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CANADIAN MARITIME STRATEGY IN THE SEVENTIES

by

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(The contents of this paper are the responsibility of the author, and do not represent the opinion of the Defence Research Board or the policy of the Department of National Defence)

## CANADIAN MARITIME STRATEGY IN THE SEVENTIES

Compared to the problems of British naval strategy or German navalism prior to WW II, or to American naval strategy subsequent to WW II, Canadian maritime strategy in the 1970s is a very minor and unimportant subject. It is unlikely to have much significance on the world stage whether it is conducted well or badly. But it could have very considerable significance for Canadians, and just possibly for all North Americans.

Those professionally concerned with the planning of Canada's maritime strategy are looking for all the help they can get from whatever source may be of use. I think it quite possible that history can be of considerable use. But it could be history of subjects that do not first suggest themselves in the context of naval strategy -- perhaps the history of mankind's search and conflict for sources of food and raw materials, or his quarrels over national boundaries, rather than the selection of the maximum tonnage of battleships. Or perhaps the history of the means by which national policies are altered under the British system of parliamentary government with an apolitical public service, rather than a blanket condemnation of militarism or of wooden-headed admirals.

And it occurred to me during the extremely interesting discussion yesterday that if we are still discovering new material and struggling to resolve conflicting interpretations of events that occurred fifty years ago, we could afford a little charity toward the poor officers, officials and politicians who are struggling to predict developments that have not yet happened at all.

## Naval Developments Prior to the Seventies

Before discussing Canadian maritime strategy for the nineteen seventies, it is probably desirable to spend a few minutes recalling some of the main changes of the forties, fifties and sixties.

The main Canadian maritime role during World War II was antisubmarine protection of the North Atlantic convoys. The Royal Canadian Navy manned and operated a large number of small escort vessels<sup>1</sup>, and the Royal Canadian Air Force flew maritime patrols. Canadian maritime forces also fought in the English Channel, the Mediterranean and the Pacific, but the most important contribution was to the Battle of the Atlantic.

Between 1946 and 1955, the Soviet Union built up the largest fleet of attack submarines ever seen. The member countries of the Atlantic Alliance prepared for another Battle of the Atlantic, equipped themselves with escort destroyers, maritime patrol aircraft and escort carriers, and made plans for the control of merchant shipping and the sailing of convoys. The Canadian role was escort of convoys, for which we had an escort carrier<sup>2</sup>, destroyers and frigates. Our ships did not have sufficient speed to escort fast carrier strike groups.

In 1950 the RCN had ships in the Korean theatre six months before Canadian ground troops arrived, and maintained three destroyers

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1 60 of the 70 RCN frigates and 106 of the 122 corvettes were built in Canada

2 the Canadian carrier had fighter as well as fixed-wing anti-submarine aircraft

throughout the campaign. The versatile capabilities of the force are well described in a paragraph from the Naval Historical Section<sup>3</sup>:

"For over three years these hard-working little ships joined their colleagues in the United Nations force and the ROK Navy in performing a great variety of tasks: maintaining a blockade of the enemy coast; protecting the friendly islands on both coasts from amphibious assaults and sneak raids; providing support for the coastal flanks of the United Nations armies; bombarding Communist installations, gun emplacements, troop concentrations and road and rail lines along both the east and west coasts; screening the United Nations carriers from the ever present threat of submarine and aerial attack; supporting the numerous friendly guerillas and ROK regulars in their unremitting harassment of the enemy mainland and islands; bringing aid and comfort to the sick and needy of South Korea's isolated fishing villages; and performing the countless other tasks that fell to the lot of the UN destroyers serving in the waters around Korea."

During the interval from 1956 to 1963 doubts began to be felt concerning the plausibility of a long "broken back" war of attrition, in which the success of the NATO forces would depend on supplies fought across the Atlantic over a long period. It was not believed that the devastation of nuclear war could be endured for long, or that seaports and inland communication would remain able to move supplies even if the ships succeeded in reaching land. Also, the technical problems of convoy protection became more severe when they were threatened by nuclear weapons, delivered by air-to-surface missiles or ship-to-ship missiles. In order to prevent the loss of several ships to one weapon, it became necessary to increase the spacing between adjacent ships. This extended the perimeter of the convoy and made it easier for a submarine to penetrate the protecting screen unless the number of escort ships was greatly increased. And, to add to the vulnerability, the

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3 Canadian Naval Operations in Korean Waters, 1950-55. T. Thorgrimsson and E.C. Russell. Dept. of National Defence, Ottawa (1965)

presence of a convoy at sea and its precise location were likely to be discovered by reconnaissance aircraft or satellites. The chief advance in antisubmarine technology came with improved sonar, including substantial advances in sonobuoys which enabled an aircraft to detect a submerged submarine by acoustic means.

In 1956 the aircraft carrier HMCS Magnificent helped to transport the Canadian contingent to the United Nations Expeditionary Force in Egypt.

Between 1964 and the present day the probability that it would be necessary to protect large merchant convoys appeared to be further reduced. Nuclear powered submarines appeared in large numbers, faster than the surface ships designed to fight them and not requiring to come to the surface for weeks on end. In addition to the usual anti-ship torpedoes, some Soviet submarines were armed with surface-to-surface missiles able to engage ships or land targets. But most important of all were the ballistic missile firing submarines, which soon replaced the strike carriers as the main maritime weapons for strategic deterrence.

Ship-based antisubmarine weapons were given greatly extended range by the use of rockets to propel torpedoes through the air to the vicinity of the target, after which they entered the water and homed on their target. And an even better weapon was the destroyer-borne antisubmarine helicopter, equipped with dipping sonar for detection and torpedoes for attack. Sonar mounted on the ship's hull was supplemented by variable depth sonar, towed behind a destroyer at the best depth for the water conditions.

The chief quarry of the Canadian antisubmarine forces now became the ballistic missile submarine instead of the attack submarine, and to an increasing extent the quarry was propelled by

nuclear rather than diesel-electric engines.

In 1964 the Canadian carrier HMCS Bonaventure helped to transport heavy equipment for the United Nations force in Cyprus, but in 1971 she was withdrawn from service. Three operational support ships were acquired, and three O-class diesel attack submarines. About half of the destroyers were converted to carry antisubmarine helicopters.

#### Necessary Areas of Canadian Maritime Activity

The Defence White Paper of 1971<sup>(4)</sup> defined four major areas of activity for the Canadian Armed Forces:

- (a) The surveillance of our own territory and coast lines, i.e. the protection of our sovereignty;
- (b) The defence of North America in cooperation with US forces;
- (c) The fulfilment of such NATO commitments as may be agreed upon; and
- (d) The performance of such international peacekeeping roles as we may from time to time assume.

Maritime forces have roles to play in all four areas. To begin with the roles which are clearly military but nevertheless necessary in peacetime, there is the surveillance of waters (including ice-covered waters) for submarines or other foreign military activity, and the contribution to NATO's Standing Naval Force Atlantic. In the twilight between peace and war there is support of United Nations peacekeeping, maritime support of NATO flexible response, and the delivery and supply of an air/sea transportable force to the NATO Northern Flank. In the event of war, it would be necessary to conduct surveillance and control of the waters in

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4 Defence in the 70s. White Paper on Defence. Information Canada. August 1971.

the vicinity of Canada for missile submarines, attack submarines, warships, aircraft, and hostile activities by trawlers. It would be necessary to provide protection for friendly shipping, including mine countermeasures, and to escort task forces.

In peacetime there are a number of necessary non-military maritime activities to be conducted by the Canadian government, many of which are suitable for the military forces acting in concert with other departments. In this paper, the term "Canadian Maritime Strategy" will be interpreted to include consideration of national maritime activities that may be essentially non-military. It is a considerable list, on which we find seaborne trade, fisheries, navigation, Arctic resupply, icebreaking, ice reconnaissance, provision of weather information, search and rescue, control of pollution, control of exploitation of the seabed, control of customs and immigration, cable repair, and oceanographic research.

The principal non-military activities will now be discussed before returning to the military activities.

### NON-MILITARY MARITIME ACTIVITIES

#### Seaborne Trade and Commerce

About half of all the goods produced in Canada are exported. About 35% of Canadian exports and 29% of imports are with countries overseas, nearly all being carried in ships. It is evident that a truly vital interest of Canada is that this trade be able to continue in a safe and efficient manner.

We were told yesterday that in the 1920s Admiral Sir Herbert Richmond considered the basic requirement for fighting ships to be



the protection of the merchant fleet. But in the 1970s it seems to be clearly in the interests of all the important powers that merchant shipping should operate unmolested. It seems probable that common interest will ensure that commerce flows at sea unless international disagreements reach a very dangerous state indeed. And those areas where interference with merchant shipping by armed force might occur in situations short of global war are so far from Canada that our own maritime strategy does not need to place much emphasis on protection of commerce except in the event of a major crisis involving our allies as well as ourselves.

#### Food from the Sea

The ever-increasing population of the world produces a corresponding need for more food supply. Fish is a particularly desirable food because of its high protein content, an essential component of a healthy diet not easily or cheaply supplied through agriculture. Modern methods, including scientific search for fish and the provision of large factory ships moving with the fishing fleet, enable enormous catches to be taken. Since 1938 the world fish catch has more than tripled. But the resources of the ocean are not limitless, and the continued harvest of fish of several important species is already endangered. It is evident that the overall well-being of mankind would be improved by controlling the locations, types and quantities of fishing in such a way as to limit the catches to match the "maximum sustainable yield". Efforts to arrange this by international agreement failed to save whales and the whaling industry, but progress is being made in fishing. It may be that the problem can be solved by international agreement. However, since some of the best fishing grounds in the world are close to Canada, though beyond territorial waters, our maritime strategy must take into account the need to

protect the interests of our fishermen, who rank in the first three among world exporters. Support could take the form of action against fishermen of another country not recognizing rules established by Canada, or of joint action by an international force to enforce rules agreed by their members but disobeyed by individuals or by fishermen of non-signatory countries.

#### Prevention and Control of Pollution

Oil pollution at sea is a cause of concern for Canada, especially with the discovery of oil in the Arctic, the dangers of Arctic navigation, and the delicate Arctic ecology. However, in addition to the problem of heavy pollution following an accident to a tanker or leakage from a submarine oilwell, there is also a need to prevent the careless or intentional deposit of oil, garbage, or other pollutants from ships in coastal waters. Accidents may be prevented by insistence on adequate standards of construction and navigation, intentional transgressions by the expectation of identification and legal action. After an accident, prompt measures by properly equipped teams may prevent or greatly reduce pollution, or expedite the cleanup. All of these are maritime responsibilities, though not primarily matters for the Department of National Defence, and they have been increased in magnitude by the recent passing of the Arctic Water Pollution Prevention Act, an initiative not approved by several of the world's major shipping nations.

#### Control and Regulation of the Exploitation of Offshore Mineral Resources

It is becoming increasingly evident that the valuable mineral deposits existing on and under the surface of the earth are distributed on continental shelves as well as dry land. The

sequence of prospecting, drilling, mining and removing of minerals may be more difficult and expensive on the seabed than on land, but it will be carried out with great economic profit in the coming years. Since there is a greater area of continental shelf adjacent to Canada than to any other country except the Soviet Union, we have a tremendous stake in the matter.

At present, activities appear to be proceeding in accordance with Canadian law, with prospectors and drillers applying for government licences. Their financial investments are so great that it would appear in their interests to obey all regulations meticulously as long as the costs are reasonable. However, questions may arise regarding jurisdiction in areas not clearly on the continental shelf, or disputed by two or more nations. If military installations are ever built on the seabed (such as depots for submarines) there could be an interaction between defence and civil activities, even to the extent of arms control inspections being demanded by international bodies.

Canadian maritime strategy must take account of the economic importance of the seabed, especially on our large continental shelf, and of the likelihood that international disputes are going to arise concerning jurisdiction on the ocean floor.

#### Other Non-Military Maritime Activities

Search and rescue, both on sea and land, occupies a considerable effort in flying time of aircraft and, on occasion, in diversion of ships. Operations are coordinated by the Department of National Defence and the Ministry of Transport. Some aircraft are specially equipped for this role.

Several government agencies are involved in the safety of shipping, for which it is necessary to provide navigation aids, charts, meteorological information, wharf maintenance, dredging, and many other services. Icebreaking, Arctic resupply, and ice reconnaissance are other important services which will probably need to be expanded considerably as activity in the Arctic increases.

The regulation of customs and immigration is mainly a matter of enforcement on land, but is supplemented by a fleet of small vessels operated by the Marine Division of the RCMP.

Research and data collection for hydrographic, oceanographic, fisheries, and defence purposes is carried out by several departments. To date, oceanographic research cruises have not been subject to international restrictions, but there are moves on the part of some of the underdeveloped countries to control the extent of the surveys which can only be done by nations possessing advanced equipment.

### The Law of the Sea

The law of the sea has developed over a long period in which the free movement of seaborne commerce was desired by nearly all important countries, and in which there were enough fish for everyone, although it might be necessary to go far from home to find them.

In the future it seems probable that a nearly universal wish for safe and easy passage of merchant shipping will continue. However, as has already been indicated, a number of new factors are emerging which are likely to cause serious conflicts

of interest among nations. It may not prove possible to obtain international agreement to modified laws, and disputes are likely to arise regarding boundaries of jurisdiction. Of concern to Canada is the status of the passages between the islands of the Arctic Archipelago, the boundary of jurisdiction on the seabed between Newfoundland and St. Pierre and Miquelon, and between Nova Scotia and Maine. Legal jurisdiction over ice floating on the sea is not certain.

It is not suggested that Canadian claims will be established by winning naval battles. But it is suggested that when laws are in dispute it may be necessary to conduct surveillance and inspection in order to be aware of activities and to uphold claims by national presence with a capability for defence and enforcement.

### MILITARY MARITIME ACTIVITIES

#### The Support of Strategic Nuclear Deterrence

There can be little doubt that the central theme of Western military strategy, and very probably also that of Eastern, is maintenance of stable strategic nuclear deterrence. The balance of deterrence depends on three offensive systems (bomber aircraft, Intercontinental Ballistic Missiles, and missile-firing submarines) and four defensive systems (air defences, ballistic missile defences, anti-submarine defence, and civil defence). Air defences can use airborne early warning systems flying over the sea, and ballistic missile interception systems of the future may be based on ships or aircraft flying over the sea. However the two systems of purely maritime character are the missile-firing submarines and the defence against the missile-firing submarines.

The most effective missile-firing submarines are nuclear-powered and carry sixteen ballistic missiles (submarine-launched Ballistic Missiles, or SLBMs) which can be launched underwater. These nuclear-powered ballistic missile submarines are designated as SSBNs. They usually operate alone, and if some sort of protective escort were desired it would probably take the form of nuclear-powered attack submarines (SSNs). Canada does not contemplate any role in the operation or escort of SSBNs.

An interesting debate can be produced regarding the contribution of anti-submarine defence to the preservation of stable nuclear deterrence. It starts with the hypothesis that a state of mutual deterrence exists if both opponents possess a force of offensive weapons sufficiently numerous, invulnerable and effective that no matter what attack (the first strike) may be made on them, enough will survive to be able to retaliate (the second strike) against the attacker's cities and industry to a degree beyond what could be endured. The mutual deterrence is also said to be stable if its existence would not be jeopardized by small changes in the forces (or the effectiveness of the forces) on either side, if neither side is required to launch on warning (i.e. before an attack has actually been delivered), and if neither side has any rational motive to attack first (i.e. a pre-emptive attack to prevent some action by the adversary). In general, steps to increase the certainty of retaliation in a second strike are stabilizing, while steps which might make it possible for a counterforce first strike to disarm the opponent and make it impossible for him to retaliate are destabilizing.

The case against antisubmarine defence is based on the fact that SSBNs are such an effective weapon system for second-strike counter-value retaliation. Once at sea they are invulnerable to the opponent's strategic offensive weapons. Since

they are smaller and less accurate than ICBMs, SLBMs are less suitable for a counterforce strike against hardened point targets such as ICBMs in their silos, but they are quite large and accurate enough to wreak unbearable damage on urban or industrial targets. Therefore, since SSBNs are better for retaliation than for a counterforce first strike, they are stabilizing, and measures to oppose them are destabilizing.

The case can be elaborated by three additional arguments. First, there are more ICBMs than SLBMs, and there is not much defence against ICBMs. There is little value in trying to defend against a minor threat until something effective is available against the major threat. Second, submarines are difficult to locate and track, especially when they proceed slowly and silently. Third, even if defences succeeded in locating and tracking SSBNs, they cannot attack them in peacetime in international waters. And if a surprise first strike were launched at a predetermined instant, all the missiles would be gone in a few minutes, after which an attack on the submarine would be too late.

The opposing argument is based on the high vulnerability of certain elements of the retaliatory system to surprise attack, the use they can make of early warning to reduce this vulnerability, and the fact that the trajectory of an SLBM is much shorter and lower than that of an ICBM, particularly if the submarine comes close to shore before launching. The elements in question are bomber aircraft, especially those based near the coast, and command and control centres. An SLBM burst above an airbase would destroy all the bombers on the ground. However, strategic warning (of days or hours) would permit dispersal of aircraft to many bases, mainly inland, while tactical warning (of a few minutes) would allow some of the aircraft to save themselves by taking off before the missile exploded. Command and control centres can also

take steps to ensure the continuation of their function by such measures as dispersing key personnel to alternate posts (some may be airborne) or into protected locations. Then, if anti-submarine surveillance gives warning of a buildup in SSBNs off the coast, or of movements towards the coast, steps can be taken to reduce vulnerability and ensure the capability to retaliate. Even prompt notice of missile launching can result in saving of retaliatory capability. So, of course, would the interception of SLBMs in flight or the destruction of SSBNs before they had launched all of their missiles.

In answer to the other arguments, the proponents of antisubmarine defence point out that the current rate of building of Y-class SSBNs by the Soviet Union will take them well past the US total (656 SLBMs) by the mid-1970s, while ballistic missile defence will begin to oppose the unchallenged freedom of the ICBMs. And, while location and tracking of submarines is difficult, it is not impossible, and is likely to improve with research and experience.

A study of the geography of the North Atlantic shows that most of the firing positions close to bomber bases are closer to the USA than to Canada, but that many of the likely transit routes to these positions come through waters closer to Canada than to any other country. It could well be that a sensible role on which Canadian maritime forces could concentrate would be surveillance and tracking of SSBNs transiting through these waters close to Canada. This function is clearly a stabilizing one, and one more easily done from Canadian bases than others. If effective surveillance in the deep ocean drove SSBNs to choose circuitous transit routes through shallow coastal waters, there would be a case for antisubmarine surveillance on the Pacific and Arctic as well as the Atlantic



coasts. Surveillance under the Arctic ice could require the development of new techniques which could be useful for civilian as well as military applications.

#### Protection of Shipping: Supply and Resupply on the North Atlantic

The great question to be asked in this connection is how likely is it that hostilities could remain at the very high level at which shipping on the North Atlantic was subject to non-nuclear attack, whether by submarines, aircraft, or surface ships, for a long period, without the situation escalating to full nuclear war? Once all-out nuclear war breaks out, it seems most improbable that hostilities will continue for a long period thereafter, with NATO's fate depending on the maintenance of the Atlantic lifeline.

Another non-nuclear Battle of the Atlantic would require a large force of escort vessels equipped for antisubmarine and anti-air warfare, and another force of mine countermeasures ships. Canadian ports and airfields would be very important. But it does not appear to be a very probable eventuality.

#### Limited Nuclear War at Sea

The suggestion has been made that the most likely place for a war to escalate to the level at which tactical nuclear weapons are used in combat between military forces, but to remain at that level, is at sea. Here the line of demarcation between tactical and strategic use is fairly clear, the chance of inadvertent wholesale destruction of large communities is minimal, and the number of civilians endangered would not be large. The effectiveness of antisubmarine warfare would be significantly increased by the employment of nuclear weapons.

### Support for NATO's Flexible Response

NATO's plan is to rely on strategic deterrence to prevent general nuclear war, and to be able to produce a flexible response adequate to any provocation short of general nuclear war. Maritime forces are well suited to flexible response. However, it is likely to be in the European theatre that the response would be made, and the present Canadian maritime forces are not well suited to work in a hostile air environment or with fast carrier strike forces. We do, however, contribute a destroyer to SACLANT's Standing Naval Force Atlantic, are committed to send by air a battalion group to Allied Command Europe's Mobile Force Land if the latter is deployed to Denmark or Norway, and to send the balance of an air/sea transportable combat group from Canada to the northern flank in the event of an emergency. With our present maritime forces we could supply antisubmarine escort and air surveillance.

### United Nations Operations

The United Nations operations in the past have been primarily on land. It is not, however, impossible to imagine an operation against an island or other area largely dependent on supply by sea. Economic sanctions could take the form of a partial or complete maritime blockade. There is a precedent for this in the UN trade sanctions against Rhodesia, in which the Royal Navy has attempted to intercept tankers carrying oil for shipment through Beira to Rhodesia.

THE PRESENT STRENGTH OF THE CANADIAN MILITARY MARITIME FORCES

Professor Schurman mentioned the importance of materiel in the development of naval strategy, and warned of the danger that, in the absence of a strategic doctrine, decisions will be dominated by questions of materiel. This is especially true in a small navy in times of austere budgets. Remembering the long lifetime of maritime equipment, it is inevitable that today's forces are the result of a past strategy, and that it will be a long time before a change in strategy today can be reflected in forces with radically different equipment. The saving grace is that maritime forces are inherently versatile and flexible.

For those not familiar with them, it may be worth a few minutes to sketch the structure of the present Canadian military maritime forces.

There are twenty destroyers, displacing about 2900 tons, rather slow, and primarily equipped for antisubmarine warfare. About half of them carry one Sea King antisubmarine helicopter, with a crew of four, and equipped with dipping sonar and torpedoes. All have the Limbo mortar for antisubmarine depth bombs, most carry antisubmarine torpedoes, and some have Asroc rocket launchers for antisubmarine torpedoes. Most have variable depth sonar. All have 3-inch automatic anti-aircraft/surface guns.

Four new DDH-280 class destroyers will join the fleet in 1972/73. These are 4000 ton vessels, each carrying two Sea King helicopters, and also have Limbo, AS torpedoes, a 5-inch gun, and Sea Sparrow close range surface-to-air missiles.

We have three Oberon-class diesel-powered attack submarines and one old Tench-class submarine. Two 22,000 ton

Operational Support Ships carry three Sea Kings, two 3-inch AA guns, and Sea Sparrow. One 23,000 ton helicopter and supply ship carries six Sea Kings.

A very important component of the Canadian maritime forces are the 32 Argus long-range patrol aircraft. With a 15-man crew and very long endurance, these carry a large radar, sonobuoys, antisubmarine torpedoes, magnetic anomaly detectors, and other equipment for maritime reconnaissance. There are in addition shorter-range Grumman Trackers, initially procured for carrier use. They have a crew of four, and carry sonobuoys, torpedoes and rockets.

#### POSSIBLE FUTURE CAPABILITIES

In its 1970 report respecting maritime forces<sup>(5)</sup>, the Commons Standing Committee on External Affairs and National Defence recommended the following capabilities for Canadian maritime forces in the period 1973-83:

- considerable surface and subsurface surveillance and identification capability
- limited surface and subsurface tracking and localizing capability
- limited surface and subsurface challenge and destruct capability
- limited self-defence capability.

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5 Tenth Report of the Standing Committee on External Affairs and National Defence Respecting Maritime Forces. Queen's Printer. 1970.

In respect of new equipment, they recommended:

- the continued maintenance of long range airborne maritime patrol forces to provide considerable surveillance and identification as well as limited localizing, tracking and challenge and/or destruct capabilities;
- the maintenance of surface forces, with the emphasis on light and fast general purpose vessels to provide limited surveillance as well as limited localizing, tracking, and challenge and/or destruct capabilities;
- careful consideration of the possibility of developing and deploying in appropriate locations in Arctic regions bottom-based systems providing these are found to be capable of effective surveillance and identification under ice;
- no acquisition of nuclear-powered submarines, given the high estimated cost.

Over the long term, our maritime strategy will depend on our answers to several major questions:

- What part will Canada elect to play in opposing the missile-firing submarine? (Surveillance? Attack the submarine? Intercept the SLBMs?)
- What will be the requirements for the maritime support of NATO?
  - is the transatlantic convoy, opposed by submarines, aircraft, and surface ships still an important possibility?
  - will there be a requirement to mount and protect smaller task forces?
  - will Soviet expansion into new areas, or perhaps the increasing dependence of developed Western countries on petroleum imports create new naval tasks?

- What will be the requirements for international missions such as UN peacekeeping, protection of nationals in time of insurrection, aid to small Commonwealth countries requesting assistance to restore order, etc.?
- What will be the Canadian domestic requirements?

Another, more technical question is "should we continue to design a maritime force with special capabilities in the submarine role, or should we now aim at a more versatile general purpose force"?

These are many questions indeed. But it would take a real optimist to predict that a country with immensely long coastlines on three of the world's great oceans will be able to maintain all of its rights and interests in the turbulent seventies, likely to see many clashes of interest on and under the sea, solely by the efforts of diplomats, lawyers and disarmers, with no requirement at all for some type of sea-going policeman. Indeed, the work of the diplomats, lawyers and disarmers is likely to be aided by the right type of maritime forces, including those of the smaller as well as the larger countries. The task before Canada's maritime strategists is to identify the right type of force, and to persuade our authorities to create it in time.