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AVIATION HISTORY

THE NAVY OF THE 1970 ERA



Office of the Chief of Naval Operations
January 1958

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Enclosure (1)



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON 25, D. C.

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From: Chief of Naval Operations

To: Distribution List

Subj: The Navy of the 1970 Era

Ref: (a) Statement of U. S. Navy Long Range Objectives, 1967-72 (LRO-57)

Encl: (1) Copy of subject statement

1. Enclosure (1) is a statement in condensed form of present views regarding the desirable long range posture of the Navy, in relation to the nation's needs. Conceptually it is in full accord with reference (a), which remains in effect as the basic and more detailed statement of Navy long range objectives. The enclosure adds to reference (a) a more comprehensive statement of future *numerical* objectives, for ships and aircraft; in a few instances these numbers are revisions of those in the reference, reflecting recent developments. To this extent the enclosure modifies and supplements reference (a).

2. The enclosure is approved for wide distribution to meet two objectives:

a. To provide a source, of lower classification than reference (a), which will be used freely to provide *all officers* with a broad perspective of where the Navy is heading, and why.

b. To provide material useful in interpreting the Navy of the future, and its value to the nation, to persons outside the service.

A handwritten signature in cursive script, reading "Arleigh Burke", is positioned above the printed name.

ARLEIGH BURKE

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THE NAVY OF THE 1970 ERA

For over two years the Navy has had an approved ten-year shipbuilding program. In August 1957, as the culmination of a three-year study, the Chief of Naval Operations approved long-range objectives for Navy weapons and forces, for the period through 1972. The ten-year shipbuilding program has been brought into accord with these objectives. This ship program to a large extent defines our ten-year programs for aircraft and missiles, but further refinement of the latter programs is in process.

Our long-range objectives and programs are not rigid. We recognize that technology, and changes in enemy posture and threat, will later require revisions which are now unforeseeable. We keep the objectives and programs under continuing review. But these objectives are founded on principles and basic situations which change slowly. We therefore believe that in their broad elements our long-range objectives present a picture of the future Navy which will remain valid, and toward which we can safely build. I will describe that Navy in broad terms.

I will start by describing in two capsules the broad *national* military problems of the 1970 era, to which the posture of this future Navy must be adapted:

First, the United States must have a guaranteed ability to deter all-out war. This means above all that we must have nuclear retaliatory forces which cannot be knocked out by surprise attack.

Second, the more certainly we can deter all-out war, the more certain the threat of limited aggression will become. We must be able to defeat limited aggression on whatever scale the Soviet bloc is able to wage it, and that is now a very large scale. We must be able to do this without provoking all-out war. I say this because I am now talking about 1970, and with the weapons of 1970 all-out retaliation will be unthinkable as an answer to anything but an all-out attack.

Against this background I will describe the Navy of the 1970 period, which we are aiming at. It will be a Navy of over 900 ships, and about 7000 aircraft.

About 50 of these ships will be missile launching submarines, with nuclear power.

About 90 of these ships will be in our surface striking forces. Over a third of these will have nuclear power.

About 400 ships will be in our anti-submarine forces, which will also defend our sea commerce against air attack. About 75 of these will be submarines, almost all with nuclear power.

About 90 ships will be required to provide amphibious lift for two Marine divisions.

Another hundred ships, mostly of small size, will be required for mine warfare and coastal patrol tasks.

Finally, there will be about 200 supply ships, tenders, tugs, and other auxiliaries, to keep the fighting ships in top fighting trim.

Of our 7000 aircraft about 1600 will belong to the striking forces. These will be fighter, attack and reconnaissance types.

About 1300 aircraft will be assigned to anti-submarine warfare. These will include large patrol planes, carrier planes, and helicopters.

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Another 1100 will be fighters, attack planes, and assault transports assigned to the Marine Corps. As many of these as possible will be able to take off and land vertically.

The remaining 3000 or so will be aircraft required for support of the combat forces, for training, and for research, development, test and administrative activities.

This is the shape of our planned Navy in broad outline. Now let me go back and relate the pieces to the national needs I described earlier.

Of our 900-odd ships we relate only the 50 missile submarines, and a few of their tenders, directly to the all-out nuclear deterrence problem of 1970. We are not at all embarrassed about the smallness of this proportion. In the first place, we are not planning that the Navy will accomplish the whole national deterrent mission by itself — even though at the moment we know of no land-based weapon program which promises the same security against surprise attack that the submarine does. And in the second place, it does not take unlimited strength to deter. This is particularly true if the retaliatory force is secure — if it doesn't lose most of its strength to an initial attack.

In 1970 the 50-submarine program we are talking about could put some 800 thermo-nuclear missiles at sea — over 300 of them would always be at sea, submerged, their location unknown to the potential aggressor. These 300 missiles alone — capable of destroying a hundred or more cities — would give pause to any rational aggressor.

But we do not believe the United States should put all its retaliatory eggs in one basket. I assume that other invulnerable systems will eventually be developed by the other services. And so, while we could make ourselves look ultra-progressive by padding our objective with more missile submarines, I believe our approximate number of 50 is adequate. This includes about 40 submarines to use the POLARIS ballistic missile, and a round dozen smaller boats which by 1970 should have small, very precise missiles which we can also use for tactical purposes.

One reason why we resist inflating our retaliatory forces is the urgency and magnitude of the limited war problem. Wars of limited objectives can be waged on land, at sea, or in the air. The Soviet capability for waging them is massive. It has not diminished with Sputnik — it may still be increasing. To the vast Soviet armies and tactical air forces must be added the satellite forces, steadily being re-equipped and trained with modern arms. The Soviet Navy continues to grow larger and more modern — and so do the satellite navies. Our future military posture must face and meet the threat which these forces hold over us.

However the limited war of 1970 may be fought — and I have already said that all-out response is no safe answer to this threat — the Navy must be prepared to be in the thick of it.

A war of limited objectives, by definition, will not be fought in the U.S., or in the U.S.S.R. It will be fought over a third country. To help that third country we must exert our power — limited and discriminating power — on the other side of some ocean. We must get it there quickly and get it ashore quickly. We may have to supply it there for protracted periods. We cannot do these things without three capabilities:

First, a capability to control the sea routes to and surrounding the area of aggression — and any other sea routes along which we are threatened or harassed.

Second, a capability to strike within the area of aggression — to strike precisely and with discrimination, using weapons appropriate to the scale of the war, and inflicting minimum harm on our friends ashore.

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Third, a capability to put forces promptly ashore in the area against whatever resistance there may be.

The great bulk of the planned Navy of 1970 is designed to meet these needs — to provide the spearhead and the shield for the free world's ability to defeat limited aggression without incurring unlimited catastrophe.

The forces for these purposes must be large, because:

First, the enemy's forces will be large.

Second, the extent of the oceans — and their shorelines — itself requires large forces to assure their control.

Third, we cannot throw megaton weapons around to cover our quantitative weakness in this type of war.

Our largest group of forces will be those required for anti-submarine warfare — offensive and defensive — and for the air defense of shipping. These forces — some 400 ships and 1300 aircraft — will include:

9 anti-submarine carriers and their aircraft

About 30 long-range patrol aircraft squadrons, plus those in the Naval Reserve

About 75 anti-submarine submarines

About 75 destroyers, most of them with guided missiles

About 240 escort and picket vessels, nearly half of them with guided missiles for air defense, and all equipped either with anti-submarine helicopters or anti-submarine missiles.

Most will be built around advanced types of sonar, and some may be of radically new design.

These forces will be flexible. They will protect sea routes. They will convoy military transports or naval supply ships or merchant shipping. They will support landing forces, form protective lines off beachheads, or seek out and hunt down submarines in the open ocean.

They will also, and I emphasize this, be equally useful to defend the United States against missile launching submarines. While our main defense against such attack must be our own invulnerable deterrent forces, and while a *total* defense against *any* form of nuclear attack is impossible, we cannot, and do not intend, to leave any enemy a free shot at us. The anti-submarine forces I have listed can give us excellent warning of submarine attack and can impose a high level of loss on attacking submarines, and they meet our minimum requirements for limited war. It would be unreasonable, in view of other national needs, to ask for more.

These forces are the shield behind which we can project and maintain a limited war capability overseas. The point of the spear will be our surface striking forces. For the 1970 era we will require six such forces, composed on the average of 14 ships each: 2 carriers, 3 guided missile cruisers, and 9 guided missile frigates. At least two of these six forces will be fully nuclear powered.

For these forces we will need by 1970 twelve modern, postwar attack carriers. In addition, we will still need our three latest converted carriers, but only in a training and emergency role. We allocate to these surface striking forces in 1970 only 87 ships in all, less than one tenth of our planned total ships, but their mission will be important.

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We see no substitute in 1970 for the long-range missile as the deterrent to all-out war. We likewise see no substitute for the manned aircraft, for the discriminating delivery of small weapons, which we must still be able to do in limited war. We see in the aircraft carrier the essential answer to the latter problem — precision striking forces which can get quickly to the scene before the war has been lost.

But we see also in the attack carrier force a continuing, flexible, alternate capability to contribute to all-out war if it should break out. For we intend to provide our attack aircraft with thermo-nuclear missiles, of several-hundred-mile range, which in emergency they can use against any target up to 1200 or 1500 miles from their carrier base.

These striking forces — while no less destructible than anything else on the face of this earth — will have a defensive capacity adequate for the most extreme degree of limited war. Each force will have something like 30 surface-to-air missile launchers — more probably than any land target outside of a few large cities. Its fighters also, in 1970, will probably be in the form of advanced airborne launching platforms for air-to-air missiles of 50-mile range. It will be possible to get through these defenses. But we should ask ourselves what *limited* war objective will be worth the costs to the enemy that such an effort would entail. I want to make it very clear, so I repeat — that for 1970 we are optimizing the carrier force for *limited war*, to be the nation's primary cutting tool for this purpose. The deterrence of all-out war will *not* then be the carriers' number one job. The carrier force need *not* measure up to the defensive requirements of that role in 1970, however useful it may be in that context in the next few years.

I have covered the shield, and the point of the spear. The rest of our limited war spearhead is the amphibious force. For 1970 we plan ships to land two Marine divisions. These will be modern, 20-knot ships. They will be designed to permit maximum utilization of the vertical assault technique, as well as to facilitate over-the-beach support when required. There is no single element of the national limited war capability more essential than the ability to put modern Marine forces ashore within a week or so after a limited aggression starts.

I previously mentioned a requirement for about a hundred small ships for mine warfare and coastal patrol. These are largely in support of our ability to project our amphibious forces into remote areas, and to operate our anti-submarine forces from bases overseas.

I mentioned the objective of 200 auxiliary ships. These serve, and make effective overseas, the entire range of combatant forces I have discussed. There will be fast replenishment ships for the striking forces; tenders for submarines, seaplanes, and other anti-submarine forces; repair ships, tugs, rescue ships and supply ships to support all forces. We contemplate that World War II ships, although tired and near their end, may meet up to half of these requirements as late as 1970.

There is one further aspect of the 1970 Navy that I cannot say too much about, because it is too early to predict. We do know that the seaplane is an optimum vehicle for nuclear propulsion, for a number of reasons. We know that large nuclear-powered seaplanes have a potential for wide dispersal in remote sea areas, relatively secure against surprise attack. Perhaps as carriers of long-range missiles such aircraft could help fill the nation's all-out deterrent needs in 1970. While we cannot predict such a force in our 1970 Navy, we do intend to develop large seaplanes — and nuclear power in seaplanes — toward whatever uses will be profitable to the nation, as the technology unfolds.

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In addition, I should mention Naval Reserve forces. For future *all-out* war, the requirements for Reserve forces are limited to moderate numbers of a relatively few types. These would largely be anti-submarine units, pre-designated and kept in a high state of readiness for specific assignments. In all-out war there is little likelihood that one will be able to assemble large reserve forces of many types, train and equip them, and get them into action in time to be useful. However for limited war, strong Reserve forces of a number of types, in some strength, are essential. In our 1970 Navy we would rely on the Reserve primarily for four kinds of limited war jobs:

First, to bring our regular forces up to full wartime manning levels.

Second, to expand our anti-submarine and mine warfare forces.

Third, to provide a follow-up capability behind the amphibious assault spearhead we maintain in our regular forces.

Fourth, to expand our peacetime logistic support forces, in order to meet the higher wartime consumption rates as quickly as possible.

This of necessity has been the briefest summary of our projected Navy posture for the 1970 era, toward which we plan and build — and will seek appropriations. Many details and explanations of items which may interest you more deeply have been omitted for brevity, for reasons of security — and because we do not have all the details yet. This is a broad brush, but we feel it is on the right track.

In my description of the 1970 era Navy, I have thus far excluded mention of satellites. Our view is that satellites, which orbit indiscriminately over land and sea, are the proper subject of a *national* program, not of separate service programs. The Navy views the development of such a national program as of urgent importance. The Navy of the 1970 era will rely heavily on earth satellites for reconnaissance, for the support of long-range communications between widely dispersed naval units, for assistance in precise navigation at sea, and for other purposes.

Our Navy objectives for the 1970 era have been developed on the assumption that the Soviets will also use satellites for similar purposes. We thus can no longer assume that major surface units of the future will operate in complete security from enemy observation. This development will have varying effects. It will increase the importance of the submarine in the all-out deterrent role, and also for anti-submarine warfare near the enemy's shores. It will prevent us from placing full reliance on carrier forces in the all-out deterrent role. It will make close convoy escort more difficult, and other means of protecting shipping more attractive. It will reinforce the requirements for dispersal and faster movement which nuclear weapons have already established. These considerations are already incorporated in our objectives.

However, there are some conclusions to which contemplation of the satellite, in conjunction with future weapons, does *not* lead us. In this connection, I would dispel one illusion which has of late carried away some very sincere and able men, quite competent in their special fields. This is the notion that the whole Navy of the future should submerge. There are several answers to this.

My first and broadest answer gets down to basic philosophy. Do we accept the inevitability of all-out war? Or are we determined to prevent it?

Our future Navy is designed to prevent all-out war — to control and limit war to magnitudes we can tolerate. I am afraid the idea of an all-submerged Navy is keyed to the spirit that

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future war can only be all-out — that nothing on the surface can survive — that everything must go underneath. But if this is true at sea, it is true on land also. We are all vulnerable here on top.

I categorically deny that we must accept this hopeless outlook. We have to learn to live with our vulnerability. If human life is to be human, we have to stay on top, rather than become cave dwellers.

The best way to do this is to resolve that we can and will overcome the threats that surround us — by means other than all-out war. This means we *must* have a secure deterrent to all-out war — which we can and should put below the surface of the sea. But it also means accepting the burdens and restraints associated with limited war. This kind of war *can* be fought efficiently on the surface — in fact it *must* be fought largely on the surface and in the air. The principal burdens of limited war are these: One must identify one's target with certainty, hit it precisely, and refrain from excessive force. This is a bit difficult against most targets when one fires blind from under the sea or from under the ground. But if we do have these abilities in our armed forces the whole free world can safely stay up in the fresh air.

We have planned to put our all-out deterrent forces under the surface. They do not require high degrees of precision and discrimination.

We have also planned to put a goodly part of our anti-submarine force underneath. As technology advances, we may increase the latter element. But as we see it today, even in undersea warfare the nuclear submarine will have no permanent magic that foreseeable surface destruction systems, and advanced aircraft and missile systems, cannot puncture. Submarines are relatively easy to sink once you find them. The technology of finding them is progressing fast. The tools are not all here yet, but they are coming. When they arrive we will be back to the hard, close decisions as to which anti-submarine tools we buy — instead of the easy choice we have when we are buying miracles.

I will say one more word about the submarine in anti-submarine warfare. The mixed bag of tricks we plan, — surface, air, and undersea — will give the enemy submarine skipper a much harder time than any single weapon.

We have a very large job to do. It takes very large numbers of ships to do it. And except for a few rather specialized jobs, the submarine is about the most expensive way to fight a war on and from the sea. If we got all the way under the surface there would be many jobs we couldn't do at all. To do the rest it would cost us many times as much as it costs on the surface. We trust the nation wants us to do the whole job well, at the least cost.

We therefore — despite our considerable enthusiasm for submarines in their proper place, and with all due respect for those who feel otherwise — we feel it our duty to stay largely on top. You may count this also as a Navy affirmation that, if we plan intelligently and are willing to sacrifice enough, there is still a future on top for the human race.

Our Navy of the future, then, expresses our conviction that we *can* remain human, and not become moles. And this Navy will play a very major part in bringing about this result.

APPENDIX

THE NAVY OF THE 1970 ERA

A. TENTATIVE ACTIVE FLEET OBJECTIVES

- 52 MISSILE-LAUNCHING SUBMARINES, ALL NUCLEAR POWERED
 - 40 with POLARIS or a successor, 1500-mile or greater range
 - 12 with smaller missiles, 1000-mile or greater range
- 87 SHIPS IN SURFACE STRIKING FORCES
 - 12 Modern Attack Carriers (6 with Nuclear Power)
 - 3 Large Training Carriers
 - 18 Guided Missile Cruisers (12 with Nuclear Power)
 - 54 Guided Missile Frigates (18 with Nuclear Power)
- 398 SHIPS IN ANTI-SUBMARINE FORCES
 - 9 Anti-submarine Aircraft Carriers
 - 75 Submarines (65 with Nuclear Power)
 - 72 Destroyers
 - 60 Ocean Picket Ships
 - 182 Ocean Escorts
- 90 SHIPS IN AMPHIBIOUS FORCES
 - 18 Helicopter Assault Ships
 - 58 Assault Transports and Landing Ships
 - 14 Command and Support Ships
- 110 MINE WARFARE AND SMALL PATROL SHIPS
- 190 AUXILIARIES
 - 50 Fast Underway Replenishment Ships
 - 140 Tenders, Tugs, Repair and Supply Ships

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SHIPS WITH NUCLEAR POWER.....	150-Plus
SHIPS WITH LONG RANGE SURFACE MISSILES.....	52-Plus
SHIPS WITH AIR DEFENSE MISSILES.....	200-Plus
SHIPS WITH ANTI-SUBMARINE MISSILES.....	450-Plus
SHIPS WITH ANTI-SUBMARINE AIRCRAFT.....	150-Plus

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**B. TENTATIVE OBJECTIVES FOR OPERATING AIRCRAFT
(Approximations: Air Reserve Aircraft Included)**

- 600 FIGHTERS WITH LONG-RANGE AIR-TO-AIR MISSILES
 - 400 for Attack Carriers
 - 200 for Marines
- 1250 LIGHT ATTACK AIRCRAFT
 - 1000 for Attack Carriers
 - 250 for Marines
- 400 RECONNAISSANCE AIRCRAFT (Navy and Marine)
 - 70 Long Range Seaplane, Mining and Recco
 - 180 Early Warning and Air Control
 - 150 Photographic, Electronic, Tactical Recco
- 1300 ANTI-SUBMARINE
 - 500 Long Range, Land and Seaplane
 - 400 Short Range, for Carriers
 - 400 Helicopter
- 500 ASSAULT TRANSPORTS (MARINE)
- 1250 AIRCRAFT FOR SUPPORT OF FLEETS
(Target, Logistic, Development and Test, Rescue, Fleet Training)
- 1700 AIRCRAFT FOR TRAINING COMMAND
- 7000

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