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Soviet Strategy: The Naval Dimension

C.G. Jacobsen

Geopolitics, the geographical fact of location in the heart of the Eurasian landmass and the political fact of contiguous threats and enemies, dictated that Moscovy focus first and foremost on land power. Naval, and later air capabilities were developed to complement that power and to integrate with it, not to challenge or supplant it. During World War II, limited-reach naval and air elements acted as tactical adjuncts to land formations. Today the Soviet Union's more potent, part-global navy and newfound strategic airpower serve as integral components of the evolving combined-arms continental and supracontinental Theaters of Strategic Military Operations (TVDS).

The Soviet Navy in Historical Perspective

The emergence of expanding Soviet naval power in the 1960s has been likened to the buildup of the tsarist fleet after the Crimean War during which, typically, naval guns were used as land cannon and marines as infantry.¹ The analogy is useful. It reminds us that Russian seapower and presence in distant oceans is not novel, but a response to situations in which narrow reliance on land formations has proved dangerous and/or unduly restricting. It also reminds us that fiscal pressures and more urgent land priorities have, in the past, always aborted or at least reined in the aspirations of the admiralty. This pattern threatened "Gorshkov's Navy," too, in the late 1970s. Circumstance and naval perspicacity—in disavowing independent aspirations and adopting, molding, and pursuing the banner of combined arms—may now have broken the pattern and established a more enduring basis for Soviet naval power. We shall see.

The post-Crimean expansion typified traditional overreach. In the West, the Russian Navy placed major warship orders with French and U.S. Union

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shipyards, accepted an offer from Louis Napoleon and Cavour for a base at Villefrance in 1858, and sent naval squadrons to New York and San Francisco in 1863 to demonstrate support for the Union in the Civil War. In the East, the first independent squadron for the eastern ocean was formed; in 1861 the Russian fleet established a *de facto* base in the Tsushima Strait. But the Tsar was ultimately persuaded that the danger of provoking Austria-Hungary and Britain in the West, and of antagonizing Japan and British interests in the East, outweighed the advantage of overseas basing. The Villefrance and Tsushima initiatives were rescinded. However, the American venture did gain his approval as a response to the threat of British and French meddling in Poland. The principle that naval reach can be a useful instrument of power was affirmed. Also affirmed, however, was the dictum that it must not precipitate or commit power.

There was one other legacy. The fleet landing in Vladivostok Bay in 1860 prodded Chinese agreement to the Treaty of Peking, which ceded the territories east of the Ussuri. The navy scarcely benefited. The naval response to war with Japan in 1904 was to draw on the Baltic Fleet. Its attack on British North Sea fishing boats, mistaken for Japanese warships, nearly sparked another war, exposed abominable judgment, and foretold the odyssey's ignominious end.

The Spanish Civil War and Italy's blockade of Soviet sea-supplies to anti-Franco government forces spawned another naval revival. Stalin ordered the building of a fleet that could challenge Western command of the seas, but World War II loomed and other priorities intervened.

The Greek Civil War saw a repeat in 1948. Stalin acknowledged the effectiveness of the U.S. blockade and Soviet impotence. Again, he directed that Moscow build a high-seas fleet to protect distant interests and clients. Again, Moscow's ambition was thwarted, sidetracked by the demands of reconstruction, Stalin's death, the move towards a relaxation of East-West tensions, and subsequent domestic needs.

While some capital ships were procured, distant ambitions were put aside. But changing strategic realities brought new naval purpose. The nuclear threat from American carriers compelled emergence from coastal waters. The navy also was an early beneficiary of the search for a means of delivery for Soviet nuclear warheads. The 1950s brought nuclear-armed torpedoes and the pioneering deployment of limited-range missiles on submarines.

It was a harbinger of things to come. Yet, the moves were aborted in the late 1950s because of technical difficulties, problems of command and control, the need to traverse hostile seas, and most importantly, because of the advent of Intercontinental Ballistic Missiles (ICBMs), and Moscow's rather naive and euphoric assessment of their import.

ICBMs appeared, finally, to have given the Soviet Union a secure deterrent—a certain and devastating retaliatory capability. Moscow

embraced the thesis that contemporary war would be nuclear and would inevitably escalate to all-out cataclysm. Naval potentials appeared redundant, and like the cavalry, a relic of earlier times. However, to paraphrase Trotsky, the navy did not long remain on the dustbin of history. Nineteen hundred and sixty-one brought renewed purpose.

Geographic Constraints and Moscow's Response

Russian and Soviet naval power have also faced a continuing geographic challenge.² The Oresund exit from the Baltic, the old capital, and the naval-industrial heartland are easily blocked. The Dardanelles exit from the Black Sea southern industrial regions (to which much of the Baltic Fleet could redeploy through interconnecting canal and river systems) is also narrow, also easily blocked.

The degree of constraint felt and the compulsion to circumvent it was dramatized by World War I. The British-French promise that the Dardanelles would be hers kept Russia in World War I. Assaults in the East may well have saved the West, but doomed the Tsar. The liberal-conservative governments that succeeded him after February 1917 were equally dazzled by the lure. Again, Russia attacked, sucking German troops from the West at a crucial juncture and again, carnage doomed the regime. Bolshevik slogans propagandizing peace now, bread now, and all power to the then democratically elected Soviets, swept it away.

When naval expansion returned to the agenda, attention focused on the remaining alternatives, the Kola Peninsula in the far northwest and the Far East. Neither was ideal. Both lay far from the heartland, connected to it by a solitary exposed rail line. Although both promised improved access to open seas, neither allowed freedom from geographic constraints.

At its maximum extension, the Polar ice cap sweeps south of Svalbard, north of Norway, curves eastward paralleling the Kola coastline at a mean distance of 180 miles, and swings south to land-lock at Mys Svjatoy Nos, 240 nautical miles from the Norwegian border. In other words, ice forms the northern shore of a wide yet constricting fiord that funnels surface traffic to and from the Kola.

In the Far East, the maximum ice limit runs outside Kamchatka and the Kurils, down to Japan's northern Hokkaidō island, and then west, south of Sakhalin and across the mouth of Vladivostok Bay. Vladivostok averages 85 days of fog a year and freezes for three months. Sovetskaya Gavan, the Trans-Siberian railway's eastern terminal, across from Sakhalin island, is even more prone to fog and is icebound from December to March. Petropavlovsk, on the Kamchatka, is protected from winds and fog by volcanic mountain ranges, but freezes in December and remains frozen for three to four months. All can be kept open with icebreakers. The result,

however, is that surface traffic from all is restricted in winter. From Vladivostok, Sovetskaya Gavan and later-built bases along the Sea of Okhotsk's shores, surface traffic is furthermore funneled by the need to pass through relatively narrow and exposed straits in order to get by Japan and on to open waters.

The Barents was nearer. Its ports and infrastructure received a boost from World War II when Murmansk served as the gateway for Allied convoys. After the war, Finnish neutrality provided a protective buffer zone for the umbilical railway. The initial buildup of Soviet naval strategic potentials centered on Murmansk, and Kola's maze of fiords and natural harbors.

The main problem concerned the limited range of early submarine-launched missiles. Targeting of Americans demanded proximity to American shores. Exit into the Norwegian Sea was not then challenged. Soviet Naval Commander in Chief, Admiral of the Fleet Gorshkov, evinced little respect for the bottling-up capacity of NATO antisubmarine warfare efforts across the Greenland-Iceland-U.K. (GIUK) gap. But he respected the U.S. Navy's underwater acoustic listening systems (SOSUS) and the attrition probabilities associated with traverse through thousands of miles dominated by NATO surface, subsurface and air units.

Gorshkov ordered exploration of under-ice Arctic transit routes, and priority development of intercontinental-range Submarine-Launched Ballistic Missiles (SLBMs).³ By 1967 the Soviet Union had published tectonic (structural) maps of the Arctic Ocean floor, right up to Canada's northern islands, that were more accurate, with better discrimination than the best analogous Canadian maps of these islands' land surfaces.

The first intercontinental-range Delta SLBMs, arriving after 1972, promised relief from the need to transit. Missiles could be fired from the northern bastion, protected by concentrated surface elements and naval and land-based air cover. Pioneer Arctic expertise was subsequently incorporated into new hull and superstructure designs that allowed ballistic missile submarines to break through the ice cap. Adjacent Arctic regions became extensions of the home fortress.

The incorporation of Arctic expanses was forced by Norway's creeping integration into U.S. naval operational designs.

- Loran C navigational facilities in the early 1960s provided "fixed launch surveilling" for the Polaris;
- the subsequent installation of a SOSUS listening network off northern Norway furthered the trend;
- the 1970s and early 1980s brought pre-positioning for the U.S. Marine Corps, Colocated Operation Base agreements to prepare airfields to host U.S. Air Force squadrons, and the Invictus accord that allows U.S. carriers up to 100 fighter-bombers and other aircraft the use of Oerland airfield, north of Trondheim;

- peacetime training patterns routinized procedures intended for war or “crisis”;
- the strike and range potential of Norwegian access provided the crucial underpinning to the U.S. Navy’s 1980s ambition to penetrate into, and challenge Soviet control of the Barents;⁴
- the Norwegian anchor was complemented by a pattern of increasing U.S. attack submarine activity under the Polar ice.

The under-ice threat was manageable. The absence of a comprehensive Arctic SOSUS and supporting surface and air antisubmarine warfare components provided good survival odds for Soviet SLBMs, especially in view of their greater familiarity with Arctic conditions and phenomena. And core Norwegian facilities, first-priority targets—subject to preemption if fully employed—could be crippled.

Nevertheless, the trend towards greater exposure in the northwest may have contributed to the mid-late 1970s decision to develop a second “home bastion” for SLBMs in the Sea of Okhotsk—although the decision may merely have reflected the confluence of intercontinental range, a much improved maritime-industrial infrastructure, and the coming of the Baikal-Amur Mainline, the 2,000-mile northern spur to the Trans-Siberian rail line. The geography of the Okhotsk, which is extraordinarily favorable for that purpose, appeared to assure Soviet land-air dominance over at least its inner reaches. Multiple but narrow straits that constrain exit afforded ideal conditions for defence against entry. Some underwater penetration might occur, but shallow regions give peculiar advantage to Moscow’s new diesel-electric submarines. Supporting surface and carrier-air penetration is not likely.

The complementary development of the Northern Sea route proceeded apace. Ever-increasing icebreaker capabilities, both nuclear and conventional, gradually extended the season for surface navigation. Obvious civilian and commercial benefits dominated the official rationale. Yet military ramifications are evident. Submarines could transit before, but now surface warships can also redeploy under cover of land-airpower far more quickly than before and far quicker than American fleets.

Naval Buildup

The emergence of the new Soviet Navy dates from 1961.⁵ Disdained as a relic a few years before, it became, instead, crucial to the future. The transformation mirrored a more sober understanding of ICBMs. Experience, tests, and increasingly caustic U.S. appraisals (particularly scathing in 1961) revealed a whole series of problems covering missile design, reliability, accuracy, and command and control. Early fuels could not be stored aboard. It would take days to prepare them for firing. They were stationary, above ground, and extremely vulnerable.

The decision to put some to sea and to upgrade the navy was part of the response. Other elements of the drive for survivability and availability ranged from silo construction to experiments with mobile missiles, missile defense and space basing. Silo hardening constituted an uncertain race against improving accuracies; mobility, defense and space aspirations foundered against both technological and operational obstacles. The navy grew.

Its primary task was to insure Soviet strategic might. The Yankee nuclear theater-range ballistic missile submarine was developed. The strategic priority was reflected in efforts to insure its viability. The preparation of the Arctic transit option has been mentioned. It was also accompanied by an array of surface vessels designed to provide a protective antisubmarine warfare screen. The defensive strategic task of engaging carrier, and later Polaris nuclear threats was also reaffirmed. New classes of surface combatants with nuclear-tipped torpedoes and cruise missiles were procured. As numbers increased, exercises established a regular operating pattern in the Norwegian Sea, then extended the presumed engagement perimeter westward to beyond the GIUK gap. A Mediterranean squadron was established, and then a less permanent Indian Ocean squadron, and an intermittent Caribbean presence. By 1970 Moscow was able to stage its first truly global exercise, Okean.

The Soviet Union's oceanographic research and fishing fleets—the largest in the world—and the rapidly expanding merchant marine provided scientific, intelligence, and other support. The Soviet Navy acquired its own acoustic listening systems, though less advanced than America's. Satellites revolutionized navigation and over-the-horizon targeting prospects.

Distant power projection capabilities brought peacetime and low-intensity options. Naval squadrons were positioned to dissuade American intervention in Angola, Bangladesh and elsewhere. Fleet presence was employed to secure the release of Russian fishing trawlers in West Africa, to shore up morale in Havana, Tripoli and Mogadishu, and to help Vietnam resist and counter Chinese attack. The navy embraced the role of protector of State interests abroad, agent and defender of Soviet politico-economic initiatives in the Third World, and used its new mantle to press for a larger share of defense resources.

But again, the navy was in danger of overreaching. Its primary purpose was embodied in its design. The navy was then predominantly nuclear, one-shot, with little or no reload capability. It was designed in accordance with prevailing doctrine: war would be nuclear, sudden, cataclysmic. Its new ambitions suggested more general challenge for command of the seas, an infinitely more demanding task in terms of quantity and sustainability.

The mid-late 1970s navy could control home seas with a high degree of confidence; intercontinental-range missiles dispensed with the offensive requirement to extend domination and breakout support westward. More powerful cruisers with missiles that provided longer range and larger yields

against ship and air targets signaled greater potency against carrier task forces. In peacetime the navy could now support and protect clients, and to a limited degree, further overseas interests. The latter was a major accomplishment with profound international ramifications. Distant interventionary-type potential, however, was still marginal, effective only where U.S. interest was slight, or where the balance on the ground was particularly favorable as in Angola, Ethiopia and Vietnam.

But the climate no longer favored naval advocacy. Economic growth slowed. Soviet military procurement growth ended in 1976, according to CIA reports of 1983 and 1986.⁶ Domestic needs were pressing.

New Soviet Strategy, New Naval Purpose

Strategic building programs sanctioned by SALT I appeared to confirm parity, secured and buttressed by survivability and redundancy. It became apparent that neither side could circumvent nor negate the other's capacity for devastating retaliation. Nuclear preemption no longer made sense, nor did strikes against the other's homeland.

By 1977 Moscow had embraced a second postulate. Nuclear weapons and probable escalatory dynamics defy control and threaten holocaust. Nuclear potentials were not discarded. They remained the ultimate deterrent. Nuclear warfighting was to be avoided because of escalatory dangers, as the "friction" of real combat would likely defy control, whether horizontal or vertical. If unleashed, nevertheless, the only distinction that could possibly be maintained would be the ultimate one, between other areas and the superpowers' own homelands. (Because of the profusion of nuclear-capable systems at sea, and because nuclear potential remains a central theme of U.S. naval expansion, nuclear avoidance may not be feasible in this arena; on the other hand, and notwithstanding U.S. naval doctrine to the contrary, this is perhaps also the arena that can most easily be "quarantined.") Nuclear preemption against the United States or, conversely, against the U.S.S.R. is no longer viable. This means that strategic reserves must be able to survive a lengthy period of threat.

The Reagan administration's apparent espousal of nuclear warfighting tenets in the 1980s caused no change in Soviet posture.⁷ Soviet nuclear strike forces were modernized, but the strategic component's share of the defense budget was reduced (again, according to the CIA).⁸ Soviet funds were diverted to new conventional, "smart," and exotic weapon technologies that promised nuclear-type efficiency without the nuclear albatross of loss of control and purpose.

The navy also retooled. Priority efforts were directed to the development of long-range conventional sea and air-launched cruise missiles, and the systems were designed for reload. The new doctrine required sustainability

on land and at sea. First-salvo nuclear engagement expectations were replaced by scenarios that put a premium on conventional options and naval journals evinced new interest in the “operational level of war.”⁹

Naval strategic forces were also affected as they no longer provided sole insurance. First, by the 1970s, Soviet strategists had become far more sanguine than their American counterparts about the impact of new accuracies on land missile survival odds. (A decade later, three-quarters of their strategic arsenal remained land-based, as opposed to less than one-quarter of America’s.) They appreciated the fact that while *pro forma* accuracies reflected the calibration of gyroscopes and accelerometers over peacetime test ranges, wartime trajectories would entail different atmospheric and gravitational phenomena. While satellite readings can correct for many of these, theoretical accuracies are not likely to be fully realized. And, in view of improved silo-hardening techniques, a significant proportion of land-based missiles is likely to survive attack and be available for response. Secondly, ballistic missile defense remained a hope. Early technologies proved inadequate, but substantial investments in research reflected continuing aspirations. Finally, missile mobility problems were overcome. The mid-1980s saw deployment of a new generation of mobile intercontinental-range ballistic missiles.

The fear that new accuracies and counterforce dynamics imperiled land-missile survival gave special status to the SLBM force; as the, perhaps, sole future guarantor of Soviet retaliatory might, its survival prospects appeared sacrosanct. The sinking of a single Soviet SLBM might then have sparked an all-out exchange. The emergence of complementary insurance elements, redundant second-strike potentials, changed the equation. It suggests that a portion of the SLBM force may now conceivably be released for other theater and sea combat (anticarrier) operations. It also suggests that at least limited SLBM attrition can be tolerated, and that it will be answered by action against analogous high-value, strategic, yet offshore targets—enemy SLBMs or carriers. This interpretation is reinforced by, and is in fact a compelling and logical corollary of, the new doctrinal dictum that strikes against superpower homelands must be avoided.¹⁰

The navy’s relative eminence was also threatened by the new doctrine’s increased emphasis on combined-arms integration and sustained mobility, on combined-arms support for deep penetration and forward drive. Wartime Theaters of Strategic Military Operations (TVDS) were redefined,¹¹ and the wartime practice of Supreme Command representatives taking direct charge of these multifront, all-arms composites was institutionalized; Marshal Ogarkov’s 1984 assignment to direct the crucial western TVD (incorporating Soviet and Warsaw Pact forces aimed at the central front) after seven and a half years as Chief of the General Staff, responsible for the doctrine’s adoption and implementation, underlined the seriousness of purpose. Military bookstore display prominence, and other indicators, confirm Ogarkov’s

continuing stature as the Soviet Union's most influential strategist. In the Soviet military the stature of the man reflects the stature of the post.

The navy stood, once again, as adjunct to a land and Army-dominated whole. Naval interventionary-type potentials were accorded low priority. The first genuine carrier would not be fully operational until the 1990s. The navy's procurement of specialized underway replenishment and amphibious assault vessels was set aside (after one Berezina and two Ivan Rogovs); landings would employ civilian transport and RO/RO ships. The combined-arms approach and the co-option of civilian resources reemphasized tradition, and the fact and purpose of a unified, integrated command structure.

Whereas Gorshkov, the "Father of the Red Navy," may have fought the new doctrine, his successor as Naval Commander in Chief, Vladimir Chernavin, anticipated and embraced it. Chernavin's embrace of the integrative approach went beyond mere acceptance of historical inevitability and fiscal circumstance.¹² His prior experience as submariner, and later as Commander of the Northern Fleet, suggests appreciation of the role and efficacy of land-based air support. (Fifty percent of the 4,000 kilometer-range Backfires, now armed with standoff missiles, have been assigned to Naval Aviation; Soviet air defense forces provide multiple interceptor and surface-to-air missile screens for naval bases and facilities.)¹³

Furthermore, the greatly extended range of maritime standoff threats against land targets meant that naval flank protection for European theater operations had to be correspondingly extended; land requirements demanded command of adjacent seas, or at least sea denial. In the north and Far East, the absence of a land buffer added a crucial defensive dimension to the argument—a dimension reinforced by the U.S. Navy's declared readiness to hit land targets in response to loss at sea. (Soviet strategists might doubt the logic, rationality and hence likelihood of retaliation against the homeland, but contingency planners must prepare for contrary mindsets and other eventualities.) Land security demands a naval buffer; a modern naval buffer must have high seas potency.

Moscow is not likely to add to its embryonic carrier fleet, however. The existing carrier, when operational, is likely to be assigned primarily to fleet protection, not power projection. The traditional Soviet view of carriers, as "sitting ducks," was reinforced by the Falklands War: the British Navy owed its survival to the extraordinary failure rate of Argentine munitions. Argentine Exocets served notice that power projection against air-rich environments is becoming increasingly hazardous. The point applies to distant interventionary designs; it also applies to the far more potent and sophisticated air defense screen that envelopes the Barents.

By adopting the combined-arms approach as his own, Chernavin appears to have broken the traditional pattern of naval rise and fall, and in the process has established a niche of perhaps greater substance and permanence.

Mid-1980s Soviet commentary assigned national territorial sectors to five Theaters of Strategic Military Operations (in war “they may stretch to several continents . . . over the whole globe—including . . . space”), but identified commanders for only four.¹⁴ The exception was the northwestern TVD which encompassed Leningrad and the Kola and projected out over northern Scandinavia. The 1983 Soviet *Military Encyclopedic Dictionary* notes that TVDs include “the coastal waters of the oceans . . . and the contiguous coastlines of continents and the airspace above them.”¹⁵ Two contiguous oceanic TVDs were also identified, the Arctic and the Pacific—also without publicly designated commanders.

The formulas assign Baltic and Black Sea Fleets to continental TVDs. In the Arctic and Pacific, however, the overlap in continental/oceanic TVD responsibilities, and acknowledgement that TVD boundaries may be “variable,” suggest different constellations, especially in the context of all-arms integration.¹⁶ Fleets may be subordinated to continental TVDs, but divisions, armies and even fronts may also be subordinated to oceanic TVDs. In the northwest the navy is dominant. In war, the Arctic commander is likely to be the naval commander in chief acting as designated representative of the Supreme High Command. As senior combined-arms commander in the region, his authority will extend to its *de facto* rear, namely the Northwestern TVD. In the Far East, the fact that the Pacific Fleet is not explicitly assigned to the continental TVD suggests that it may, in war, act as a separate oceanic TVD with responsibility extended to include air and land support forces or, alternatively, that it could be assigned to the (presumably senior) Arctic TVD commander.

The independent Russian Navy was vulnerable, beholden to fate and to circumstances over which it had little control or influence. Its moments of glory were transient. The new Soviet combined-arms navy, on the other hand, is integral to Soviet power. It is not transient.

America's new 600-ship navy, configured according to forward strategy precepts, with attack submarines penetrating close to Soviet base complexes, a doctrine that calls for strikes on Soviet land targets in response to clashes at sea and cruise missiles that can be launched from afar, serves the cause of Soviet naval advocacy. In earlier eras, coastal defense scarcely impacted on homeland survival, while naval power projection was a luxury, useful if you could afford it, but not necessary. Today's U.S. naval posture and emerging long-range strike potentials impact directly on the core concerns of the Red Army. Distinctions between periphery and heartland are erased. Technological and adversarial dynamics have compelled the Red Army to adopt and integrate naval potentials. The navy has become crucial to heartland defense—and to the deterrence task of ensuring that the adversary face the same dilemma, the same threat. During the 1960s, 1970s and early 1980s, only

the SLBM force was essential to Soviet deterrence. In the new threat environment, long-range naval surface and land/naval airstrike technologies also become vital. Previously their import could be dismissed as marginal. Today they are of the essence.

Finally, Moscow's official position on long-range (dual purpose) cruise missile developments is the same as her position on the weaponization of space: that both dynamics threaten to make verification (and hence arms control) impossible, that neither can alter the fundamental underpinnings of the strategic equilibrium, yet both will inevitably increase jitteryness, and instability. If these dynamics do proceed, however, the relative advantage may be Moscow's (though not one commensurate with the cost of greater instability). Today America's allies and forward-based systems ring the U.S.S.R. Advanced cruise potentials, deployed on civilian as well as military carriers, and space basing, will allow Soviet forward-based systems to ring the United States.

Notes

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2. C. G. Jacobsen, *Soviet Strategy—Soviet Foreign Policy* (Glasgow, Scotland: The University Press, 1972), pp. 142-160.
3. C. G. Jacobsen, *Soviet Strategic Initiatives* (New York: Praeger, 1979), pp. 73-117; on Soviet Arctic exploration, note for example *Tektonicheskaya Karta Arktiki i Subarktiki* (Leningrad, U.S.S.R.: Institute for the Study of the Arctic and Antarctic, 1967).
4. J. D. Watkins, "The Maritime Strategy," U.S. Naval Institute *Proceedings*, January 1986, pp. 3-17.
5. M. McCWire, "Naval Power and Soviet Oceans Policy," J. M. McConnell, "Military-Political Tasks of the Soviet Navy in War and Peace," and C. G. Jacobsen, "The Civilian Fleets," in *Soviet Oceans Development* (Washington: U.S. Govt. Print. Off., October 1977), pp. 80-183, 184-210, 257-286 respectively; for the larger strategic context, see C. G. Jacobsen, *The Nuclear Era* (England: Spokesman; Cambridge, Mass.: Oelgeschlager, Gunn & Hain, 1982).
6. C. G. Jacobsen, "Soviet Military Expenditures and the Soviet Defence Burden," *SPIRI Yearbook 1986* (Oxford, England: Oxford University Press, 1986), pp. 263-274.
7. N. V. Ogarkov, *Istoria Uchit Bditel'nost'* [History Teaches Vigilance] (Moscow: Voenizdat, 1985), pp. 24, 47, 88.
8. *SPIRI Yearbook 1986*, p. 267.
9. New Soviet naval designs reflect the doctrinal emphasis on surface-to-surface sustainability; see e.g. *Defence*, June 1986, pp. 265-370. In *Morskoi Sbornik*, September 1986, Admiral Chernavin pioneers discussion of a conventional first salvo.
10. M. McCWire, *Soviet Military Objectives* (Washington, D.C.: The Brookings Institution, 1986), see chapters 1, 5, 7.
11. J. G. Hines and P. A. Peterson, "Changing the Soviet System of Control," *International Defence Review*, no. 3, 1986, pp. 281-289; see also Ogarkov, pp. 24, 47, 88; and M. V. Gareyev, *M. V. Frunze—Voyennyy Teoretik* [M. V. Frunze—Military Theory] (Moscow: Voenizdat, 1985), pp. 239-241, 380-381.
12. "Chernavin—the new C-in-C of the Soviet Navy," *Jane's Defence Weekly*, no. 2, 1986, pp. 61-62; see also V. N. Chernavin in *Morskoi Sbornik*, January 1982: "there are no purely independent spheres of armed struggle . . . [victory] is attained by the joint effort of all combat arms."; R. V. Shlomin in *Morskoi Sbornik*, April 1983 notes "the objective requirements . . . of mutual penetration of combat arms to the sphere of activities of the other combat arms."
13. Analogous trends began to affect US dispositions: *Memorandum of Agreement on Joint USN/USAF Efforts for Enhancement of Joint Cooperation* (Washington: U.S. Govt. Print. Off., 1982); see also *Basic Aerospace Doctrine of the United States Air Force* (Washington: U.S. Govt. Print. Off., 1984). This upgrades the "maritime role" to the status of "major mission."
14. Hines and Peterson, quoting from the *Polish Naval Review*, December 1983.
15. *Military Encyclopedic Dictionary* (Moscow: Voenizdat, 1983).
16. Hines and Peterson, pp. 281-289; also, Ogarkov, p. 47.