles, capable of being fired from underwater, may have removed the need for mid-course guidance but this has been achieved at the cost of placing the launcher platforms within range of the ASW defences, which include carrier based aircraft, protecting the carriers.

Gorshkov does claim that cruise missiles permit 'powerful

1 The discussion of long range cruise missiles and the state of the art in the underlying technology of large array micro-circuitry which have made possible an entirely new set of micro-miniaturised electronic devices and sensors in SIPRI Yearbook 1975, World Armament and Disarmament (London and Cambridge, Mass; 1975) Chapter II, together with the development of 'smart bombs', points to possible future developments. However, given the recent assessment of one competent observer that Soviet research and development in this field lags by about five to ten years, it is unlikely that this development represents any more than a future aspiration for the Soviet Navy. 'Offensive Missiles', Stockholm Paper 5, (SIPRI) p.24-5, f.n.4.
and accurate attacks from great distances\textsuperscript{1} but this has always been the Soviet claim since their introduction to the fleet. In addition, he notes that developments in electronics have 'increased ship and aircraft capabilities to destroy surface targets',\textsuperscript{2} a claim which is so broad as to be virtually meaningless for any specific context.

The series strongly emphasises the importance of the Mediterranean Sea in any future nuclear conflict, perhaps to strengthen the case for an increase in the Soviet presence in this region. Gorshkov reminds his readers that historically the Mediterranean has been 'the foremost line of defence of the country when threats of aggression were arising from the southwest',\textsuperscript{3} and that in this region only the Navy can play a significant role in determining 'the overall course and outcome of the armed defence of the country'.\textsuperscript{4} Hence there is an 'age old need for the Russian (Soviet) fleet to stay there',\textsuperscript{5} which is as relevant today as ever, if not more so, given the presence of the carriers and SSBNs of the Sixth Fleet.\textsuperscript{6}

d) Navies and Peace Negotiations

Gorshkov makes two distinct points about the significance of naval forces in peace negotiations. The first concerns the impact of naval power on the actual outcome of the negotiations which have followed some wars, while the second concerns the impact of the negotiations on the status of the naval forces of the vanquished power, a point more suitably discussed later.

In his concluding remarks on the Crimean War, Gorshkov writes

\textsuperscript{1} M.S./2/1973/17.  
\textsuperscript{2} ibid., p.18.  
\textsuperscript{3} M.S./3/1972/21.  
\textsuperscript{4} ibid., p.22.  
\textsuperscript{5} ibid., (my addition).  
\textsuperscript{6} ibid., p.23.
The significance of the Fleet in this war was also determined by the extent to which its presence in a given theatre could be used by diplomats of the belligerent States to support their position at the peace tables.\footnote{M.S./4/1972/6.}

Russia, her Black Sea Fleet overwhelmed by technologically superior British and French forces 'had to accede to the provisions of the Paris Peace Treaty', one of which was the prohibition against a Russian Fleet in the Black Sea. On the other hand, Great Britain and France having administered a naval defeat on the Russians acquired new possibilities for exerting pressure on Russia with the threat of attacks against her from the southwest, consolidated their control over the straits zone, and increased their influence in the Near and Middle East.\footnote{Ibid.}

In the Russo-Turkish War of 1877-1878, Russia was unable to achieve 'one of the main goals of the war - free access to the Mediterranean Sea',\footnote{M.S./3/1972/10.} because of a display of British naval might in the Turkish Straits.\footnote{Ibid.} Not only did this display influence the subsequent course of events, by forcing the Tsar to withdraw forces from Constantinople and hence to give up the objective of controlling the straits, but it also forced a revision of the San Stefano Treaty, which concluded the war, at the subsequent Congress at Berlin.\footnote{M.S./4/1972/7.}

Despite the victories of her Army, Gorshkov concludes 'Russia did not win the war' and he attributes this failure to achieve the objective to the inferiority of the Russian Fleet, 'sufficient only for single combat with Turkey', in the face of the British presence.\footnote{M.S./4/1972/8.} For the modest price of dispatching a show of force the British were able to achieve

\footnotesize
\bibitem{1} M.S./4/1972/6.
\bibitem{2} Ibid.
\bibitem{3} M.S./3/1972/10.
\bibitem{4} Ibid.
\bibitem{5} M.S./4/1972/7.
subsequent occupation of Cyprus: 'the most important strategic point in the Mediterranean'.

It is clear from the style of presentation that Gorshkov intends these historical examples to be pondered by his political masters. The failure of Russia to achieve the goals for which so much sacrifice had been made during the 1877-1878 war is laid directly to 'errors by the Tsarist government with regard to questions of building up the Navy', and to the fact that 'Tsarist officials continued for a long time to underestimate the importance of a fleet in international relations and in warfare'.

What is more difficult to determine is what Gorshkov would have his political masters do. It is possible that Gorshkov is concerned to see a large proportion of his SSBN fleet withheld from any initial nuclear exchange, so that it can be used as a factor in the post-exchange bargaining. More generally, it is apparent that his example of the British Fleet in Russo-Turkish War is designed to impress on his political leaders the diplomatic advantages that can accrue to a third party, essentially uninvolved in the actual combat situation, provided it has a predominant concentration of naval force in the area of hostilities. What is required, is a large ocean going fleet, capable of concentrating in regions of importance and maintaining its predominance, which can only be provided if government adopts the appropriate policies and recognises 'the importance of a fleet in international relations and in warfare'.

1 M.S./3/1972/11.
3 M.S./4/1972/7.
4 McConnell 'Admiral Gorshkov' passim. See also MccGwire, Michael, 'Critique of a paper by James M. McConnell entitled 'Admiral Gorshkov on the Soviet Navy in War and Peace', 1st July 1973, mimeo, for a spirited reply.
5 See also his account of Japanese withdrawal from the Liaotung Peninsula following the Sino-Japanese War of 1884-1895, M.S./4/1972/11.
Naval Arms Control

Gorshkov's views on arms control, as revealed in 'Navies in War and Peace' are complex. He is undoubtedly a cautious man who believes

Only the creation and testing of nuclear weapons in our country ... forced the latter-day pretenders to world supremacy to restrain their aggressive desires."

As such he appears to be a tough-minded advocate of some ideal military posture and an opponent of detente and compromise: a position which he directly associates with Lenin. Thus he compliments the Party and the Soviet Government for their realistic appraisal of the threat posed to the Soviet Union by sea based nuclear weapons systems. They have

seen that the way out of the situation which has been created lies in opposing the forces of aggression in the World Ocean with strategic defensive counter forces whose foundation consists of the Strategic Missile Forces and an ocean going Navy.

For Gorshkov, 'strategic counter forces' are the 'way out' from the dangers of a nuclear war, and as such he opposes those who see in detente a 'real escape' by 'other, peaceful means', which are designed to promote peace and remove the dangers of a future conflict.

This is not to suggest that Gorshkov regards arms control in general, or naval arms control in particular, as a bad thing. That judgement obviously depends on the outcome of any particular agreement. What he does warn against is any

1 M.S./12/1972/1 and 2.  
2 M.S./6/1972/6.  
3 M.S./12/1972/15.  
4 The quotations are from a Soviet comment on Brezhnev's call for a limitation on distant deployment by the major naval powers.  

A kind of euphoria to which detente may give rise, a euphoria which may give rise to that 'wavering and indecisiveness at the crucial moments of the struggle'\(^1\) and an underestimation of the enemy.\(^2\)

Thus the treaty prohibiting the placement of nuclear weapons or other forms of mass destruction on the sea bed is applauded. The Soviet Union is credited with its initiation and the treaty is described as 'the first, but important, step' in 'a struggle against a new arms race'.\(^3\) However, Gorshkov warns that 'American imperialists' and 'prominent figures in U.S. military circles' are still interested in carving out areas of the ocean for military purposes despite the treaty.\(^4\)

It is quite conceivable that Gorshkov's endorsement of the sea bed treaty is based on a realistic appraisal of the Soviet Union's technical inferiority in this area, a factor which in addition to the geographical disadvantages inherent in the Soviet Union's limited access to open waters, suggests a position of inferiority in these systems in perpetuity. To the extent that the treaty is successful in restraining the United States from developing this field, its results can be seen as being advantageous.

The SALT I agreements are also welcomed.\(^5\) Clearly the ABM agreement has put a stop to a potential growth area for the P.V.O., which could have taken a massive amount of the defence budget had development in this field been continued. Moreover, under the terms of the Interim Agreement, the Soviet Union has had a position of rough parity agreed to in the field of strategic missiles. So far as numbers of SSBNs are concerned, the Soviet Union is permitted more than the United States and as indicated earlier, this may have been gained without requiring any cut back to intended Soviet

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1 M.S./6/1972/6.
2 ibid., p.4-5.
3 M.S./2/1973/11.
5 M.S./12/1972/9.
programmes. None the less, Gorshkov warns that the SALT agreements, notwithstanding

The process of the approach of U.S. bases towards the borders of the U.S.S.R. continues despite measures taken by the Soviet Government to ease international tensions.\(^1\)

The new naval base in Greece, and the basing of SSBNs and carrier forces in Japan, in Italy (Madalana Island) and the Indian Ocean are components of a

powerful and widely dispersed military organisation ... directed against the USSR and countries of the socialist community.\(^2\)

The Moscow Agreements of May 1972 included a Treaty to Limit Incidents at Sea, which Gorshkov refers to in passing in the course of this series.\(^3\) However, in a July 1972 interview, Gorshkov characterised the Treaty as a 'practical step' taken to fulfil the peace programmes of the 24th CPSU Congress and as an 'integral part' of the SALT package, which was of 'historic significance'. Although the naval treaty opened 'possibilities for eliminating the Cold War at sea', Gorshkov stresses that signing bits of paper does not 'preclude undesirable situations'. To implement the agreement 'effort is needed on both sides' and although Gorshkov indicates that for its part, the Soviet Navy will make that effort the general tone of this section of the interview suggests that he is not expecting too much from the Americans.\(^4\)

Gorshkov's comments on the broader aspects of naval arms control are primarily historical. He notes that as a result of various peace treaties, marking the conclusion

\(^{1}\) M.S./2/1973/18.

\(^{2}\) ibid., p.19.

\(^{3}\) M.S./12/1972/14.

\(^{4}\) Gorshkov Interview OGONEK, 31 July 1972, p.4-5, translation JPRS, Translations in USSR Military Affairs, No. 842.
of wars, the vanquished power was deprived of elements or all of its fleet.¹ This is used to sustain his point that major sea powers have always recognised the importance of navies as tools of foreign policy and as instruments of war.² He also notes the fact that until the present, there had been no major attempt to implement arms limitation agreements on any except naval forces.³

Gorshkov's preference for a 'strategic defensive counter force' indicates a desire to build the Soviet Navy into a truly ocean-going fleet. However, his comments on the naval arms limitation treaties in the interwar years suggests that the American experience is not without its interest to him. He asserts that America's primary preoccupation throughout the negotiations, 'the diplomats war for supremacy at sea',⁴ was to weaken the power of Britain, then the dominant sea power, and to achieve a position of recognised parity.⁵ Moreover, as a result of the interwar agreements and the fact that the British economy was drastically weakened by the world wars

her ally - the U.S.A. - has displaced England from the throne of 'Mistress of the Seas'. In this connection, the Americans have succeeded without a war... in achieving what Germany could not accomplish in two world wars.⁶

Undoubtedly, if he could get the sort of arms control agreement which would enable his Navy to achieve parity with the United States, he would welcome it. Moreover, control in some fields, e.g. SSBNs as under the SALT I agreements,

¹ For the Russian case in the aftermath of the Crimean War, see M.S./3/1972/10 and M.S./4/1972/6.
² M.S./12/1972/8-10.
³ ibid., p.9.
⁴ M.S./8/1972/1.
⁵ ibid.
⁶ M.S./12/1972/10.
may be welcomed provided that this control is accompanied
by development and construction in fields not covered in
the agreement and provided that technological innovation is
permissible in those fields covered.

In the series, there is nothing on the control of
deployment patterns and Gorshkov does not mention zones of
peace, nuclear free seas or Brezhnev's statement on the
withdrawal of fleets from distant waters. The stress on
the utility of naval vessels in peacetime diplomacy suggests
that he is not willing to forego these options at this stage,
whatever the inclinations of the political leaders may be.
Moreover, he may wish to enlighten his political masters on
these matters, so that they too will not pursue these
matters beyond propagandist utterances.

The Central Importance of Policy Decisions to the Growth
of the Navy

Throughout the series, Gorshkov can be seen as
advocating and educating. He is reinforcing lessons which,
whatever we may think of his treatment of history, are not
at variance with commonly accepted doctrines of naval power
held in the West.

He stresses that the role of the Navy has changed in
a world in which nuclear war is a possibility and advocates
that this change in role be recognised. He spends a great
deal of time showing the importance of naval power to Russia
and the Soviet Union in the past and its particular importance
in a thermo-nuclear world where SLBMs are held to be 'an
even more effective means of deterrence' than land-based
ICBMs.¹ Should thermo-nuclear war come 'naval forces are
more stable against the effects of nuclear weaponry than
land forces'.²

If there is no thermo-nuclear war, but armed hostilities

¹ M.S./2/1973/20.
² M.S./2/1972/7.
continue to occur at lower levels of violence, Gorshkov stresses the importance of the navy in defending state interests on the seas and oceans and in the defence of the country from possible attacks from the direction of the seas and oceans. He is also concerned to show his readers the importance of naval forces, widely deployed, in peacetime and the advantages which can accrue to a nation possessing such a force. While warning of the dangers which may arise if detente leads to an ill founded euphoria, he is not opposed to arms control, but seeks to use naval arms control to improve the naval might of the Soviet Union vis à vis the United States.

Having shown his readers what benefits naval power can confer on a country in its international relations and during war he indicates what is necessary if these benefits are to be realised. In its most general terms what is required is a 'balanced fleet', the actual structure of which is revealed by

an objective analysis (which) permits the determination of the necessary and sufficient composition of forces in their most rational combination.²

We have highlighted specific areas where Gorshkov's concern seems to be most apparent. He wants more of everything except SSBNs and undoubtedly there are technological innovations here, such as the MIRVING of the SLBMs, which he may want.

This process of advocacy and education is designed to persuade others of the importance of a strong and powerful fleet, so that the Navy can be saved from the fundamental weakness which beset the Tsarist Fleet: the fact that the political leaders

often did not understand the role of the

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¹ M.S./2/1973/16.
² M.S./2/1973/20.
Fleet within the system of the country's armed forces and underestimated its capabilities.¹

What is required is a policy based firmly on a clear appreciation of the importance of sea power in war and peace which will result in Gorshkov's balanced fleet. It seems clear that the actual specific requirements will be provided by the naval experts who will calculate by methods of mathematical analysis, by solving a system of multi critical problems for various variants of the situation and different combinations of heterogeneous forces and means,²

the actual requirements of a balanced fleet. This analysis will take into account expected technological advances³ and the capabilities of the opponents naval forces.⁴

However, all this analysis and calculation will be to no avail unless the political will is there to allocate the necessary resources for a policy taking into account the country's need for sea power is an important factor determining the nature of naval construction promoting the mobilisation of its capabilities for the indicated purpose, and is an indispensable condition for the development of sea power.⁵

Despite the dubious claim that

In contrast to the ruling circles of Tsarist Russia, who did not understand the role of the Navy in the military might of the country, the Communist Party and the Soviet Government attached greatest importance to it.⁶

Gorshkov's dissatisfaction with the growth of the Navy is

² M.S./2/1973/20.
³ M.S./5/1972/16.
⁴ M.S./6/1972/4-5.
⁵ M.S./2/1973/25.
obvious. There is a note of criticism in the remark

As is well known, through the will of the CPSU Central Committee, a course has been charted in our country toward the construction of an ocean going navy whose base consists of nuclear powered submarines of various types ...

However, a modern fleet, designed to conduct combat operations against a strong enemy, cannot be only an underseas fleet.¹

Gorshkov is not unaware of the costs likely to be imposed on the economy and Soviet society as a whole, if his ambitious plans are to be fulfilled. However, he argues that such costs must be faced squarely by the political leadership and invokes Lenin to support his claim: 'Every revolution can only stand if it is able to defend itself'.²

Moreover, if the political leadership is to convince the Soviet people that sacrifices to their immediate prospects of improved living conditions are worthwhile, then there needs to be a return to the view which recognises the importance of the support of the entire people for the outcome of the armed struggle and therefore, makes the importance of military affairs an inseparable part of the people's daily lives.³

Gorshkov cites two historical examples of the Russian people's allegedly making the necessary sacrifices in order to develop a more powerful navy.⁴ In view of the sacrifices required, Gorshkov would appear to oppose detente⁵ to the extent that that process either weakened the politicians resolve to demand the measures necessary to build the fleet, or led to a reluctance on the part of the people to accept the necessity of these measures.

While he quotes with approval Brezhnev's statement to

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¹ M.S./2/1973/19.
² M.S./6/1972/3.
⁵ As is seen most clearly in his warning on the falseness of wavering and indecisiveness.
the 24th Party Congress 'Everything that the people have created must be reliably protected', the series as a whole suggests that he would like to see such declarations implemented in policy terms and that a major beneficiary of the resultant policy should be the Soviet Navy.

1 M.S./2/1973/25.
CONCLUSIONS

The quantitative and qualitative growth of the Soviet Navy in the post-war era can be adequately explained as a particular response to the changing strategic environment. The particulars of the response have been shaped by Soviet military doctrine, a doctrine which has drawn no clear cut distinction between the requirements for deterrence and actual war fighting, despite the attempted policy of strategic bluff engaged in by the political leadership in the late 1950s and early 1960s. In addition naval growth has been affected by changing assumptions regarding the role of the navy in a future war, inter-and intra-service competition for shares of the defence budget, the industrial and technical capabilities of the Soviet Union, the impact of the political leadership and geographical factors.

In the above analysis and description of Soviet naval growth major changes in ship construction programmes, armaments and deployment patterns have been shown to be specific responses to changes in the naval capabilities of the Soviet Union's major adversary, the United States. In the immediate post war period, at Stalin's insistence, the Soviet Navy built a force capable of controlling the coastal waters and in particular the Baltic. Such a force, operating under land based air cover, could repel a sea borne invasion and lend support to army units operating in the coastal zone. When a new threat emerged, in the form of carrier launched sea based strikes, the Soviet Union dramatically abandoned its previous programme of ship construction and moved towards the development of an anti-carrier navy based on smaller, SSM armed, surface ships and submarines and ASM armed aircraft. The Northern Fleet was strengthened in recognition of the importance of the Barents Sea area. Initial units of the SSM armed navy were conversions from the previous programme and entered service in the late 1950s. Subsequent developments, the introduction of a number of SAM armed vessels and the rapid growth of the SSGN component of
the fleet were a response to the increased range of carrier borne aircraft necessitated by the fact that no reliable fighter protection could be afforded beyond the reach of shore based aircraft.

It is now apparent, since the function of the SS-N-10 has been clarified, that a reassessment in the late 1950s resulted in a major shift toward developing an anti-submarine capability for the surface vessels scheduled to appear at the end of the 1960s and into the 1970s. At this stage it is still uncertain whether the ASW programme was designed to combat a submarine launched cruise missile threat or an SLBM threat. If the latter it suggests that Soviet assessments of the characteristics of the U.S. SSBN fleet and its future development were sadly astray.

It would be a mistake however, to see the growth of the Soviet Navy solely in terms of a response to developments in the navies of the NATO allies and the U.S. Navy in particular.

The Soviet Union had developed an SSB, the Z.V. class, by the mid-1950s and the launching of its first SSBN occurred in 1958. This rapid development of an admittedly unsophisticated system was undertaken to provide the Soviet Union with a reasonably reliable means of delivering a direct strike on the continental United States. It is important to bear in mind that the SSB and SSBN programmes produced no new vessels in the period 1962/3-1967, although longer range missiles were fitted to existing units. In this period the anti-surface ship SSGN programme delivered some 27 E-II units. Since 1967 when the first of the Y class SSBNs entered service the Soviet Navy has strengthened its SSBN force which now stands at some 48 boats of Y and D classes. The Y class vessels, although able to transit and launch missiles without surfacing, do require protection. The United States has taken advantage of its free access to the high seas and its long coast lines to construct submarine detection systems and it has exploited the Soviet Union's need to transit its Y class submarines through confined waters before reaching the high seas by establishing ASW barriers at the choke points. Moreover the Soviet Union now
has high value surface vessels of its own which require protection.

Soviet moves to forward deployment may also be accounted for primarily in terms of reaction to sea based threats. Initial deployments were made to the Mediterranean in the late 1950s, following the introduction of nuclear weapons and longer-ranged aircraft to U.S. attack carriers. These deployments, in which W class submarines were the main attack force, continued until the Soviet Navy lost the use of Albanian ports. Soviet vessels began exercising on a regular basis in the waters west of Norway in the early 1960s following initial anti-carrier exercises in the late 1950s and returned to the Mediterranean in 1963/4. Port agreements were reached with the Egyptians in the aftermath of the Arab-Israeli war. The return to the Mediterranean followed U.S. deployment of the longer ranged Polaris SSBNs to the area and the arrival of the SSBN tender Proteus at Rota in Spain. Finally the low level, but highly visible, Indian Ocean presence was established after the possibility of an SSBN threat from this region had been established.

Forward deployment was a novel experience for the Soviet Navy. It required vessels capable of operating at a distance from home base in a variety of weather conditions, crews trained in a variety of new operational areas, familiarization with new areas, where possible a measure of air surveillance, access to foreign facilities, and in some cases the establishment of their own forward facility areas and an auxiliary fleet capable of sustaining forward deployment. While area familiarization could only be gained once a specific deployment had been undertaken the navy's unpreparedness for such operations, together with the activities of vessels on forward deployment, strengthen the contention that the Soviet Navy was responding to events.

The move to forward deployment has enabled the Soviet Union to take advantage of its increased naval presence for diplomatic purposes, some of which have been related to the Soviets' needs for facilities in the areas to which deployments
have been made. In addition the availability of vessels in a variety of areas has enabled the USSR to probe U.S. resolve on a number of issues; the introduction of nuclear powered submarines to the Caribbean, and U.S. support for a variety of regimes in areas where the Soviet Navy has established a presence. The Soviet Union has also been able to indicate, in a reasonably low level manner, military support for friendly regimes and interest and concern in a number of regional disputes, through a mixture of timely port visits, inter-positioning elements of its own naval forces amidst elements of the U.S. fleet and supplying arms. However it would appear that these aspects of naval diplomacy are benefits accruing from a naval presence whose formal raison d'etre is the enhancing of Soviet ASW capability or the attempted closure, by way of diplomatic pressure from littoral powers, of oceanic spaces to enemy SSBN deployments.

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The historical development of the Soviet Navy had been affected by the dominant role of other branches of the armed services in Soviet strategic planning, by the fact that historically the Soviet Union has fought primarily continental wars and by the fact that Soviet naval vessels have had limited access to the open seas. Are these factors still of significance or has the change in the strategic environment and the course of Soviet naval development been such as to overcome what previously had been regarded as a geographical handicap and to afford the Navy a major role in Soviet strategy?

The major fleet areas of the Soviet Navy are still in the North, the Pacific, the Black Sea and Baltic and hence the navy is still subject to the possibility of being confined within limited waters. Within these fleet areas the navy has become more secure from external attack as a result of the post World War II settlements and because of the dispersal of facilities within the fleet areas. Whereas this may enhance the security of vessels from attack it does little to solve the problems of access to the high seas except in the Pacific where major
concentrations of submarines are to be found at Petropavlovsk, outside the Sea of Japan. Only in the event of the Soviet Union dominating the egress points could access to the high seas be secured for its surface vessels. Although its submarine forces would be affected to a lesser extent the fact that a series of ASW barrier systems have been erected at the egress points and at subsequent choke points poses some difficulties for Soviet naval planners in the event of future hostilities. This fact was no doubt one important consideration in the development of the long ranged SLBM fitted to the D class submarine which does not have to leave the well protected fleet areas of the North or Pacific to strike important targets in the United States.

Forward deployment has to some extent overcome the immediate problems of access to the high seas. In peace time the Soviet Union is free to send its vessels where it will subject to the constraints of the law of the sea. It may also use a variety of ports, on a commercial basis, for refueling and resupply and enter agreements with sovereign states to establish facilities capable of supporting vessels on forward deployment. Should hostilities break out however the ability of the Soviet Union to use these facilities may be curtailed. In addition the survival of the surface vessels could not be guaranteed for any length of time.

This latter problem can be seen in the Mediterranean where the presence of U.S. sea based nuclear strike forces continues to pose a major threat to the Soviet Union. The Soviets have responded by establishing a major presence in the region drawing on units from the Black Sea, subject to the constraints of the Montreux Convention, the Baltic and the Northern fleets. If the Soviets, through sheer numbers and ability to "launch the first salvo", eliminate the attack carriers and destroy a number of SSBNs on patrol they will have accomplished their mission. Should they fail in the initial exchange their chances of reinforcement or returning to base areas for repair and re-equipment must be rated as slight. The
fact that many Soviet vessels appear to carry no reloads for their missile system underlies the importance of the first salvo.

Soviet vessels have little ability to maintain combat stability while they are without reliable and continuous air cover available to the NATO allies through the U.S. attack carriers.

With regard to the navy's role within Soviet military strategy two points need to be made:

1. The Soviet Union has a military strategy to which the various branches of the armed forces make a contribution.

2. The so called "Revolution in Military Affairs" has significantly altered the importance of the contribution which the navy can make to aspects of Soviet strategy.

The Soviet Navy is no longer regarded solely as the loyal assistant to the ground forces but as late as 1968 the authors of Soviet Military Strategy, none of whom were naval officers, were still of the opinion that naval activities could hardly have a decisive effect on the outcome of the war. Important sections of Gorshkov's "Navies in War and Peace" indicate that the Navy's Commander-in-Chief is concerned that military and political leaders still do not recognise the important contribution which the navy can make in furthering Soviet objectives in war and peace and that the navy has not shaken off its status as the junior service.

There has been a relatively recent degree of consensus that the Navy, together with the Strategic Rocket Forces, will play a major role in launching strategic strikes in any future war fought between the major nuclear powers. Yet it should not be forgotten that institutional recognition of this fact, by way of appointing a senior naval officer, Labov, to the position of Assistant Chief of General Staff, was not afforded until 1973. Indeed the potential importance of the SLBM appears to have been underrated for a considerable period of time
following its initial appearance in the mid 1950s when it was arguably the most reliable means of launching a direct attack in the United States. In the period 1962/3 to 1967 no new SSBN was added to the Soviet fleet although longer ranged missiles with underwater launch capability were retrofitted to existing units. Whether this hiatus was due to dissatisfaction with the then existing SSBN propulsion units and missiles, a decision to wait for the new generation equipment incorporated into the Y class, the recognition of a more pressing need (SSGNs in an anti-carrier or anti-surface ship role) or because Khrushchev thought that deterrence could be adequately provided with a minimal number of land based ICBMs, is difficult to determine with precision. What is certain is that the essential parity of ICBMs and SLBMs as contributors to a nuclear attack was not recognised until 1964 when Malinovsky linked the two as the major components of the Soviet strategic strike force. Whether this status for the SLBM was generally agreed to is doubtful for in the third edition of Soviet Military Strategy, published in 1963, the role of the SSBN was confined to strikes against coastal targets. Gorshkov himself appears not to be content with the apparent consensus on parity for in his "Navies in War and Peace" he argues that the secrecy and mobility of SSBNs makes them relatively invulnerable to attack, a decided advantage vis-a-vis land based missiles.

The major offensive role of the SSBN branch of the Navy under conditions of nuclear war has been recognised but what is equally apparent is the fact that the rest of the Navy has not been afforded the same treatment, despite the efforts of naval spokesman to stress the need for balanced growth. At a superficial level this is apparent in the fact that in speeches given on official military occasions the Navy is always mentioned last. More significantly it is seen in the fact that naval ship building facilities given over to merchant construction in the late 1950s have not reverted to the navy. In addition the Soviet Navy has not developed an aircraft carrier fleet capable of establishing sea control enabling it to undertake offensive war time operations.
It does appear that the Navy has been able to justify the construction of a variety of surface vessels with an ASW capability. It is difficult to determine whether or not these vessels, at least in their initial conception, were seen as being used for strategic ASW purposes. Outside the relatively confined waters of the Mediterranean and the Barents Sea the surface vessels, designated large anti-submarine ships, appear to have limited utility in this role, given the range of present and projected SLBMs and the nature of their launching platforms. Even within these waters it is by no means apparent that they could achieve a degree of success sufficient to warrant the emphasis which has been placed on this type of vessel since the mid 1960s and which continues to the present. It is therefore likely that a number of these vessels will be used to ensure the survival of the Soviet Union's own SSBNs and in particular the Y class boats which need to gain access to the high seas before they can target the United States. The ASW armed surface vessels are at least in part an attempt to overcome the hunter killer submarine component of the ASW activities of the Soviet Union's adversaries.

The Soviet Union's primary defence against SLBMs still rests with the Strategic Rocket Forces and such of its own SLBM forces as are directed against enemy submarine bases, communications and navigation facilities. No doubt research aimed at achieving an ASW breakthrough is under way and Soviet vessels are involved in gathering oceanographic data and conducting exercises designed to prepare them for an offensive ASW role, but as yet there appears no Soviet answer to the problems of combatting enemy SSBNs on patrol.

Reports that the Soviet Union is developing a short range ballistic missile for shipboard use have caused some concern for it is alleged by some commentators that such a development would give the Navy a greater role in operations against enemy SSBNs and concentrations of surface ships at sea. However I think that such a development is impossible. It suggests a greater degree of targeting flexibility for the missile than is possible. A ballistic missile is not a free fire system.
It cannot, like a rifle, be aimed in any direction at will. Ballistic missiles follow a trajectory from one fixed point to another and the precise location of these fixed points and their distance must be known in advance, for the missile to be programmed. Neither of these conditions would apply in the case of the alleged new shipboard ballistic missile.

The subordinate position of the Navy, except for the SLEF branch, and its primarily defensive strategy is explicable. The Soviet Union is still in important respects a continental power. In any future war, be it a nuclear missile war or a conventional war, the U.S.S.R. will not be dependent on its overseas trade routes. It will, if necessary, seek to expel hostile forces from the Eurasian land mass as quickly as possible. In either case the ground forces will bear the major burden for the success of this task and the navy will be called on to effect a sea denial strategy limited to the coastal waters of the territory it commands and to assist the armed forces operating in the coastal zones by effecting amphibious landings. In the event of a missile war it will contribute to the strategic attack and seek to play its part in eliminating hostile sea based weapons systems. For its contribution to the strategic attack it will not require control of the sea except to the extent that such control is essential to suppress ASW barriers erected against its SSBNs. To eliminate sea based weapons systems it appears over reliant on the success of the 'first salvo'. If its initial strikes are unsuccessful it will be unable to effect a sea denial strategy at any distance from its shore for it lacks effective air support. That such support is essential for achieving objectives on the high seas has long been recognised by a faction of serving naval officers who have argued for a more offensive naval strategy. Such a capacity has been denied to the navy. It is unnecessary in a navy whose role, in many important respects, is primarily defensive, and which is expected to use the cloak of invulnerability conferred by peace to prepare for a successful 'first salvo' should war occur.
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