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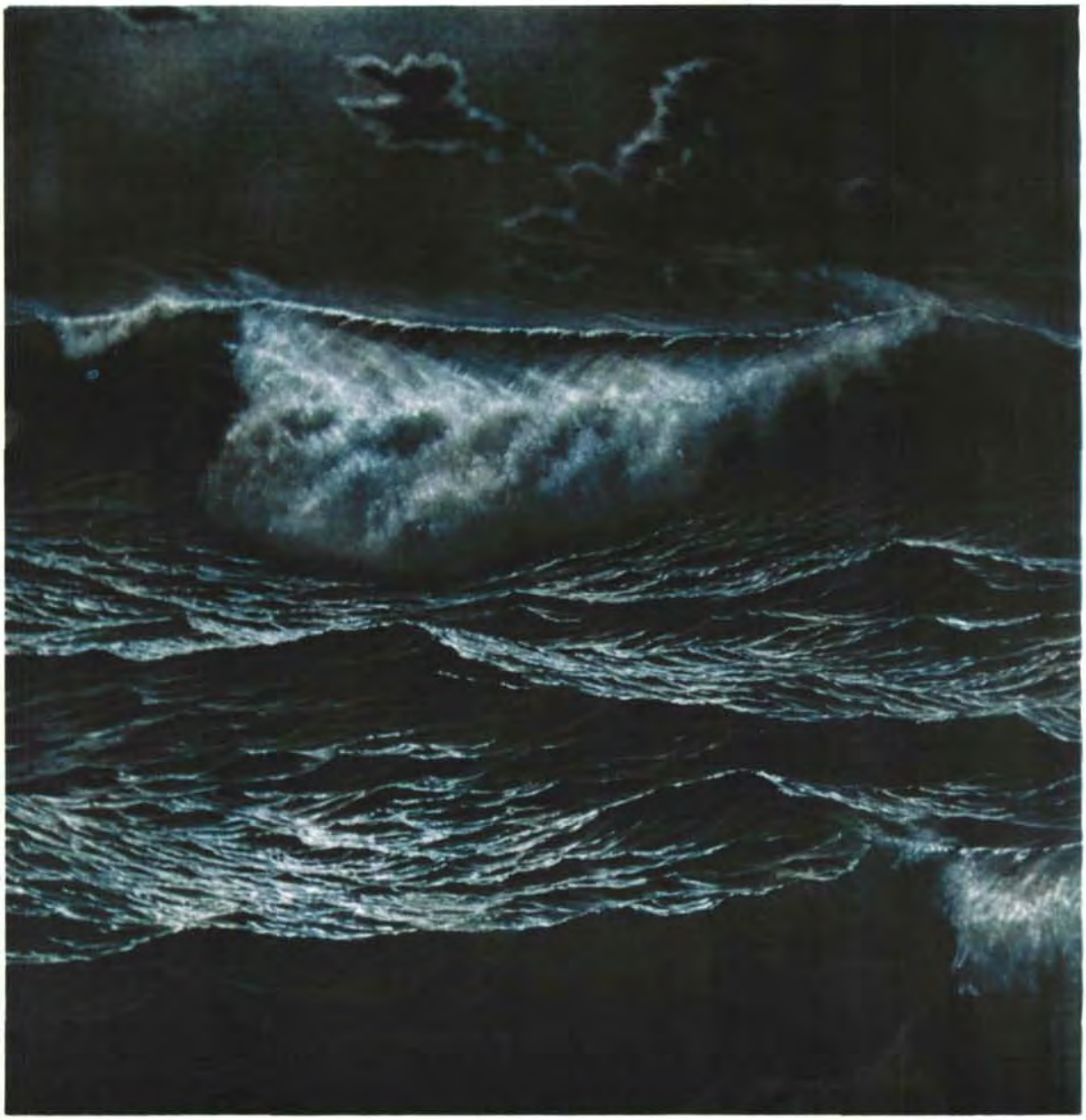
JOURNAL OF

THE AUSTRALIAN NAVAL INSTITUTE



VOLUME 2 FEBRUARY 1976 NUMBER 1

AUSTRALIAN NAVAL INSTITUTE

1. The Australian Naval Institute has been formed and incorporated in the Australian Capital Territory. The main objects of the Institute are:–

   a. to encourage and promote the advancement of knowledge related to the Navy and the Maritime profession.

   b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the Maritime profession.

   c. to publish a journal.

2. The Institute is self supporting and non-profit making. The aim is to encourage freedom of discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.

3. Membership of the Institute is open to:–

   a. Regular Members–Members of the Permanent Naval Forces of Australia.

   b. Associate Members–(1) Members of the Reserve Naval Forces of Australia.

      (2) Members of the Australian Military Forces and the Royal Australian Air Force both permanent and reserve.

      (3) Ex-members of the Australian Defence Forces, both permanent and reserve components, provided that they have been honourably discharged from that force.

      (4) Other persons having and professing a special interest in naval and maritime affairs.

   c. Honorary Members–A person who has made a distinguished contribution to the Naval or maritime profession or who has rendered distinguished service to the Institute may be elected by the Council to Honorary Membership.

4. Joining fee for Regular and Associate Member is $5. Annual Subscription for both is $10.

5. Inquiries and application for membership should be directed to:–

   The Secretary,
   Australian Naval Institute,
   P.O. Box 18,
   DEAKIN, A.C.T. 2600.

CONTRIBUTIONS

As the Australian Naval Institute exists for the promotion and advancement of knowledge relating to the Naval and maritime profession, all members are strongly encouraged to submit articles for publication. Only in this way will our aims be achieved.

DISCLAIMER

In writing for the Institute it must be borne in mind that the views expressed are those of the author and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.

JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE (INC)

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OUR COVER

The front cover picture is a reproduction of a painting by Dennis Hardy, by courtesy of Mr. A. E. Stephen of Surfers Paradise.

CHAPTER NEWS

Canberra

The next meeting of the Canberra Chapter will be held at the RSL National Headquarters at 1930 on Tuesday 30 March 1976. Captain Niel Ralph, DSC, RAN will deliver a paper entitled 'Australian Maritime Trade – A Problem for Defence'. Members and guests will be made welcome.

We were sorry to lose the services of Commander Bob Nattey as Chapter Secretary on his posting to *HMAS Perth*. The Convenor is hopeful of filling the billet shortly (with a nominated volunteer).

Sydney

The second meeting of the Sydney Chapter was held on Wednesday, 10th December, 1975, at RAN House at 2000. The meeting was attended by 18 members. Two papers were presented; 'Naval Aspects of the Defence of Australia', by RADM N. E. McDONALD, and 'Operation Seaking Recovery', by Captain J. A. ROBERTSON RAN.

Captain Robertson's scheduled paper, 'The Battleship Mentality Part II' was deferred as he had been asked to talk on the recent salvage operation which took place off the south coast of NSW. The paper covered the salvage operation in detail and prompted a lively discussion on deep diving; the problems associated with it and the capability, or lack thereof, in the RAN. A serious point raised was whether the Navy would become the victim of its own success in salvaging the helicopter using ad hoc resources, and thus fail to develop suitably trained personnel and the appropriate equipment to perform these operations successfully and safely.

RADM McDONALD's paper was of great interest. The Admiral first presented his interpretation of the role of the Navy in Australian affairs. This provided a concise answer to that question 'What is the Navy for?' To the serving members the answer is self-evident, but when called upon to put his thoughts into a simple answer he is often at a loss for words. Admiral McDonald then proceeded to give his impressions of the way the Navy should develop over the next 15 years, and the types of ships to be considered given the limited resources to be available. The ensuing question and answer discussion period was very lively and many varying ideas were put forward.

The first meeting of the Sydney Chapter for 1976 was held on Wednesday 21st January. The meeting was attended by nine members. Commodore V. A. PARKER, the Institute President attended and addressed the meeting. Two papers were presented; "The Aircraft Carrier - Past and Future" by Commander G. NEKRASOV RAN, and "The Battleship Mentality, Part II" by Captain J. A. ROBERTSON.

Commodore PARKER's informal address included a brief discussion on the aims of the society, its foundation, and the current state of the Institute.

CMDR. NEKRASOV's paper on aircraft carriers provoked considerable discussion – particularly as a member of the Fleet Air Arm was present. The paper gave a historical development of the aircraft carrier and then discussed the alternatives open to the small nation. Cmdr. Nekrasov raised the debate on what is cost effectiveness and how it can be measured; he summed up the issue with the statement "There are no consolation prizes for the loser in a sea battle". This paper has been forwarded to the editor of the Journal.

Captain ROBERTSON's paper was a sequel to "The Battleship Mentality, Part I" and presented the case for the defence.

After the discussion on "The Battleship Mentality, Part II" Captain Robertson asked for ideas to make the Institute more appealing. He proposed that we consider making a documentary on "The Coral Sea". The meeting considered it was a good idea but to go ahead there are many practical problems to overcome. Another point discussed was Wargaming and it was decided to "have a go" at the next meeting. If anyone has any ideas on how to improve the meetings; or comments on the film project, please write to Captain Robertson or Lieutenant Lemon in *HMAS Stalwart*. The other point discussed was the timing of the meetings – is Wednesday the best day?

The next meeting promises to be the biggest and best yet. The theme is "Wargaming – Idle Games or a Useful Tool?" The meeting will be addressed by Mr. Dennis Brackman of West Pymble who is a Naval Wargamer of international repute. It is hoped to stage a trial game between *Rantau* and *HMAS Watson* Tactical School.The meeting will be on Wednesday, March 10th at *HMAS Watson* Tactical School. (The date will stay but the venue may change. A signal will be released to confirm the venue but it is requested that anyone not on the naval distribution, ring Lieutenant Lemon on *Stalwart* to confirm).

AN APPRECIATION

Captain I. H. Nicholson, a founder member, has been posted to Singapore as Defence Advisor to the Australian High Commissioner. He volunteered to be co-ordinator of the honorary editorial staff of the Journal and it is entirely due to his efforts that the publication has got off to such a good start. The President and Councillors, on behalf of all members, thank Ian Nicholson for the time and energy he spent on this task.

Correspondence

HMAS STALWART
At Sydney

The Editor,
Journal of the Australian Naval Institute

Dear Sir,

Captain Macleod's paper on the Women's Services refers to the reasons for the re-introduction of the WRANS *in peacetime as "much the same as in 1941".* Presumably that means women were only required in the Navy for "ladylike labour such as housekeeping, cooking and typing". This is misleading, to put it mildly.

The reason for re-introducing the WRANS in the 1950's was to provide communicators; the instigator was Commander A. D. BLACK. All the rest followed from this initial requirement. I am not sure that it was quite so clear cut in 1941, but it is undeniable that communicators were a significant proportion of the WRANS from the outset in World War II. And it should be made quite clear that there is no more operational task in the Navy than long haul communications. Ships refit; the shore network and the radio stations run continuously. The WRANS have done well in this exacting field and are highly respected by their male co-workers. WRANS Communication Officers, Chiefs etc. take charge of activities and watches which include males, and have done so for a long time.

So there is some irony in the fact that while the WRANS communicators have been the raison d'etre for their Service, at least since the 1950's and they have had the only operational responsibility held by women in the Navy, their importance has been played down within the WRANS, as the inference from Captain Macleod's remarks confirms. Other examples could be quoted.

Altogether then, it seems fair to observe that, while the communicators have appreciated the WRANS, the WRANS, at least outwardly, might show more appreciation of the importance of their own communicators, if only in the interest of historical accuracy.

J. A. ROBERTSON
Captain RAN

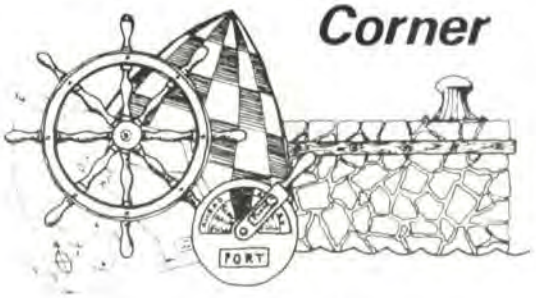
Captain Macleod's Comments

Approximately one third of the members of the WRANS have always been communications personnel and the value of their services to the RAN has been, and is, inestimable. I would be the last to deny proper acknowledgment of their role and if anyone read into my paper any inference to the contrary, then I sincerely apologise.

I deliberately avoided discussion of the merits and demerits of any particular WRANS' category because, in my view, each has had equal importance in the functions alloted to the WRANS.

I reiterate – the MAJORITY of the members of the WRANS have been, and to a large extent continue to be, employed on clerical and domestic tasks. Happily, I also acknowledge that this situation is gradually changing.

Shiphandling Corner



INCIDENT ONE:

Latrobe, a Bathurst Class minesweeper or corvette, was in 1947 one of the few still in commission who had inward-turning screws. These, in theory, gave the ship a little bit more top speed, but made her handling in harbour very difficult.

A good general rule, with the ship at rest in calm weather, with one screw going ahead and one astern, was said to be that at Full Speed she'd turn the expected way, at Half Speed she'd do nothing, and at Slow Speed she'd turn the wrong way. Permutations and combinations, when making way either ahead or astern in varying wind conditions, were legion.

Coming up Hann's Inlet for about the ninetieth time, aiming to berth port-side-to on *Gladsone* at the Flinders Naval Depot Wharf, all went well until we were edging in alongside our sister-ship, with engines stopped. "Slow astern both", when abreast her after-superstructure (and we should finish up nicely in position).

But what's this? We're not slowing up! "Half astern both". We're passing her bridge! "Full astern both; hold onto those wires you've got across". We've reached her bow! "Stop both engines". Wait, wait; make sure they've time down below to react. Now "Full astern both" again. It still doesn't work. The for'd wires are holding, though. We're slewing around *Gladstone's* bow, due partly to the influence of their spring-effect, and partly to the turning-at-rest screw action, and we're ploughing noisily and expensively into the wharf.

The attendant tug-boat confirmed later what seemed obvious: that my starboard screw had been going ahead instead of astern at every engine move-

ment. The ERA on the throttle nevertheless told me that he was sure that he'd been putting it astern.

Lessons? Not many, really, I suppose. Perhaps, firstly, that even the best engine-room people can be guilty of lapses, even when alerted by the classical "Stop engines, try again" action. Secondly, that a similar wrong reaction below, with a faster approach, would have been even more disastrous. Finally, inward-turning screws going ahead and astern at full speed do indeed turn the ship in the expected direction!!

D. H. D. S.

INCIDENT TWO:

SCENE:
Hervey Bay: Battle Class destroyer in the waiting position about to RAS from *HMAS Supply* with COMAUSFLT embarked. Replenishment Speed 14. Weather and sea conditions perfect.

ACTION:
Fast backdown approach, fortunately outside 100 ft. distance, as the destroyer took a violent sheer towards the tanker on overtaking her stern. Urgent reaction by the destroyer avoided a collision and she ended up 200 ft. on the tanker's beam. While closing in for RAS the Coxswain reported undue difficulty in maintaining course, having to use excessive wheel. The steering was checked and the destroyer returned to the waiting position for another go. Despite the forewarning, an almost similar episode occurred on the second approach. This time the destroyer recovered quicker, and gear was passed and connected, but considerable difficulty was experienced in maintaining a steady course and proper station throughout the RAS.

CAUSE:
Initially it was thought that inexperience or poor ship handling by the destroyer was to blame. While this may have been partly so it does not explain why she sheered so erratically when close to the tanker. A quick look at the chart of Hervey Bay should have indicated the reason to all concerned: SHALLOW WATER EFFECT: the average depth in the area is only 10 fathoms. In depths less than 20 fathoms (36.6 metres) the strength of the interaction effects between ships is greatly increased, particularly at higher speeds. A fast backdown and even a RAS speed of 14 knots are considered excessive in such circumstances and a reduction in speed of a few knots would probably have been significantly safer.

LESSON:
While replenishment in such shallow water is rarely carried out, the incidence of ships manoeuvering at speed in close company in inshore waters is more frequent, e.g., inverting the column. We are generally aware of the shallow water performance of our own vessel but BEWARE OF THE EFFECTS OF BIG BROTHER ON YOU, LEST YOU GET OUT OF CONTROL.

P.S.:
Has any reader experienced interaction effects when passing close to a fast bulk carrier or supertanker in comparatively shallow water?

Mariner of Lyneham

NAVY CUT

For the Midshipman of the watch on the bridge of *HMS King George V* soon after the cessation of holsilities with Japan life was pleasant; the blue Pacific slid past the giant ship, tensions were at a low level and the Captain dozed comfortably in his chair.

The Sub-Lieutenant was smoking his Dunhill pipe no doubt purchased on account from Gieves and the aroma of the tobacco permeated the bridge area owing to a slight following breeze. So as to create some conversation the Midshipman asked:

"What tobacco are you smoking, Sir?"

"Three Nuns", came back the reply from the Sub-Lieutenant.

"Yes," piped up the Captain, "and one of them has passed wind."

End of any further attempts to promote light conversation.

Attributed to P.E.M.H.

The Place of the Seaborne Aircraft Platform in Future Naval Warfare

BY LEADING SEAMAN AIRCREW B. R. CHALLONER

This paper won first prize in the Sailor Section of the 1974 Peter Mitchell Trust Essay Competition and is reproduced here by permission of the Naval Board.

Although the prohibitive cost of the mammoth nuclear aircraft carrier is making this type of ship redundant, there is still a place in modern naval warfare for a seaborne aircraft platform. What form this platform will take is a political thesis which nations are debating at this time. The range of platforms available vary from large aircraft carriers to small flight deck spaces on destroyer type ships. Factors which have to be considered by different nations which will govern their choice will be the nation's economic stability, its political acceptance (not only by the government, but also by its people), and the envisaged operations involved in a seaborne platform. What political factions of both the supporters and detractors of this idea realize is that in modern warfare a seaborne aircraft platform will play a critical role in the survival of its own seaborne forces.

The measure of a nation's economic state is sketched in the book, "The Twenty Years of Crisis 1919-1939" by Edward Hallet Carr:

> "Every modern government and every parliament is continually faced with the dilemma of spending money on armaments or social services; and this encourages the illusion that the choice really lies between 'power' and 'welfare', between political guns and economic butter. Reflection shows that this is not the case. The question asked never takes the form, do you prefer guns or butter? For everyone agrees that, in case of need, guns must come before butter."

Therefore to have the economic security, a military policy must be found which will provide protection for the nation. No nation is unlimited in its spending, and to stay within politically acceptable lines as well as social economic stability, which in most nations is motivated towards peaceful fulfilment, and not warlike mannerism, less expensive and politically more accepted ideas for naval expenditure have to be found.

Most nations have large vulnerable coastlines and extensive seaborne trade. A strong navy has to be capable not only of protecting its own shipping lanes and its own seaborne forces, but also when the situation arises, be able to attack and remove the threat. This in turn poses a critical stand. What difference would this make between a non-nuclear war and a nuclear war? To find these answers one must read the political histories of nations, to find out what motivated them to their present goals.

THE AUTHOR

LSA Challoner was born in 1949 at Burwood, NSW. He joined the RAN as a Junior Recruit in 1965 and, after twelve months basic training in *HMAS Leeuwin*, he joined *HMAS Watson* for the ABUC course. On qualifying nine months later he served at sea for 26 months in HMA ships *Parramatta* and *Vendetta*. He then transferred to the Fleet Air Arm and qualified as Leading Aircrewman in 1970. His flying tours in Wessex helicopters have included participation in two RIMPAC exercises and Operation Navy Help Darwin, the relief operation after Cyclone Tracy. He wrote his prize winning essay whilst serving on the Air Operations staff in *HMAS Melbourne* and he is currently undergoing the Sea King conversion course in *HMAS Albatross*.

To fully understand why seafaring nations of the world are moving into politically motioned policies of future seaborne aircraft platforms for the protection of their sea going forces, one has to delve into the past, and how over the years of political change, the nation changes.

Two great nations are of great importance, as they are the two most powerful seaborne forces afloat today. Russia and America are two major factors in the world today, and influence many other nations. Russia's Admiral S. G. Gorshkov maintains that great national power and a powerful navy are indispensable concomitants. To be a great power, a state must also be a maritime power; and when maritime power declines, great power status diminishes also. Just to look at the world power race today, one can see that the modern power nations are maritime nations. Admiral Gorshkov was quoted in 1973, "Naval might has been one of the factors which has enabled certain states to advance into the ranks of great powers. Moreover, 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." To read the history books, the text of those words can clearly be seen. In the 16th century, Spain neglected to maintain an adequate navy, and as a result lost her overseas possessions and slipped from a great power to one of the lowly. The 17th century saw Holland lose her great power status because she was not sufficiently strong. Again England had her turn as a strong nation due to her powerful navy, but lost her power because of political pressures, and is again just starting to re-emerge into a strong sea power.

Turning to Russia to find an answer to her great sea power, there is a new role being undertaken in her maritime force. This role is the Keiv through deck carrier, and to find why, one has to examine her past naval history.

Before the post war period, the Soviet Navy was a collection of odd, thrown together vessels without any thought of the invasion from the sea. Her political writers argued that the "Bear" was capable of looking after itself; and indeed it was, much to the dismay of Hitler. It repelled the attack from the land, just as it had for centuries. Stalin decided after seeing the result of the conflict between the Japanese and Americans, how the attack carrier not only survived, but emerged as the most feared weapon afloat. In the future, not only would he have to protect his country by land, but by sea too. His first objective was to have a defending navy and not an attacking one. So he started building a navy equal to the task, though this task was purely one of protecting the Soviet coast from seaborne assault. It became Stalin's personal prodigy, to which he lent his personal weight and prestige, allotting a high percentage of Russian resources. The only problem in his "big mother" attitude was that it was kept too close to his apron strings, namely the Russian coast, and never, while he lived, became more than a coastal navy.

When he died in the early fifties, he was hardly in the ground when top Russian admirals and their Staff decided that the navy was due for a face lift, due to the Americans building up a strong aircraft carrier fleet. The envisaged transformation was in the form of a submarine fleet, because at the time this was the easiest way of countering America's carriers. The reason for the choice of submarines was (a) the non existence of a naval aviation unit, and (b) Russia's defensive policy. Her theory was that when the enemy carriers came within distance of the coast, submarines would concentrate on the carrier by attacking from the sea, and land based aircraft would attack from the air in a combined assault.

Russia's new leader, Nikita Khrushchev proved that high ranking admirals of those days were like paper drinking cups (expendable), and used their naval strategic plans for wallpaper. This of course stunted the growth of the navy for a few years.

Another threat arose besides aircraft carriers, giving Soviet politicians more headaches. It was the suprise attack with nuclear weapons delivered via the aircraft carrier. With the advent of the cruise-missile, it was but a short respite for Russia. With the submarine strongly in the limelight, this became the prime unit for fitting of a missile. Thus the dawning of the missile launching submarine, the Whisky Twin Cylinder. Here was a technological revolution in its own right, but it came from the necessity to stop-gap the improvements made in the range of America's carrier borne aircraft, and the emergence of the Polaris submarine. Russia was now in the arms race, and new weaponry systems were made for her ships with continual updating of submarines and ships. This in turn brought Russia into a new era and a new role: because of the distances weapons and the carriers were achieving, Russia had to give up her apron strings and move out into the high seas.

Out of the bustle of Russia's new era, stepped a man who had a profound effect on the future of the Soviet fleet. This man was Admiral Gorshkov, who picked his way with great care at first because of the domination of Khrushchev. Slowly he changed the main emphasis to that of a navy with more surface ships, and with this man behind the wheel, Russia progressed swiftly to its present status in a matter of twenty years. From a submarine coastal fleet, to the navy of today, with 112 nuclear submarines, 306 non-nuclear, 287 warships and 1,624 other types (from coastal gunboats to support ships). Her changing role started about the late fifties, and even at this time, drawings for an aircraft carrier existed. Now she is a sea going fleet. Today Russia's naval might is exemplified by floating arsenals, of which the following are two examples:

KARA CLASS. 10,000 tons, 8 - SSN 10, 2 - SAN 4, 2 - SAN 3, 4 - 76mm, 8 - 30 mm, ASW weaponry, 10 - 21 inch torpedo tubes, an array of ECM and an aircraft platform aft for her Hormone A helicopter.

KRIVAK CLASS. 4,800 tons, 4 - SSN 10, 2 - SAN 4, 4 - 76mm, 4 - 30mm, ASW weaponry, 8 - 21 inch torpedo tubes, an array of ECM and a platform aft for a helicopter.

Compare this to American ships of the same weight and the difference is easily seen, for example:

VIRGINIA CLASS (DLGN). 10,000 tons, 2 twin Tartar launchers, 2 - 127mm, ASW weaponry, 2 triple torpedo tubes, ECM and an aircraft platform aft for her Sea King helicopter.

SPRUANCE CLASS (DD). 6,900 tons, 2 multiple launchers for Sea Sparrow, 2 - 127mm, ASW weaponry, 8 tube torpedo launchers, ECM and an aircraft platform for her (LAMPS) helicopter.

The ship that raised a few eyes in the western world was the MOSKVA Class. It should not have, because just as America progressed along carrier lines, then so did Russia. Soviet designers and theorists tested the Moskva class thoroughly at sea, as a test platform for the Keiv class. It is now certain that the Moskva proved herself well.

It was a long road for Russia to travel, with many annoyances and set backs, but finally the second greatest sea power in the world emerged. The Soviet navy is now at a stage which other great navies are approaching: in the age where the seaborne aircraft platform will play the lead role in the drama of future naval warfare.

America, as the greatest sea power in the world today, started in the race for a seaborne aircraft platform at an early age. American naval aviators were around even during the 1st World War. In 1928 they landed a heavier-than-air contraption onboard *USS Saratoga*. The ships crew probably viewed this intrusion with disgust, as did many "old salts", when aviation merged with the navy. The many advantages of the seaborne aircraft platform soon became apparent. The Second World War in the Pacific proved that point, especially Japan's attack on Pearl Harbour. Political speakers and the tacticians of America never had the problems of Russia in pointing out the favours of an aircraft carrier, because America developed along these lines from the outset when it was proved that an aeroplane could land on a ship.

The Second World War came and went; with the aircraft carrier proving its versatility in many ways. America progressed after the war from the modernised Essex Class through, Hancock Class, Midway, Forrestal, Enterprise type, Kitty Hawk Class to the Nimitz Class of today. The strength of the American fleet is now 3,687 vessels of 15,024,148 tons gross, registered with Lloyd's Register of Shipping. U.S. Naval Aviation currently consists of approximately 5,500 aircraft flown by the Navy and Marine Corps. The principal naval aviation organisations are 14 carrier aircraft wings, 24 maritime reconnaissance/patrol squadrons and three Marine air wings, consisting of: Attack Aircraft, Fighters, Patrol Aircraft, Training Aircraft, Helicopters, Cargo, Transport and Utility Aircraft.

The death of the large aircraft carrier has been brought about by different factors, the main one being the astronomical cost involved in not only keeping it at sea, but its repair bill. The pressure for its ultimate destruction not only comes from within the political system, but also from a nation which is motivated towards peaceful existence. The most annoying aspect that has emerged from the pages and pages of debate on the large nuclear carrier, is America's politicians insistence to use their "toy" as a battleground for political football.

To use the carrier in outdated naval strategies is like taking a shower with a raincoat on: useless. Admiral J. T. Hayward said:

> "Fast carrier forces are not governed in their support of amphibious assault ships . . . Tying the carrier force to integral support of slower forces of almost any nature, is contrary to good seamanship and all existing doctrine for employment of strike carriers."

The navy is to share the blame of the carriers' downfall also. The Navy put up in its defence a weak water-logged case, not fully realizing that the large aircraft carrier still has so many new roles to perform. One of many is to use the carrier in conjunction with a nuclear powered submarine to make a formidable combat unit. With the submarine in the ASW role, and the carrier in the AAW role, both still have the capacity to be fitted with systems to augment the other. It is however, ASW defense that will become the prime function of the submarine, in support of the carrier. Add to this carrier-borne ASW aircraft and it is a very strong combination with no need for surface escorts;

To soften the blow of the end of the era for a large aircraft carrier, changes can be seen "blowing in the wind". Changes must come as they already have started to do. New ideas such as Surface Effect Ships (SES), Surface Control Ships (SCS), and large Hydrofoils are building blocks for America's new navy. If one thinks these ideas radical, one only has to look back 45 years, when battleship Admirals considered the aviators' claim that aviation had supplanted the battlewagon as the fundamental instrument of naval power. In the saga of the large aircraft carrier, the battle continues to be fought. For those people in favour of an aircraft carrier, Australian Rear Admiral D. C. Wells words echo:

> "The aircraft carrier has proved again that it is the dominant factor in the maritime phase of operations".

To those who oppose it . . . only time will tell the outcome.

Over many centuries the great ocean expanses have not only been a means for communication between different continents and for the supply of essential trades of mankind, but also a battlefield for the struggle of domination of giant military powers. Today man is entering a new era of scientific discoveries, which when utilized for modern military needs will mean that the vast ocean wastes will become of far greater strategic importance.

William Ledyard Rodgers once said:

> "All war upon the sea . . . has for its ultimate objective the control of seaborne commerce . . .".

Today, as in the past and in the future, the most important factor which governs the end result in any conflict of seaborne war, is a nation's strict adherence to this basic fundamental. No nation in a non-nuclear war environment can be victorious without first securing the safety of its lifeline, reinforcements and supplies.

Over the last decade, since the reality that total destruction of the world can be brought about by the major powers by mutual annihilation in total nuclear war, strategic planners are focussing their attentions towards conventional warfare problems. What this group agrees on is; the earlier effective forces can be bought into action, the shorter a war would become.

If a war develops between Russia and America, an enormous amount of equipment and supplies must be delivered by surface shipping, hence America's naval policy for the protection of sea convoys. Both naval powers have transitioned from post war ideals to today's modern warfare concept and it is only natural to assume that this advancement will continue into the future. Already today's leaders are worried over the advances each has made. Admiral Thomas H. Moorer, in his statement before the Senate Armed Services Committee said:

> "Considering our great dependence upon the seas, in peace and war, and in view of the rapid growth in the sophistication of the Soviet attack submarine fleet, I must conclude that the U.S. Navy is no longer the unchallenged master of the seas."

With Russia's numerous submarines, sea-going commerce would be endangered if war between Russia and the free world started. Taking conservative figures from the early seventies, Russia had more than 250 long range attack submarines, over 50 of them nuclear powered. The free world shipping for the year 1970, (with an average 12% yearly increase) covering dry cargo and petroleum, was 2,510 million metric tons. With Soviet distribution of their submarines over the world, as many as 150 are operational, carrying nearly 3,000 torpedoes. There is no more explanation needed as to the amount of tonnage that would be destroyed if the situation arose. Another important factor to be considered is that most nations of the world, because of modern technology and inflation, are producing high productivity units in the form of container ships, which are rapidly replacing old type freighters which have the delivery capacity of many times their number of the conventional freighters. It is their very productivity that makes this type of ship more vulnerable. A container ship which provides the sustained lift capacity of four or five conventional freighters, when sunk, represents the loss of four or five freighters. Thus the value of each torpedo has been multiplied due to modernized economics. The answer to this grim picture is in the type of defence system that inevitably will be placed to counter this threat.

Today's advances in technology point to the answer of the defence of the commerce fleet. These are the development of SES, SCS and Hydrofoil.

SURFACE EFFECT SHIP

Two precursors of this new "100 knot navy" are already going through rigorous trials. Already 70 knot speeds have confirmed the design predictions. SES of up to 20,000 tons or more are planned, and a naval fleet of SES is a logical progression. Their advantages are virtual invulnerability to torpedoes and the difficult targets they present for aircraft and missiles. They can outrun or catch subsurface or surface vessels, and perhaps their greatest role: provide a platform for seaborne aircraft.

With an SES (or Hydrofoil) as an aircraft carrier or as a smaller through deck assault ship, not only would its speed allow more wind-over-the-deck for aircraft take-off and landing speeds, but also the need for catapult and arresting gear requirements should be greatly reduced. Already the U.S. Navy has several proposed SES designs for a seaborne platform, one of which is a 2,000 ton ship which will carry one or two large multi-mission helicopters, and have a speed of 80 knots or more.

HYDROFOIL

Another type of ship envisaged is the Hydrofoil which would carry V/STOL aircraft. This ship would be the 1,000 ton Small Hydrofoil Aircraft Carrier (SHAC), and carry two or three Harrier type aircraft. Its major advantages over the SES or semi-submerged catamaran ship is its ability to operate in a high sea state. Its advantages over the present day aircraft carrier are: that a station dispersed force of these small aircraft carriers on a periphery of a few hundred miles in circular formation would not only provide more favourable time and distance factors than standard fleet formations, but have the ability to provide target intercept aircraft at a greater distance from the centre of the force, therefore eliminating the need for an orbiting combat air patrol (CAP). The enemy's attack would not be aimed at one large aircraft carrier, but would have to be dispersed over a greater area, therefore blunting the effect. The range of the SHAC with maximum military payload is 2,000 miles plus at normal foilborne speed, which competes favourably with conventional ships of the same size.

SURFACE CONTROL SHIP

The navy's present day proposal is for the sea control ship to operate V/STOL fixed wing aircraft and helicopters for the defence of seaborne forces, including merchant convoys, amphibious assault group and replenishment group$. Because of the ship's limited capabilities; speed, size and aircraft complement, it would only operate in areas of limited enemy threat. The SCS will not carry much in the way or armament or sensors, but would rely on its embarked aircraft for defence. Other requirements for this ship would be for maintenance of destroyers and escort ships' helicopters. Being only of around 14,000 tons full load, it tends to be the stop-gap for today's navy until the SES/Hydrofoil is beyond the test bed stage. The SCS will fill the need for a surface aircraft platform that the large carrier will leave as it slowly fades out of existence of the American navy.

Its main advantages are to minimize the effectiveness of long range, stand off delivery missiles. The job of the SCS would be the same as that of the SES/Hydrofoil where the ship or ships are placed at a distance from the main force, as early radar warning, intercept, ASW etc. The main reason for this ship is that it is a political answer to the ever watchful American nation. The ship is a relatively small and simple one, and her aircrafts' task specific, tailored for certain tactics. The end result is a complementing team of aircraft and ships for today's tactics and smiling politicians.

The new concepts of the SES, Hydrofoil and lesser extent SCS, will mean new strategies, tactics, maintenance procedures and operating philosophies. Of course there will be a transition period. This type of ship will not replace the conventional ship overnight, but just as iron hulled ships and its steam power made their predecessors obsolete, so will the SES/Hydrofoil.

In America, from their 1968 Fiscal year onwards, every warship large enough to take an aircraft platform, whether new or refit, has had this platform fitted. In the United Kingdom, Australia, China, Russia, Canada, Italy and France, for each new warship built, the same principle has applied. The obvious reason is that the range of the ships' defence and in some cases, attack, has been enhanced by adding this platform.

In America on 1st December 1973, the first of five new amphibious assault ships (LHA) was launched. The *USS Tarawa* will carry helicopters with provision for future V/STOL aircraft. At 820 feet long, with a full load displacement of 39,000

tons, it will be the second largest combat ship afloat. Also in America the nuclear powered attack carrier of the Nimitz Class, the *USS Eisenhower*, is nearing completion. This ship will however bring to an end the large attack carrier.

In Russia the new Kiev Class Through deck carrier of 45,000 tons, is being built. This aircraft carrier will carry VTOL aircraft and Hormone helicopters. Though the VTOL aircraft, apparently an improved Freehand version, is not of the Harrier class, both aircraft and carrier will become a formidable seaborne platform.

In England the projected through deck carrier of about 20,000 tons will definitely be a home for both the Sea King and the Harrier. Three great seaborne nations are convinced that in future non-nuclear warfare the seaborne aircraft platform is going to play a critical role in not only its own survival but that of the sea-going commerce trade.

Other countries of the world with naval sea power fall into different less fortunate categories. China, which is a communist country, is on the threshhold of new understanding. The Chinese navy started about 200 B.C.: in its struggle for existence it had its great moments. The new fleet of today, under the leadership of Vice Admiral Hsiao Ching Kuang is steadily building into a modernised navy, with capabilities for both advanced nuclear and missile weaponry. It is a power that in the future will have its say. The only drawback it is suffering from (as does every Asian country) is a lack of technology. Today it might have a new DDG Class ship, but it does not have the technical knowledge and training facilities to keep up to date with other nations. Its surface seaborne platform at this time is non-existent.

Japan is a country with the technical knowledge and the means to produce an efficient fighting force. Its naval power is about what Russia had in 1955; a coastal navy for the protection of its coastal shores from seaborne attack. Again a non-existent fleet air arm, and no seaborne platform. Its only aircraft for coastal work is with her Coast Guard.

Indonesia is a smaller version of China with no nuclear or missile capabilities to send a shudder of fear down America's back. Fleet air arm is also lacking.

India had 24,000 officers and men in 1973. Its fleet is a navy of British reject ships, with something less than a powerful naval air arm.

So the list goes on and on. The three great navies of the world today which can use the technology of a seaborne aircraft platform in future naval warfare are, in order: America, England and Russia. To a lesser extent follow Australia, France, Italy and the Netherlands. Dragging the rear are five other countries, but these only have very small fleet air arms (mainly ASW): Argentina, Brazil, Canada, India and Spain.

Total nuclear war will bring to this world problems that most nations have never envisaged. Can there be a rationalised answer to the complexity of nuclear war? How far does one go when using a weapon that mankind knows so little about! The problem that arises from nuclear war is that no one as yet has survived this holocaust to know the answers. What most giant nations of the world fear is that some smaller nation, when backed into a corner and which has the scientific knowledge, may use a nuclear device of enough magnitude to make the other party retaliate with nuclear weapons. This chain of events could lead to man's extermination. A good illustration of this was the film "On the Beach". The movie tells the story how fall-out slowly floats over the earth after a nuclear war, killing nations one after the other. Even today in Japan, the effects of the small atomic bomb dropped during the Second World War are causing concern. Mothers are having stillborn babies or dis-figured and mentally retarded children. The cause is radioactive contamination. Turtles of the South Pacific Islands, if contaminated, lose their sense of direction. On burying her eggs in the sand, the female, instead of crawling back into the sea, crawls inland to die from the hot sun, never realizing that her young will also be infected and die while still in the shell. It is not just mankind which suffers, but all living creatures.

Most nations have an educational system and specific buildings for use in time of a nuclear war. If there are survivors from the initial blast and shock waves, they still have to protect the community from something no other type of war leaves: fallout. It cannot be seen, it cannot be touched, and it cannot be smelled, but it kills as surely as old age.

There is no reason to go into naval tactics of nuclear warfare here, or into what political influence leaders will have over the nation. It is obvious that aircraft will be used for flying supplies and medical assistance to the worst affected areas. Shipping will be the supply train, and the seaborne aircraft platform the front line for use to determine to what extent radiation prevails in different areas of the world.

Man is at the edge of a new dawning; one of far reaching discoveries in all fields of technology. What way he will turn, to shape that destiny, no one knows. What is important is that today the two leaders of the world, Russia and America, are both in the position that each has cancelled the other out in the missile race. Due to this fact the governing factor for future warfare is not nuclear. If the situation arises, then a non-nuclear war, borne out of the fear of mankind's annihilation, will occur. This will leave each nation locked together in battle using conventional non-nuclear war materials.

To conclude by re-capping the important facts that point strongly to a place in future naval warfare of a seaborne aircraft platform; in Russia the acceptance of the carrier in the form of the Keiv Class has only come about during the period after Stalin's death, when the Soviet navy moved out into open water, and quickly found aircraft an advantage over other systems. America and England developed basically along the same political lines due to the Second World War. Today mainly due to her resources and superior technology, America is the leader in this new era of the aircraft-carrying ship.

Russia with her new naval policies has moved from coastal operations to new territories: the Mediterranean, Indian Ocean, and Nordic countries. To cover all these areas, the fleet has to be enlarged. What now is apparent to both Russia and America is that because of their new foreign policies a persuasive case must be made for seaborne tactical support.

Today, because of the emergence of the new policies of open sea warfare and the tactical advantage gained from a seaborne aircraft platform, both Russia and America seek new ways to fulfil this role. America seems to be turning slowly towards the "100 knot navy". The SCS concept indicates American efforts to test thoroughly their ideas for this small carrier for later on when with the eventual arrival of either the SES/Hydrofoil or both, another chapter in America's naval history will begin. The advantages are: (a) reduction in the size of catapult and arresting gear on flight decks, (the present SCS does not have these items fitted), (b) obvious advantages of speed, making a difficult target for missiles, aircraft or submarines' torpedoes, and (c) by using a screen of SES/Hydrofoil around a force not only is the CAP eliminated, but the attack is broken up.

Russia is also following the aircraft carrier role with the Keiv Class. The advantages that America had with its attack carriers will be nullified. It will be capable of having formidable fleet support away from Soviet soil. Admiral Gorshkov now has a powerful addition to the political impact ot the Soviet fleet in peacetime. In wartime the ship will enhance and manifest the capability of the fleet to operate anywhere in the world.

The world of tomorrow involving the complexity of modern warfare, is something that "old salts" of today will not be able to rationalize. So new are the concepts that to explain them would be like trying to explain to a person living in a two dimensional world, i.e., length and breadth, that there was also another dimension, height. To try and set down what political path a particular nation will tread is another impossibility, due to the ever changing daily events. What is apparent is that if there was an outbreak of nuclear war, once it finished, the world would not resemble anything that stands today. Every nation must be aware of the political forces that govern the lives of so many. If it is used for personal gain as has happenned in the past, then we will again see yet another war. When this war occurs, the vast ocean areas will become a place where seaborne ships will naturally play a major part in that particular nation's survival. Sea-going commerce in this period will be increased because of strategic materials needed to fight for the cause. Food supplies and re-inforcements will also have to be sent. Warships will be needed to counter the stand-off missile threat, and to remove that threat with its own defensive capability. The one main fact that underlines all these needs is the aircraft. Since its discovery, the aeroplane has been transformed from flimsy matchwood glued frames to its high standard of sophistication. Combined with a seaborne force as the history books of the past have shown, it is a formidable weapon which must command respect. With today's complexity and tomorrow's radical ideas, there is an assured place of the seaborne aircraft platform in future naval warfare.

☆ ☆ ☆

Every Australian should have in his blood some sound of the sea. Behind him somewhere is the long sea passage. And seapower is still a condition of his life and of the national existence.

– McGUIRE

The Indian Armed Services

OVERVIEW AS SEEN FROM THE INDIAN NATIONAL DEFENCE COLLEGE

An address to the Australian Naval Institute, Canberra, 7th November 1975

BY CAPTAIN T. E. FISHER, RAN

In 1974, the writer was posted to New Delhi to attend the Indian National Defence College for a course which for all intents and purposes, is similar to and based upon the old Imperial Defence College (now the Royal College of Defence Studies) course. The views expressed are personal and based upon observations and the experience gained by working and living with Indian Service officers over a period of 11 months.

The Indian National Defence College was opened in 1962 by the then President of the country Mr. Jawaharlal NEHRU to give senior Service and Government departmental officers an insight into the higher requirements of defence management. Although run by the Army and hence, upon Army lines, the Office of Commandant is held by each Service in turn and during 1973, the College Commandant was Lt. Gen. BATRA PVSM who had had a distinguished military career first in the Indian Army under the British Raj and later in the Indian Army. Gen. BATRA was a contemporary of Yaya Khan who was the Prime Minister of Pakistan until the cessation of hostilities between India and that country in 1971. Yaya Khan was the platoon commander of Gen. BATRA's platoon when the latter was a Cadet of the Indian Army Cadet College. Gen. BATRA fought in the Middle East during World War II and took the British Army Staff Course at Camberley and was very much brought up in the British Army tradition as is the general case of the majority of the more senior Indian Service officers. The student body attending the National Defence College consisted of 12 Army, 8 Air Force, 4 Navy and 12 civilians from various Governmental departments such as the Indian Foreign Service, Indian Administration Services, the Post and Telegraphic, Railways and the Indian Ordnance Inspection Service. Eight foreign students attended the course, one each from Britain, Australia, the Philippines, Sri Lanka, Afghanistan, Iraq, Tanzania and Ghana.

The curricula for the NDC was governed from the Defence Department in New Dehli. It did not embrace a close study in detail of the Indian Services per se but rather addressed the total problem of defence as seen from an Indian viewpoint taking into account the capabilities of likely opponents (and allies) and the development of Indian forces and separate infrastructure within the parameters dictated by the socio/economic climate of the country.

The standard and status of lecturers was, with few exceptions, very high and ranged from permanent heads of Government departments through the Chiefs and ex-Chiefs of Staff to the leaders of the various political parties, industrialists and economists. The range was broad: all lectures were given in English, this language in reality being the common link-language of India.

Formal lectures were supplemented by tours within India which tended to be regionalized and were designed to introduce the problems and development of industry and social progress within the country. Owing to the number of students involved – 44 in all, the visits were generally split three ways and upon completion a post mortem discussion of the tours was conducted, each group giving a presentation of its findings. One overseas tour was provided to each group.

THE AUTHOR

Entered the Royal Australian Naval College in January 1943 and passed out at the end of 1946. He specialized in marine engineering completing at the Royal Naval Engineering College in 1950 and subsequently served in HMA ships *Australia, Sydney, Warramunga, Yarra* and *Melbourne.*

Other postings have included *Cerberus* and *Nirimba,* Captain Trials, the staff of the RNE College at Manadon, U.K. and Navy Office.

Captain Fisher attended the 14th course of the Indian National Defence College in 1974. Currently he is the Director of Naval Project Co-ordination at Navy Office.

Although the matter of security in respect of foreign students prevented them from making certain visits, generally speaking security had no apparent inhibiting factor on the efficacy of these tours.

The first tour took the whole College to Hissar, in the state of Haryana. This was associated with the social progress being made in a typical Indian district. The Agricultural University of Haryana was inspected together with experimental farms (some of which recieved considerable aid from the Australian Government in the form of expertise, equipment and stock), one of the Indian equine remount farms, whose main task was to breed mules for use in the mountainous terrain to the north as transport, and a typical Indian village (Ladwa) where the system of local government was explained and illustrated in detail.

Following the economic study of the country, an industrial tour was arranged. This consisted of three separate parties: one going to the Eastern States and embracing the bulk of the heavy industry in this area namely West Bengal, Bihar and Orissa; one Southern tour to Madras, Hyderabad and Bangalore areas which contain the main industry supporting defence production and a Western tour of the industrial centres of Ahmadebad (mostly textiles), Baroda (refineries and fertilizers) and thence to Bombay, which contains a complex industrial capacity and amongst others, is the headquarters of the vast Tata group of companies as well as numerous other medium engineering concerns. This party also visited the Bahrat Nuclear Testing Station which did all the work leading to India's first nuclear explosion which was detonated on 17th May, 1974 in the desert of Rajasthan. India's main Naval dockyard is in Bombay as is Magazan dockyard which has built and is still building the Leander class ships for the Indian Navy. From this tour one gained the impression that the country was quite capable of building equipment up to a reasonable level of technological complexity but they were not producing equipment involving advanced technology, especially in the field of electronics. India is, however, quite capable of building a complete 100-megawatt power generation plant in-country and without obvious outside aid. Perhaps their weakest point lay in the lack of sound quality control, a feature which was often observed and which is reflected by comments made about the reliability of most indigenously-produced Service equipments.

Foreign officers were not included on the tour of the Eastern States as this included a visit to Vishakhapatnam.

Later on, the College was flown to Bombay to visit the Indian Navy and later, the Indian Air Force Station at Pune (Poona). The majority of the Service officers, including the writer, were accommodated for the week in the Western Command Officers Mess situated two miles to the south of Bombay. Whilst living in this Mess, one was able to mix freely with officers of all ranks and the Mess functioned as any similar Naval Mess in Australia or the U.K. The Indian Naval officers, although they obviously treated any questions with caution, were willing to talk on any Western Navy matter quite freely and indeed, with much enthusiasm and one soon gained the impression that the Indian Navy dearly wished to become associated with other Navies and particularly, the Royal Australian Navy, probably due to the influence arising from the visit by *HMAS Perth* and *HMAS Derwent* in 1973 and the fact that *INS Delhi* had visited Australia in 1972. The younger officers literally thirsted for knowledge of the RAN – knowledge quite across-the-board from conditions of service through to our Vietnam involvement to the reliability and efficacy of our equipment and especially, U.S. equipment. One had at times to be very cautious. At the time, *INS Vikrant* was in dry-dock and had been for some four months getting new boilers following potentially severe boiler troubles. *Vikrant* was the Indian Navy's pride and joy despite her aged aircraft and the Navy dearly wished for Skyhawks to replace their obsolete and very tired Seahawks and the manner in which the RAN catered for more advanced aircraft in *HMAS Melbourne* was frequently brought up in discussion.

The reader will appreciate that the Indian forces have acquired a considerable amount of Russian equipment; in particular the Indian Navy has acquired Foxtrot class submarines, Petya class escort vessels and Osa class patrol boats. From discussion with various Naval officers, one gained the impression that Russian equipment was sturdy but technologically, not up to Western standards. This appeared to be the complaint offered by Army and Air Force officers with regard to their Russian equipment. One further complaint was that the spares were both expensive and that the lead-time for acquisition and turn-round for spares was in excess of 18 months. The equipment was designed for a repair by replacement policy which demanded that the defective unit be returned to Russia and that local repair facilities were not encouraged. The Indian Air Force met this problem despite the fact that MIG-21's were being built in India although many of the components and units had to be foreign-imported at great expense and with

long lead-times. These factors would inhibit the ability of the Services to indulge in operations over an extended period. The Indian Navy did not approve of the training and subsequent operation philosophies demanded by the use of Russian equipment in that a one-man/one-job technique was implemented leading to excessive complements in the ships, a lack of cross-training in equipments and, of course, great cost in foreign exchange required by the sending of greater numbers to Russia to be trained. The maintenance and operation philosophy of Russian equipment is geared to the predominance of a conscript Navy and a three year period of service in the Russian Navy, unlike the Indian Navy's of volunteer personnel serving for a period of 12 years. In-country training was being developed on the East Coast but details are not known. Suffice to say that from the Sub-Lieutenant level until promotion to Commander, the Indian Naval officer tends to be either Western-ship orientated or Eastern (Russian-type) orientated. The Western fleet operating out of Bombay however, comprised vessels of both British and Russian origin and the headquarters for patrol boat operations was in Bombay.

A tour of the Naval dockyard at Bombay produced no surprises except the extension programme which was to include ultimately two new dry-docks, one capable of taking the carrier with ease (as compared with the shoe-horn fit which *Vikrant* posed in the one existing dock and the other, a destroyer escort sized dock). The dockyard now extends from the well-known 'Gateway to India' out to sea for some half a mile and thence some 2,000 feet southwards, the land having been reclaimed from the sea. The vista from the Taj Hotel has been very much impaired and the old Admiralty House (the residence of C. in C. Western Fleet) and the Royal Bombay Yacht Club, which still flies its Union Jack defaced with the Club badge, no longer enjoy a water frontage or direct water views.

The dockyard is not unlike any other one sees. It is crowded with equipment in the corners and showing all the signs of its 'topsy-like' growth which followed its insignificant start in the late 18th century. The plans for its rehabilitation are ambitious however, and well on the way to completion. Magazan docks, the commercial yard of note in Bombay, is to the casual observer, an inefficient jungle of crowded buildings, slipways and fitting-out wharves but with quite an active building programme being undertaken, both commercial ships and men-of-war being built. Yarrows have a direct input into this yard and 1/10th scale lofting techniques are used. However, here the modern methods appear to stop and with the abundance of relatively cheap labour, much of the work was pull and haul. At the time of this visit, there was talk of shifting the whole of the complex across the harbour and starting from taws.

Lunch was taken onboard Indian Naval ships in harbour with small groups going to each ship. Although initially I was to lunch in one of the Petya class vessels, this was changed at the last moment to *INS Talwar. Talwar* is a type 12 Destroyer escort commissioned in 1960 and she showed definite signs of her age by way of minor corrosion of the upper deck fittings and other general corrosion and pitting of the decks themselves.Due to shaft vibration problems, she was limited to 25 knots and one gathered that she had troubles.

She was, however, clean and tidy above and below decks and the drill, dress and appearance of the ship's company was very good.

The same can be said of *INS Mysore* which took the whole College to sea on the following day to witness an Indian Navy 'Shop Window' exercise. *Mysore* (ex *HMS Nigeria*) was the flagship of the Commander-in-Chief, Western Fleet. The whole exercise, from guard and band for leaving the harbour to the detailed manoeuvres undertaken, was quite impressive. *Mysore* superficially appeared to be in reasonable shape for her age (laid down in 1938) but there the matter rested.

During the day, I had the opportunity to talk at length with the Admiral about a host of matters, one of which was the material state of this ship and the appalling conditions which prevailed below due to excessive heat caused by steam leaks and habitability factors. She had never been designed to cope with an Indian summer (or winter for that matter). *Mysore's* ability to remain at sea was largely dictated by her capacity to sustain an enormous feed water consumption. The Admiral could see no future for the ship although some Naval circles consider that she should be armed with surface-to-surface and surface-to-air missiles to counteract the threat which was looming with the possible acquisition of similar weapons by Pakistan. The nostalgia of the 6 inch gun came out loud and clear. *Mysore* had bombarded Karachi adding to the undoubted successes achieved by the Indian Naval Osa-class vessels during the recent war. The 6-inch gun was still revered.

The Admiral reinforced the impression that the Indian Navy felt rather lonely, being suspended between East and West with a result that they had no other Navies with whom to exercise and asso-

ciate. Perhaps the recent visit by RAN units will do something to relieve this need. Certainly, the visit will help to offset the feeling which prevails that the Russian association has led the Indian Navy to be left on the outer – a point which has obvious validity.

The 'Shop Window' was a standard affair with little out of the ordinary except for the firing of the AS weapons of the Petya-class and the showing-off of the Osa boats at speed. No Styx missiles were on view or fired.

The hedgehog-type ahead throwing weapon of the Petya had a range of about 3,000 yards and the launcher did not appear to be stabilized and despite the calm sea, these vessels pitched quite heavily – a factor which must inevitably affect the accuracy of the weapon. The Petyas are cramped and uncomfortable and their sea-keeping qualities suspect (sea state 3 being quoted as their maximum). Their engine hours too are a critical factor and although people tended not to discuss this aspect, one gathered that engine life between overhauls was very limited. The Indian Navy did not appear to be very enthusiastic about the Petyas. With the Osa-class, however, they had achieved remarkable success in using these vessels and their Styx against the fuel storage farm and shipping in Karachi. The vessels were towed to within range of Karachi and towed back to Bombay after the attack with no losses.

The structure of the Indian Navy is very much upon Royal Navy lines with their ranks and rates closely akin to the Royal Navy. Training is a major undertaking with the bulk of it taking place on the West Coast, but with the Russian equipment and vessels, on the East Coast, centred at Vishakhapatnam. Basically, the Indian Navy has a training organization not unlike our own with establishments at Vishakhapatnam, Jamnagar, Lonavla (near Pune), Bombay and Cochin. *INS Vendaruthy* at Cochin is very much their *HMAS Cerberus* but separate weapons, electrical, marine engineering and supply schools existing at Jamnagar *(INS Valsura),* Lonavla *(INS Shivaji)* and Bombay *(INS Hamla).* These are fully commissioned establishments, commanded by specialist officers but here the General List concept appeared to stop. More than one officer of the engineering specialization was very critical of the lack of any real General List concept being practised within the Navy.

By RAN standards, the training equipment was poor and what was available tended to be obsolete. Money to purchase equipment has been very tight in India and generally, they appeared to be at the stage at which the RAN found itself in the 1960's with no up-to-date equipment at specialist schools. It must be conceded, however, that the Indian Navy is really trying to make do. At Vendaruthy the MRS 3 system, as fitted in the two Leanders, was displayed in mocked-up form using full-sized photographs of the equipment applied to wooden models. This achieved quite realistic presentation of the equipment for instructional purposes.

Contact with the Indian Army was a daily event. The Army is India. It is the Senior Service – it is the biggest by far of the three Services (over ¾ of a million) and the brunt of all attacks on India or by India have fallen upon the Army. Besides the regular Army, there are other para-military forces whose numbers certainly bring the figure of ¾ of a million to well over the million mark. The largest of these para-military forces is the Border Security Force which tends to recruit from, and operate in, border areas. They are well armed, well trained and very active. In contrast, the Central Reserve Police are armed with the old Lee Enfield .303 rifle and look a second-rate outfit. Their main function is internal security and control. The regular Army units are not, as a rule, used in internal security matters, the Central Reserve Police, Railway Police and Industrial Security Police being used. As a result, the Army stands in high regard and respect with the local population and the Indian Army is a very proud and tightly knit organization. One cannot help but notice the spirit of togetherness present amongst the Army officers, especially at the high levels. They all appeared to know each other despite the size of the organization and the frequency with which letters were exchanged was quite noteworthy. These letters were short, personal notes just keeping in touch and cost 15 paise, or about 2 cents, to post. When the College travelled, the Army usually made all arrangements and they worked. It was acknowledged by all in India that the Army was the only really efficient and reliable large organization in the country. This was not a reflection against the other Services – it merely tended to group the three Services into one – Army.

One example of the way in which the system worked is worth recalling. One of the foreign tour groups was to visit Lebanon, Egypt and Iraq, departing Bombay by Air India at 1800 which meant a 3 hour wait at the passenger terminal which usually is crowded and with few facilities. This was of no consequence to the local Army Commander, who roped off a quarter of the terminal and complete with Mess silver and bearers,

the NDC was entertained to a cocktail party by the local IX JATS Regimental Mess. This did not even rate a second look by the other non-privileged passengers, no doubt being taken for granted.

As previously stated the Army have borne the brunt of the fighting and some of the regiments had been badly mauled, especially in the Jammu/ Punch area of the Indo-Pakistan border and the Chinese in 1962 caused severe losses. The casualty rate in the 1971 war amongst junior officers was very high indeed, especially in the infantry regiments which form the bulk of the Army. Traditionally, the officers must lead and show the way to their men and the toll of the modern automatic weapons was dire. Despite orders to the contrary, the platoon and company commanders continued to expose themselves unduly to enemy fire and losses reached distressing proportions.

The Army is very British, probably more so than the other two services. The Beating the Retreat Ceremony in New Delhi is recalled, held to celebrate Independence Day on the broad Raj Path with the magnificent Government Office buildings, designed by Sir Edward Luytens, as the background. Despite a large degree of local musical input, the whole ceremony could have been at Whitehall with the Guards performing and at the completion of the musical sunset, which incorporated the hymn "The Day Thou Gavest Lord Is Ended", I turned to an accompanying Royal Air Force officer with the statement:- 'Well, Desmond, the sun has not quite set on the Empire'! Many of the old Indian regiments still continue to exist and some continue to keep in touch with their British officers and a visit to a regimental headquarters Mess is a lesson in history in itself and the Colonels of the past continue to watch over from the walls of the high-ceilinged Mess halls and, all in all, would probably continue to approve, although the paintwork is a little shabby and here and there maintenance obviously is being neglected. The Delhi 'local' regiment has the Rajputana Rifles, whose headquarters cantonment was on the outskirts of the city. Recruit training was carried out here and the viability of the regiment lay in its Delhi district background. Its Mess was straight out of Kipling with its walls adorned with trophies, relicts, guidons, silver and old weapons which reflected the regiment's history of some 200 years.

A visit to regiments in the field or away from their headquarters tended to be just as interesting and the Mess valuables and trophies seemed to be part of the move. To have morning tea served at 13,000 feet up in the Himalayas from the Mess silver in a Mess which was no better than a hole in the ground, is an experience quite unique. This regiment was the Gawahli Rifles whose home is some 200 miles to the north-east of Delhi, but who were guarding the approaches to Sela Pass in Aramanchal Predesh in that part of the world where Bhutan, Assam and Tibet meet.

One's impressions of the Army can be derived from three sources each distinct and pertinent. These are, first the face-to-face contact encountered at the College; second the social contacts made through travelling about the country under the care of the Army; and last seeing how they operated on the border with Tibet and China. The first two contact impressions have been addressed.

At the end of October, the College visited the border areas, one group going to Kashmir and thence up to Ley and Ladakh, another visiting the Nagaland Mizoram areas which are trouble spots, due in the main to insurgency problems and the third to the mountainous border state of Aramanchel Predesh to the north of Assam.

In 1962 the Chinese invaded this latter area coming from Tibet over the Bomla and Thag La Passes. They completely overwhelmed the quite inadequate and ill-prepared Indian Army. One has to see the country to appreciate the problems which the terrain imposes. The Chinese came from the high regions of Tibet where they were acclimatized to the rarified atmosphere of 16,000 feet and were adequately clothed and armed with automatic weapons. Indian troops were rushed up from the plains of Assam and the Ganges, ill clad for the extremes of temperature, ill conditioned physically and poorly armed. The result was a debacle with the Chinese proving themselves the .masters' of mobility in the tough going the terrain imposed. This war, from the Indian viewpoint, is well documented in Brigadier Dalvi's "Himalayan Blunder" and it was the turn of the tide for the Indian Services and the Army in particular. A less emotive account is contained in Neville Maxwell's "India's China War". Previously, the 'no threat' concept of Nehru and Krishna Menon had seen a run down in numbers within the Services and had severely curtailed the acquisition of modern equipment.

The rationale behind why the Chinese unilaterally ceased their offensive actions is not really understood. Probably it was due to the closure of the passes leading from Tibet by snow which shut their lines of communication. However, the snow falls were not early nor unseasonable and in reality, the Plains of Assam were open to them. These are immensely fertile and supply a large proportion of

India's rice requirements. The Indian Army's lines of communication were extensive at the best of times, being restricted to a narrow gauge rail link, road and air links all of which were forced to pass through the narrow corridor of land between East Pakistan and Nepal. Although the Indian Army's ability to cope effectively with the Chinese at the lower altitudes of Assam in the Brahaputran valley would have been much enhanced, the general consensus of opinion was that the country was most fortunate in emerging from the conflict relatively intact.

Indian troops are now permanently stationed up in the high altitudes and are properly equipped and conditioned for such warfare.

In order to condition the human body to high altitudes and here one is speaking in terms of 15-20,000 feet, one must stage up from about 9,000 - 12,000 feet over a period of one week, from 12 - 15,000 feet over another week and from 15 - 20,000 feet, a further two weeks is required (these were the scales laid down at the time of the visit). A failure to stage will result in a breakdown in the ability of the lungs to dispose of excess moisture with a result that severe respiratory problems will arise. It was this problem which arose when troops from the plains were rushed up into the mountains to oppose the Chinese in 1962 and which was the major constraint on the ability of the Indian Army to cope. This complaint is the classic mountain sickness or Pulmonary Oedaemia and is mostly fatal. At present, the Army stationed in the mountainous areas live at 14,000 feet with some troops stationed permanently at 19,500 feet and, with some three Divisions at these altitudes, the scenario today is a far cry from 1962.

Up in those parts, the Army lives underground or in fairly basic conditions in huts clinging to the mountainsides. The area HQ is way back at Tezpur with forward organizations at Bomdila, Sela and Towang. Until recently, families were not permitted and a tour of duty involved a two year separation, with one period of leave in the middle. Even today family accommodation is limited and available for low altitude personnel only as the full rehabilitation process to acclimatize must be undergone after each descent.

Two of the National Defence College students had, in turn, commanded a brigade at Sela (14,500 feet). Headquarters was a hut edged into the side of the mountains with an underground continuation and very basic comforts only were afforded. The Brigadier visited the whole of his Command monthly on foot. This involved climbing up to 19,500 feet in some instances and descending to 6,000 feet in order to cross some of the valleys. These people were fit to say the least! Supplies are moved by mules which are specially bred for the purpose at Army remount centres of which there are two in the country.

One gained the impression that despite the conditions pertaining to service on the frontiers, the morale of the troops was high. Bodies of marching men looked smart and their drill and dress was of high order and the whole of the North East Frontier Area appeared to reflect a sense of purpose and commitment. Visitors such as we, were made most welcome. The progress of the convoy of Jongas (equivalent to a jeep) was frequently impeded by road-blocks consisting of cups of tea and the inevitable Indian 'small eats', arranged by independent groups who emerged from the terrain determined to offer hospitality and to meet and talk with people from Delhi.

The three separate frontier tour groups reported similar experiences and considered that the Army were well in control of the situation. Following the 1971 War, the Army's tail was well up. Despite relative inactivity, the tail was still riding high in 1974.

One feature of the Army could well cause problems in the future. India is a country of varied ethnic and language differentiated peoples with little commonality between groups. For example, the Punjabis are fiercely and intensely proud of their heritage and offer, to an outside observer, the distinct impression that all other Indians are second-class in their eyes. They are predominantly Sikhs – tall and well built and are a proud people and excellent workers. Similarly, but less obviously, the same applies to the Mahrattas from the West Deccan, the Gawahlis from the Uttar Predesh foothills and so on.

The Indian Army regiments are recruited and trained predominantly within their ethnic area – a situation not unlike that of the old British regiments exists with the one major difference – the Tommy spoke English (or a recognizable dialect of the language, whereas the Jawans use of English is limited and a native tongue predominates. As such, his primary allegiance tends more towards a state or district from which his regiment is recruited rather than the total Indian Army. The Army is taking considerable pains to breakdown this compartmentalisation by introducing recruits from other districts into essentially local regiments.

Since partition in 1947, India has seen the fragmentation of its larger states into smaller and less

viable states based upon mainly language, ethnic and to a lesser extent, religious considerations. The Hindu religion contains many variations (as does the Christian) and these tend towards regionalization. This very fact tends to exacerbate the problem which the Army fully recognizes. The fact that the regimental system is so varied in background, language and basic affiliations, leads to logistic, communication and leadership problems which would not beset, say, the Australian Army. Within the Navy, the same problems do not appear to exist, or if they do, they are cast aside as insoluble and thus the Indian Navy sailor is uniformly dressed and except for the ubiquitous turban of the Sikh, no differentiation is noticeable. Food-wise, he is either vegetarian or non-vegetarian. Both tastes are catered for and the matter there rests. The same appeared to be the case in Air Force Messes.

The Indian Air Force follows the other Services in the basic rank structure and organization inherited from the British and uniforms follow the Royal Air Force pattern and colours.

As contact with the Indian Air Force was essentially through the officers of the National Defence College group and several journeys in Indian Air Force aircraft, to wit, Super Constellations and on one occasion, a Russian MI8 Helicopter, a truly objective viewpoint is difficult. A short visit was made to the Indian Air Force station at Pune, which is some 90 miles on the Deccan Plateau from Bombay and here a flying display was staged for the benefit of the College. Aircraft types flown were MIG-21's, Canberras and an ex-Air India Super Constellation. This latter type is the sole aircraft in use by India for long range maritime patrol. They do not appear to be fitted with any sensors other than the basic radar underslung from the belly and the Mark I Eyeball. The MIG is built in India by Hindustan Aircraft, with a substantial imported inventory. One gained the impression that the MIG was a solid and well-built aircraft but it had its limitations, being essentially an interceptor and the Army wished for ground support for which the MIG with its swept-wing configuration and high wing loading, was most unsuitable and susceptible to high-speed stalling. In consequence, the Army in the field saw little of them. Instead the Indian Air Force relied heavily upon their Hunters and Gnats in 1971, with the Marut as the third string. The SU - 7B's received little mention although they are essentially a close support aircraft.

The Marut is an interesting aircraft, being designed by the German, Kurt Tank, and built in India. Originally, the engine was to be built in Egypt but this arrangement did not eventuate and a Rolls Royce Orpheus was fitted leaving the aircraft rather underpowered. Apparently it handles well but being underpowered, does not reach up to its design expectations.

The Gnat came out of the War, the hero of the air being suited to the role of ground support cum Interceptor especially in the Kashmir area which is mountainous and difficult terrain for aircraft operations in either role. At the time of leaving India, the Gnat was being up-rated to give it additional power and proposals were in hand to build a modified Gnat, the new version to be called the Ajeet, which is Hindi for 'unbeatable'. It is of interest to note that the Gnat in combat with the Pakistani Sabres invariably won the day as although the latter were faster, the Gnat could climb better and out-manoeuvre its opponent. On one occasion, when six Pakistani Air Forces Sabres 'jumped' the Srinagar air strip in Kashmir, the one Gnat which was able to take-off, destroyed four of the Sabres before it was itself shot down having expended its ammunition.

The young pilot was posthumously awarded the Indian equivalent of the Victoria Cross.

Both the Hunters and the Canberras tended to be outclassed especially when faced with the apparently excellent early warning radar systems deployed along the Pakistan/Indian border which, when combined with the efficient ground spotting organization of Pakistan, effectively prevented the Indian Air Force from reaching Pakistan air space undetected. The Indians are very aware of the weakness of their strike capability and are looking for a Canberra/Hunter replacement.

In the Bangladesh operations, the Indian Air Force excelled themselves by initially destroying Pakistani opposition (mainly Sabres) and cutting the road and rail communications (mainly by the destruction of bridges) and then using the large MI8 Helicopters to ferry troops as necessary, across rivers which, by running in a north/south line, split the terrain into thousands of virtual islands. The Air Force Bases in West Bengal and Tiprura to the east were invaluable in this campaign and kept all Pakistani Air Force opposition to a minimum.

The Pakistan Air Force Mirage aircraft were prudently withdrawn from East to West Pakistan before war broke out and they took little part in the affair but their mere presence in the West effectively discouraged air attacks upon Pakistan itself – except for the combined Navy/Air Force attack on Karachi.

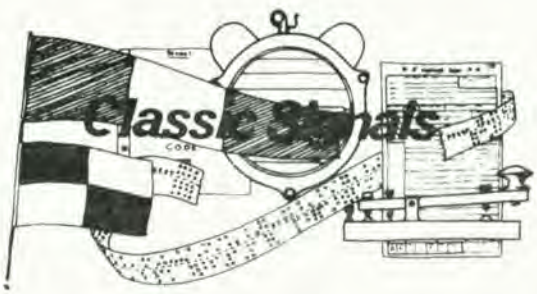
Flying which was done on various tours with the Indian Air Force, was without incident and on time, and generally done in the old Super Constellations. One could not help but recall Neville Shute's book "Around the Bend" and hope that the fastidiousness of the mechanics who serviced the aircraft in Shute's days, persisted into 1974 as the Super Constellations were flying long hauls and were at least 25 years old. As with the Dakotas, in Super Constellations one flies low enough to have a look and slow enough to make it a very good look.

During the frontier tour to Nefa, the group was airlifted out from Rupa to Tezpur in an MI8 Helicopter which was very large and carried the party of some 18 people plus equipment and extra pillow type fuel tank with plenty of room to spare. The Air Force spoke well of these aircraft and their ability to operate in the mountainous regions carrying heavy payloads and with good reliability - another case of good Russian ruggedness.

The terrain in Nefa and the high country of Hunzar Kashmir and Ladakh is not suitable for fixed wing operations and with the exception of the airstrip at Leh, I was not aware of any other strips of any size in the remote border areas. The difficulties of air supply to troops stationed in these parts is well described in Brigadier Dalvi's "Himalayan Blunder". One can surmise, having seen the terrain, that the operation of DC 3's in these regions must have been fraught with problems due to ceiling limitations of the aircraft, the sheer massive nature of the mountains and the weather conditions which prevailed. One had to admire the courage of Indian Air Force pilots who took part in flying operations in the Himalayas.

The impressions which have been expressed have been gained from close contact with Indian Service personnel. The National Defence College student group was a representative sample of senior officers who did their initial training towards the end of British rule in India. I doubt whether the basic training methods and patterns have changed significantly since Independence. However, the influence of Russian equipment acquisition and all that it entails by way of training and co-operation with Russian technology, will bring about a change as will the lack of opportunity of the Service officers to visit other countries as has been the case in the past. Hence, the strong British ties and traditions will inevitably fade as the senior officers retire and others rise up to command. Change is bound to occur, but it is felt that the present close-knit ties which were most apparent, and the commitment of the Servicemen to their professions and their country, will for some time remain based upon their heritage of which they are fiercely proud.

★ ★ ★



The first two examples occurred during Confrontation and both happened to an R.N. Officer who was, at that time, commanding a minesweeper.

One day on patrol in the Malacca Strait he challenged an Indonesian coastal force ship with the time honoured,
"What ship?"
The reply was quick and to the point.
"Buy yourself a copy of Janes' for Christmas".

— • • • —

On the other occasion a tense situation developed as his minesweeper began warily circling round an Indonesian Patrol Boat trying to identify it. Both had come to action stations and they began stalking each other like two dogs working up to a fight. Finally, the sweeper, in accordance with his instructions, broke off to resume his patrol. As he did so the Indonesians' lamp spelled out the wry comment,
"Hornblower would be proud of you".

— • • • —

Two ships in the Far East were making a passage through a small strait with villages on wooden stilts close to the water's edge and the ships' wakes were breaking on the shore. No. 2 in the column signalled:
No. 2: "I am worried about my wash".
No. 1: (having decided the wakes were not dangerous) "Use Blue OMO".

— • • • —

The first signalled position report received from a newly commissioned new Commonwealth naval patrol craft read something like the following:
LAT 2 FEET 39 INCHES SOUTH
LONG 60 FEET 16 INCHES EAST

The Patrol Boat in Continental Defence

BY LCDR COLES, RAN

The problem of the characteristics of a replacement, or perhaps better a supplement for the Attack class patrol boats needs to be examined from the point of view of the role of such a ship in the overall Continental Defence concept; indeed in the light of the role of the Navy in such a scheme. What is this role? In the simplest terms, it is the execution of maritime military operations as required by the Government. Such operations will involve ocean surveillance, coastal patrol and defence, and convoy escort, and may involve amphibious operations, denial of the use of a given area of the sea to an enemy or potential enemy, and pre-emptive operations. In any event, the Navy should be able to exercise control of the sea. This does not mean all of the sea all of the time, but certainly the seas around the continent. It is in this context that the patrol boat problem will be viewed.

The word "defence" is misleading. It has, to this writer connotations of waiting, of reacting to the initiative of the enemy, indeed a passive act. It is true that Australian forces will probably never be called upon for unilateral initial attack, and that we would be fighting defensively in response to an invasion attempt or similar enemy action. However, no defensive strategy can succeed unless it encompasses the willingness and the ability to take the offensive if the situation favours such action. The Battle of Midway provides a classic example, wherein the U.S. Pacific Fleet, although forced on the strategic defensive by Japanese aggressiveness and success, was able and willing to strike back. A combination of excellent intelligence, and offensive weapon in the shape of carrier borne air power, the moral courage of their command to commit this weapon, and a little luck, completely altered the course of the war. The absence of any of these factors would probably have resulted in a Japanese victory. History provides us with other examples of the importance of the offensive. The factor that is of interest in this discussion is the offensive weapon. The form of it is not of great concern, be it the Dauntless dive bombers of the *U.S.S. Enterprise*, of Nelson's wooden ships standing in to destroy Villeneuve. It is the fact that the means were there to conduct offensive operations. It is this writer's contention that offensive capability in warships is the key to a viable and versatile naval force.

The role of the small warship in coastal defence has been, if mine-sweeping is excluded as being outside the scope of this paper, broken down into two divisions. Firstly, there is the truly defensive patrol boat, epitomised by the Fairmile, the Seaward Defence boat and small auxiliaries such as armed trawlers, etc. Their role was to operate against enemy submarines, light forces, swimmers etc. They were effective, in part because in World War II a small vessel could carry reasonably effective ASW weaponry. Secondly there were the aggressively configured forces, such as the MTB and MGB, designed to strike at forces considerably more powerful, under cover of darkness, bad weather, and geographical feature. Their effectiveness declined with the advent of radar, which caused a quantum jump in the ability of heavy forces and destroyers to counter their threat. The lesson to be drawn from this is not that offensively equipped light forces are, per se, less effective militarily than those configured defensively, but rather that the relationship is determined by technological factors.

THE AUTHOR

LCDR Coles joined the Royal Australian Navy as a Midshipman in 1964 and was awarded his Observers Wings in Malta in 1965. After five years in S2 Tracker squadrons he served as Operations Officer with the RAN Helo Flight (Vietnam). In 1974 he studied Indonesian at the RAAF School of Languages before attending the Indonesian Staff Course, Jakarta in 1975. He assumes the duties of Staff Officer (Air) at the Australian Joint Anti-Submarine School in April 1976.

The huge increase in the effectiveness of the submarine since the Second World War means that a small ship, equipped with ASW weapons and sensors appropirate to its size, is doubtfully as effective as the Seaward Defence boat was. Conversely the appearance on the naval scene of the lightweight surface to surface missile has once again, given to the small warship a formidable offensive capability. The situation is perhaps not unlike that of the turn of the century, when the fast, turbine, torpedo armed ship appeared as a real threat to the battleship fleets.

The choice for the R.A.N. then, in deciding upon the characteristics of its new patrol boats, is fundamentally that of an offensive or defensive ship. The size of the vehicle will be determined largely by the requirements imposed by Australia's geography, and less by the weapon fit. Several needed characteristics recommend themselves:

(1) The range will be of the order of 2500-3000 miles at economical speed.
(2) Seaworthiness will be high.
(3) Standards of habitability will be high.
(4) Top speed will be 35-40 knots.

These factors imply a ship larger than the Attack Class, perhaps in the 250-350 ton range. That this is ample to carry a powerful weapons-sensor fit is exemplified by the Israeli Saar class which combines heavy armament with long range on 250 tons displacement. Indeed the Italians have mounted two Otomat missiles and a 76mm Oto Melara gun on a 60 ton hydrofoil.

The peacetime roles of the patrol boat force will be to maintain security of coastal, especially remote coastal, waters. For this task a modernised version of the Attack Class, bigger and with a more modern radar and gun system is sufficient. Indeed, fishing violators and such can probably be frightened off with a .5 inch machine gun. But in wartime such a ship will be of no value. It will not be able to defend itself against conventional surface forces. Why should we spend a large sum building and equipping warships which will be useless or nearly so in the event of war? The same hull armed with surface to surface missiles will have the same patrol capability, the same capacity to police our remote sea areas, but in wartime, a broad spectrum of offensive and defensive roles will fall within its capabilities.

A further consideration is the deterrent effect of a powerful naval force, a fleet in being, towards a possible aggresor. It is not this writer's intention to indulge in crystal ball gazing about form, size and timing of threats to the Nation's security. We can see the great capacity for instability in the area to our north, and we may assume that our vast natural wealth will become a target for illegal demands on those resources. In any event geography shows us that a physical threat to Australia will be maritime in nature. A navy with a high level of offensive capability, based on the exploitation of the most modern technology, may well deter military adventurism by a less technically advanced enemy. Missile armed patrol boats would provide a relatively economical segment of such a navy.

It is, therefore, the writer's contention, that the only valid solution to the patrol boat problem is the missile armed boat. It remains to discuss the weaponry, examine the problem of support, and to look at the possilbe role and of a much smaller, cheaper vessel.

The discussion on the armament will necessarily be rather superficial, as these problems will be solved by systems analysis, with, doubtless, political considerations taken into account. Israel's highly successful Gabriel system developed and manufactured from limited resources and our own development of the Ikara, point out that an effective system could be developed in Australia, with the attending benefits to local research and industry being significant. This writer feels, however, that the relatively large number of proven missile systems available, or at least extant, make this course of action of doubtful value. There would be great competition for export markets. It would be better to choose a "state of the art" system with offset production and development rights. The designed versatility of the *U.S. Harpoon*, with its "three-dimensional" launching platforms, its compatibility with the Standard launcher, the P-3, and, hopefully the Oberons seems to offer a lot of operational flexibility. Secondary armament will be versatile, with anti-air and anti-surface capability. The Harpoon is an expensive way to sink an undefended target. The Oto Melara 76mm turret has a good performance against air and surface targets. The AAW capability could be enhanced with a lighter gun of 40 or 57 mm or alternatively a short range missile system such as SLAM. The radars will need to have a multi-target acquisition, tracking and weapon control capability. The Signaal M20 series have this capability, and have for us the added benefit that the R.A.N. already has considerable operational experience with this make. The armament fit will also include 0.5 machine guns for use against low value targets, demolition charges, and conceivably a "non fitted" infantry-type missile such as TOW, to economically dispose of larger, non-defended vessels. A force of patrol

boats, armed as above will be able to carry out all required peacetime tasks. The missile system will also make this force a formidable counter-attack weapon, ideally suitable for the Continental Defence concept.

Initially, the high cost at such an armament system could be reduced, by fitting the boat "for but not yet with" its missiles, which could be installed later as part of a progressive re-equipment policy. The cost could thus be spread over a number of years.

It is difficult to discuss support need in detail without reference to the size of the force to be supported. Because of this, a broad idea of operational support for a patrol boat force operating in the north and north-west of Australia will be proposed. The conventional solution, shore bases, may not provide the answer. The nature of patrol boat operations requires that support be available close to the operating area. In the huge area in question a main base supplemented by smaller evenly distributed facilities will be needed. Both Garden Islands have the advantages and disadvantages of distance. Darwin is centrally situated but has already been proved vulnerable to both hostile action and the vagaries of the elements. And is there anywhere in the norther part of Australia that has an industrial and population base sufficient for a comprehensive support facility? Seaborne support provides the answer for operation in relatively remote areas, due to the flexibility given by its own mobility. An interesting design for a capable support ship is already in service. The Libyan Navy's *"Zeltin"*[1], designed and built by Vosper Thorneycroft, incorporates full docking and maintenance facilities, and may be used as a command ship for patrol boat operations. The ship would need to be enlarged to handle the size of boat envisaged by the writer. In association with the fuelling facilities of the small ports in the North and Northwest, and possibly fuel dumps located in remote spots, a *"Zeltin"* type would allow great flexibility in operations. A ship is less vulnerable to air attack than a forward base, if only because of its mobility. Its mode of operation, mostly in inshore waters, will also render it less subject to submarine attack than might be expected. It should be defensively armed with short range AA missiles and guns, and could carry a Rapier system to be set up ashore when carrying out docking and maintenance of its charges in an area of high air threat.

This paper will conclude with a look at the really small patrol boat, of 50 tons or less. Although such a craft can carry a powerful armament (the Italian hydrofoil for instance) it is most doubtful if it can also offer the range and hability required by Australia's "tyranny of distance". There may be a role for this type in the event of major harbours being attacked from the sea, where a coastal defence warship would not need long range. As described earlier, a useful ASW armament could not be fitted, whilst defence against swimmers could only be carried out by commandeered pleasure craft. The small boat, then is only of value if a local seaward defence is deemed necessary. It does not seem to have a place in the long range offensively armed patrol force postulated.

1. See USNI "Proceedings" Jan. 1971, page 95. "-LNS Zeltin- Maintenance and Repair Ship for Libya" for a comprehensive description.

FROM THE EDITOR

Despite our appeals in the last edition for contributions to the Journal the response has been somewhat disappointing.

In this edition there is no Technical Topics column as not one single item was submitted and the Correspondence column consists of the sole letter received. We cannot believe that all members completely agree with all points of view expressed in all the articles so far printed. Again we stress: THERE IS NO PARTY LINE.

We need articles, items for the regular feature columns, letters to the editor and humourous anecdotes.

If contributors so request their items will be printed under a nom-de-plume.

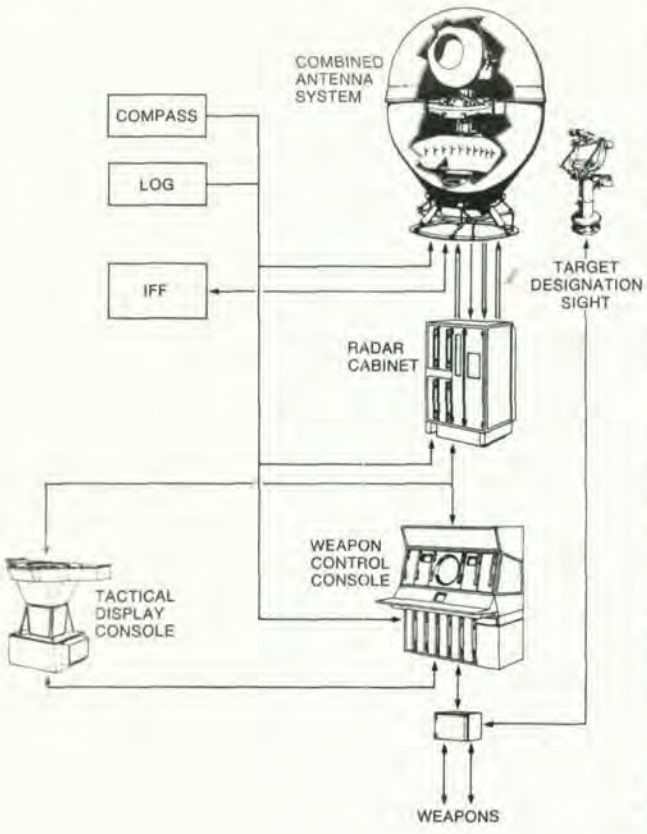
To quote an old Naval saying "Don't just stand there – do something."

★ ★ ★

Military philosophies, bred and crystallized in the crucible of war against the elements and other adversaries, may not convincingly register on mentalities trained and experienced in totally different circumstances.

Admiral R. B. Carney, USN: Address to the Naval War College, 31 May 1963

Signaal's Mini-Combat System



Mini-combat system based on Signaal's well proven M20 system concept now in use with 14 navies, including the United States navy.

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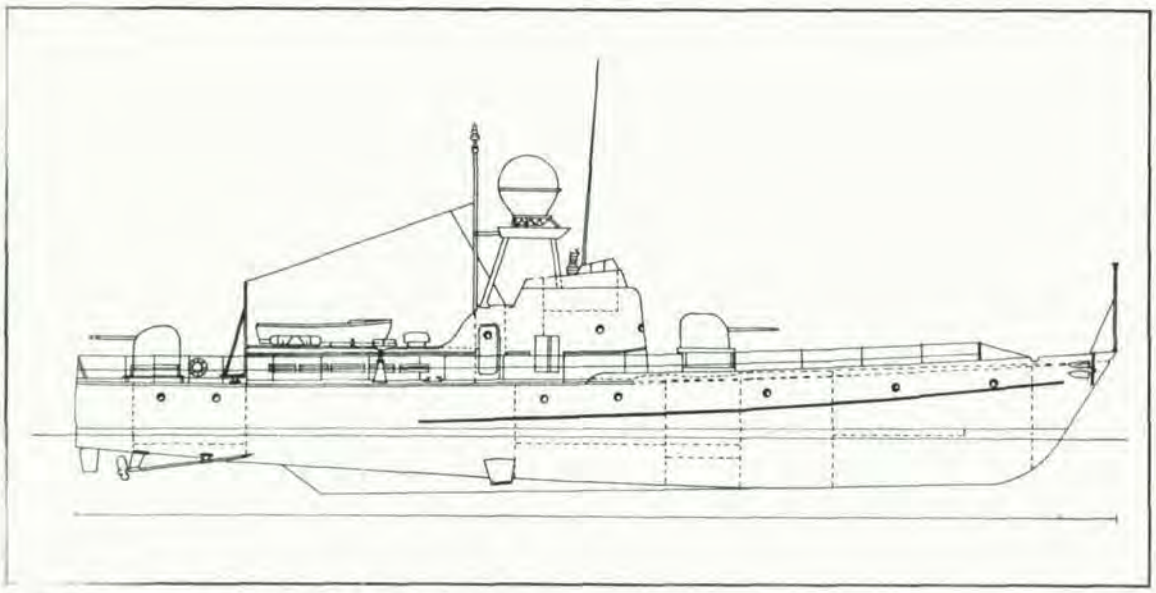

The Battleship Mentality

Parts One and Two

These two papers were presented by Captain J. A. Robertson at the Sydney Chapter meetings on 22nd October and 10th December 1975.

PART 1 – THE PROSECUTION

INTRODUCTION

The expression is always used with intent to wound, it is THE insult to be used as a criticism of the Navy by both civilians and the other Services. The beauty of it is that it needs no explanation. It has acquired the authority and conviction of years and it ends the final (or personal abuse) stage of an argument in a conclusive and triumphant manner for its user. The victim, often as not, is crushed by what he considers the monstrous untruth of the accusation as much as he realizes there is no short retort which can undo fifty years of sustained polemic. In his heart he knows he is a progressive thinker, alert to the possibilities of the latest technology; he is in fact a bit of a rebel, even "bolshie", at times; he can be and often is highly critical of what he regards as evidence of outmoded thinking in his own Service. Listen at any bar where he and his fellows gather and talk shop. So where does the truth lie between these two widely divergent images?

The truth, as Oscar Wilde observed, is rarely simple and never pure. But the idea of at least looking for the truth of this matter in a continuing discussion in the Institute was prompted by a report in the "New Scientist" of 24th April which quoted from a paper entitled 'Military Decisions'. The writer was a Psychologist, a Dr. N. F. Dixon speaking at a conference on civil-military relations held at Cambridge University earlier this year. The magazine article was catchingly titled "Are Generals Stupid or Do They Just Act That Way?" In the article Dr. Dixon is quoted as advancing the argument that people having the personality traits which he considers ensures advancement in military organisations – "orderliness, liking of dominance/submission relationships, belief in power and toughness, conformity, obedience" are ill tuned to the job of high level decision making. Dr. Dixon warms to his work describing the persona of his Archetypal Blimp, "over controlled, obsessive, dogmatic, authoritarian and having a closed mind", and says that "(such people) are intolerant of ambiguity and uncertainty, they are inflexible, unimaginative, unrealistic in their risk taking and remember and perceive only those things which are palatable and do not arouse anxiety".

Such generalised and passionate overstatements tend to be self-defeating, particularly as Dr. Dixon appears to be referring to military decision making in tactical situations where, as we all know, there is seldom enough information for complete certainty. Most of us, I believe, would incline to the contrary view, that it is in these risk situations, where in the Navy anyway, we often do well, indeed possibly where we may do best of all. Despite this flat disagreement one is still left with the uncomfortable feeling that there is more than

THE AUTHOR

Captain John Alan Robertson was born at Melbourne in 1926. He graduated from the RAN College in 1943 and saw service in the Royal Navy on the East Indies Station and in the English Channel. After the war he took part in the Post-War Mine-clearances of the Barrier Reef and New Guinea Islands areas. He specialised in Communications in 1952 and, after RN exchange, joined *HMAS Melbourne* (CVS 21) for her commissioning in 1955. As a communicator, he has also been, variously, Fleet Communications Officer, Officer in Charge NAVCOMMSTA Darwin, and Director of Naval Communications. After passing the RN Staff Course in 1963 he had a further two years exchange service in Singapore as a Joint Planner on the staff of the CINC Far East. Subsequently he was posted as Executive Officer *HMAS Melbourne*. He has commanded *HMAS Duchess* (DD 154), 1967-69, and *HMAS Hobart* (DDG 39), 1970-2, and is currently in command of *HMAS Stalwart* (AD 215). He is the co-founder of the Institute and convenor of the Sydney Chapter.

a grain of truth in the proposition that authoritarian organisations stressing conformity breed rigidity, a reactionary outlook and the attendant defects which flow from a closed mind. And I think we might more readily agree with Dr. Dixon if he had been referring to the more deliberate decision making processes of peacetime administration.

To try and probe further into this matter I propose to adopt a sort of dialectical method and present a case for the prosecution tonight. At our next meeting I will follow it with a case for the defence. Having argued both sides of the proposition, I would then like members of the Institute to act as a jury and cast their votes. A simple majority will suffice for guilt or innocence, and hopefully members will wish to add their own amplifying comments when casting their votes.

THE CASE FOR THE PROSECUTION

Battle practice circa 1914 *—by courtesy of Australian War Memorial*

To develop a case for the prosecution I intend to draw on British experience. There are three reasons for this; firstly British history in this specialized field is readily available while our own is unpublished for the most part. Secondly, if Dr. Tom Millar's unflattering view of us is widely held then we are tarred with the same brush. I quote "the Royal Australian Navy developed integrally with and as a direct offspring of the Royal Navy, absorbing its customs, traditions, procedures, skills, equipment and vessels. Until very recently when national "flashes" were introduced, Australian Naval Officers, unlike those in the Army or Air Force, have been visually almost indistinguishable from British Naval Officers. Even their accents are likely to be more 'British' and their sense of loyalty to and affinity with the mother country to be stronger. Since most of them will have spent some years training and serving with the Royal Navy this is not surprising."

The third and final reason is simple cowardice on my part.

The principal witness for the prosecution is David Divine. Here is what he says: "The history of naval conservatism is documented and exact . . . of the 20 major technological developments which lie between the first marine engine and the Polaris submarine, the Admiralty has discouraged, delayed, obstructed or positively rejected seventeen. The eventual and necessary incorporation of these developments has been achieved by individual and sometimes undisciplined officers, by political and industrial pressures, or – and most frequently – by their successful adoption in rival navies." While it must be admitted that Mr. Divine is occasionally a bit shrill, he backs his statements by describing the Admiralty's tenacious official resistance to the introduction of steam, its reluctance to adopt the screw propeller, the lead the Americans and French navies gave in armour plate for warships. (Admiral) Sir Percy Scott, one of Mr. Divine's "undisciplined Officers", forced gunnery improvements on the Royal Navy despite the determined opposition of the Admiralty and the entirely unwilling co-operation of the Royal Navy. The famous "Jackie" Fisher forced the Dreadnought into existence by waiting until he became First Sea Lord and, packing the design committee with his own men, sidestepped the inevitable resistance he knew would come from trying to use the official

channels. Torpedoes began in the Austrian Navy and had to be bought in by the Admiralty some eight years after they had been developed abroad.

The Admiralty specification to counter the torpedo boat was 'too slow to make contact with its enemy', and industry (YARROW) designed the first torpedo boat destroyer as a private venture.

France and America again led the way with submarines.

Churchill had to force a Naval Staff on the reluctant Sea Lords, and he was also a prime mover in the change from coal to oil, but the struggle against the Admiralty machine took ten years.

Naval aviation was pioneered in the United States and the small group of early advocates and developers in the Royal Navy who performed so brilliantly in World War One were not heard of again in the Navy after that war was over.

Although the Admiralty did, for a while lead the world in Aircraft Carrier development in the early 20's and, in the 30's built excellent carriers, there was no complementary development in aircraft and tactics. The advances made in these fields were predominantly Japanese and American, and Britain had to buy or borrow the U.S. developments in World War Two.

The Admiralty resisted the introduction of convoys in World War One until, in 1917, two fairly junior undisciplined officers (Commanders K.G.B. Dewar & R. G. Henderson) flying in the face of official doctrine and using slightly underhand means instigate the necessary change through political channels. Despite this experience the need for convoys had to be relearned the hard way in World War Two.

ASDIC (as sonar was called) and ASW generally remained undeveloped for twenty years between the wars, yet the Naval Staff, officially and euphorically stated in 1937 "the submarine should never again be able to present us with the problem we were faced with in 1917".

In Britain, radar and machine cryptographic devices originated with the Royal Air Force.

Despite Percy Scott, gunnery fire control systems have hardly been the Admiralty's strongest point and they have, for a long time, been markedly inferior to German, Dutch, American and French systems.

The dangerous inadequacies of rigid and outdated Fighting Instructions in both World Wars are well documented in official histories.

The Action Information Organisation grew out of necessity in World War Two; it had not been developed by peacetime administrations.

In fairness, it must be admitted that, since World War Two, there have been a few notable developments through official channels; the angled deck, the steam catapult (though it was originally German), the mirror sight, the marine gas turbine, and the quiet conventional submarine. These are well known, but as contributions they need to be compared with continuing developments in other navies in missilery, electronic warfare, naval aircraft, nuclear propulsion, dunking sonar, Submarine Launched Ballistic Missiles, homing torpedoes, MCM, fire control systems, radar and communications, and perhaps it would be best to stop there before there are any security bogeys raised.

While it would be surprising if the defence does not hotly dispute some specific aspects of this depressing catalogue of failure, the point to be borne in mind is that the vast weight of evidence offered by Mr. Divine is undoubtedly correct and supports the charge more than adequately.

Nor is Mr. Divine the only witness to draw attention to the Navy's defects arising from its obsession with a rigid conformity, its unwillingness to look ahead, and its propensity to look back. Captain Stephen Roskill, the Official Naval Historian, son of an Admiral, and hardly a wild-eyed radical, has commented that "it is extraordinary that a Navy which has honoured the memory of Nelson to the point of reverence has so singularly forgotten the reasons that made him great". More specifically he has also commented on the years of the Battleship controversy, the 20's and 30's, that: "there was a period of tactical sterility" in which the primacy of the capital ship and the Battle Fleet concept dominated naval thinking to the extent that serious studies in other areas were neglected, and, with every major Admiralty and Fleet appointment going to former Grand Fleet Officers, radical or innovative thinking was not encouraged.

Right at the centre of the Battleship controversy was Admiral Sir Herbert Richmond who tried to force the Admiralty to think its position through with some logic, rather than rest on the subjective opinions of officers who had been moulded by Jutland. Eventually Richmond had to resign and yet, as he said himself, "I thought Beatty was going about investigation the wrong way round. One should not try to prove what needs proving in one's own mind, but to find out what was right".

But there is a danger that if we pursue this witness (Admiral Richmond) too far we will be led away into the finer details of the actual Battleship controversy. Despite its title, this case is not restricted to that particular aspect of British experience at all. The case is concerned with conformity, and conservatism, where the latter is spelled with a small 'C' and indicates a backward looking frame of mind concerned to defend the past, with resistance to change as a primary characteristic. This should not be confused with conserving principles, but merely the practices those external manifestations of modes of naval warfare and behaviour generally. There is, I contend, a long history of mistaking the shadow for the substance, for worshipping the mammon of, for example, a particular weapon system while forgetting the true prophets of seapower and the principles they have given us. The Battleship Mentality derived from conservatism and conformity is not myth, it is an established characteristic of naval behaviour.

I suggest the Navy often mistakes a stultifying conformity for true discipline and a narrow conservatism for the sensible preservation of all that is best in our tradition and the principles we should seek to uphold. It seems we do not remember the Biblical comment that the letter killeth but the spirit giveth life.

The prosecution contends that, not only is there a case to answer, but it has been established beyond all reasonable doubt. Let me conclude by repeating the opening remarks of our principal witness- "The history of naval conservatism is documented and exact . . . of the 20 major technological developments which lie between the first marine engine and the Polaris submarine the Admiralty has discouraged, delayed, obstructed or positively neglected seventeen."

PART 2 – THE DEFENCE

HMS Queen Mary blowing up at Jutland —*by courtesy of Australian War Memorial*

Despite the prosecution's closing remarks there is simply no case to answer. For a start there is no charge, merely a vague accusation. But even granting that a specific charge could be framed, the whole basis of the prosecution case rests on British experience, tenuously related to Australia. Dr. Millar's opinion of the R.A.N. is now over ten years old. Even if it were true when it was first uttered in 1965 (and I do not accept that it was true then), it is certainly not true now. It probably never was.

As long ago as the 1940's Admiral Colvin's obituary remarks on Captains Waller, Getting and Burnett referred to them as no mere copyists but adding a distinctively Australian lustre to their conduct as naval leaders in war time. If that were not enough, since 1965 there has been the Navy's eclectic acquisition of Dutch radars and fire control systems, French equipment, American ships, aircraft, sonars, fire control and weapons systems, and communications equipment. As well we have the locally developed system IKARA, and the drone targets, our training methods have brought us into contact with a much wider world of naval warfare thinking. Our independent representation in international naval and military organisations has required us to adopt national positions often at variance with British attitudes, and other nations as well, for that matter.

So the whole basis of the prosecution's case which rests on the Admiralty's performance (and then only up to about 1955) cannot be accepted as any kind of evidence of the outlook and attitude of the R.A.N. in 1976, over twenty years later.

There is no charge and no evidence; it is an attempt to transfer guilt by past association and an unstated assumption, unsupported, which would have us believe it continues to the present.

It will bear repeating that there is simply no case to answer.

Having shown that the prosecution's case has no substance it would probably be prudent to stop there, but it seems to me that the prosecution should not be allowed to get away with what amounts to destructive propaganda. Such evidence as has been presented is highly selective and offered with all the sanctimonious wisdom of hindsight. Nothing is said of the milieu in which the instances quoted took place.

In the years between 1919 and 1939 the Admiralty's performance in acquiring the right equipment may have not been good, but it could not have been worse in principle than, say, the War Office. One example will suffice. According to the prosecution's own witness, Mr. Divine, the British Army in the 1930's had a fodder bill for its horses far in excess of its bill for motor fuel. So, while Germany was busy developing its mechanized warfare for the Blitzkreig which was to shatter Europe's armies in 1940, the British Army was more interested in horses. And this behaviour was defended in the House of Commons, with some passion, by no less than the War Minister (which also makes a significant point about the accusation of resistance to change, so monotonously and exclusively laid against servicemen, but more of that later). As for the Air Ministry, Trenchard's obsession with bombing is perhaps an even worse case of a closed mind because it masqueraded as advanced thinking.

The strategic bombing ideas which had been developed in a small way by the Royal Naval Air Service in World War One came to be stated as theories of warfare in the 20's by Douhet in Italy, Mitchell in America and Trenchard. In Britain a major consequence of pursuing this misleading light was a dangerous neglect of fighter defence. Radar, quoted by the prosecution as a RAF development, was, in fact, the scientist's answer to an Air Force request for a Death Ray, according again to Mr. Divine, while the complementary fighters to make the system work, the Spitfire and Hurricane were developed by private industry (Vickers and Hawkers) in defiance of the Air Ministry. The aircraft bore little relation to the RAF Staff Requirement.

My point is that you cannot single out one Service for the kind of criticism the prosecution offers. The British Services between the wars were all of their time, and of their circumstances. Should we have also "Horse Cavalry Mentality", the "Bomber Mentality"? Or does the elusive truth lie elsewhere again?

I suggest it might.

Single service departments (or Defence Departments) in Western democracies are, of course, departments of the civilian government. They are administered by elected, and appointed, civilians. This kind of civil control of the military is fundamental in many countries, including even some which are not democratic by our standards. Servicemen are advisers who seldom have much real authority and virtually no right of autonomous decisions at all, though, of course, they cannot escape their share of responsibility for bad advice. But this can be, and generally is, questioned minutely and relentlessly. Thus the final responsibility is a collective one involving the Services, the Defence Departments, Public Servants, Ministers, Cabinets, and, ultimately the people, whose requirements and expectations have to be assessed by politicians. How many examples could be quoted of higher authority shying off the price of introducing a much more cost-effective long term solution and allowing an old inefficiency to be maintained, because the regular annual drain on resources does not appear so spectacular? Surely it would not be argued that it was out of choice that the Naval Board committed its own people to war in 1939 in the obsolete, worn out destroyers of the Scrap Iron Flotilla?

Perhaps the kind of interlocking responsibility I mean can best be illustrated by quoting at some length from a recent book review describing the unfortunate TSR2 project. I quote:

" . . . the RAF had insisted on an aircraft that could do virtually everything in all weathers from long range deterrent strike, through all phases of reconnaissance down to battlefield support, with a performance in excess of the most advanced jet interceptor then on order (the Lightning).

This meant that the resulting design had to be 'clever' and so expensive that it had to be duplex, triple and even quadruplex system protection. It had to be capable of flying at Mach 1.1 at a terrain hopping height of 200 feet, and speeds greater than Mach 2 at medium altitude, and have 1000 miles radius of operation without outboard fuel tanks. On top of this it had to be able to get off the ground from rough strips no longer than 1800 feet. That the designers were able to satisfy all these conflicting requirements was a truly major achievement". (As an aside here, why did the RAF staff state such difficult requirements? Perhaps, because they thought on the basis of performance, that the Government would not give them too

many shots at acquiring aircraft, and they were honestly, and perhaps desperately, trying to get the aircraft they foresaw as necessary while this rare opportunity presented itself? And in any case, why wasn't this requirement questioned? If it was, and accepted, can the RAF be blamed in isolation? It it was not questioned who failed to exercise his right? And why? The point is that the civilian controllers of the military cannot escape the responsibility of their much greater authority either. But to continue . . .).

"What the TSR2 lacked was a man of steel to see the project through . . . . It became commonplace for 60 to sit down at the Ministry and discuss a problem for hours on end without result. The dead hand of bureaucracy had replaced the brains and decision-making mechanism of the Chief Designer.

(While all this was bad enough) Whitehall was busy arranging (a project management organisation). This was to be the disaster which (finally) killed the aircraft. (A management board was set up) on which sat the RAF, the Ministry of Aviation and the company. With responsibility so hopelessly split proper control was never exercised and the cost of the project began to escalate.

(All manner of additions were authorised by the various panels involved in the project). The 90 million pounds for R & D and 11 pre-production aircraft rose to 175-200 million pounds. Then when Harold Willson (cancelled the project in 1965) he cited the final cost of 750 million pounds for the R & D plus 150 operational aircraft.

(Yet) even if it had cost 4 million pounds per copy the TSR2 would have been a bargain compared with the . . . F111 which would have cost (the U.K.) nearly 9 million pounds an aircraft before it too was cancelled". Unquote.

The RAF still files the V-Bombers it had before the TSR2 project began.

This is a cautionary tale from British experience too, and since we have already determined that what happens in Britain cannot be applied willy nilly to Australia, only the principles need be taken to heart. This story serves to illustrate the kind of difficulties nations (including the U.S.A.) get into when they try to decide where to spend their defence dollars and then get the idea into a practical form; but most importantly it indicates how fragmented the decision making process can be.

Quite clearly facile abbreviations so beloved of journalists, such as "Colonel Blimp", "Bomber Air Marshals" and "Battleship Admirals" do not get within cooee of the real problem. And charges of closed minds at the Admiralty, exclusively, or even in the British services, generally, will not hold water. (How was it, by the way, that all those rebellious officers mentioned by the prosecution became Admirals? It needs explaining). Despite Dr. Dixon, with whom we began, there are, of course, authoritarian organisations everywhere, all of them stressing conformity. No doubt evidence could be gathered to demonstrate conservatism and rigid thinking in such diverse structures as public services, industry (e.g. "The Man in the Grey Flannel Suit"), hospitals, sporting bodies, political parties, newspapers, and even, perhaps, Psychology departments of universities.

More could be said about the prosecution's trick of quoting Roskill out of context, and then incorrectly, but to get back to the single, essential point of this defence; no case has been made against the Australian Navy in 1976. On the contrary, it would seem on the basis of only two issues of the Australian Naval Institute's Journal, that there is no shortage of innovators and thinkers within the R.A.N. Certainly we need to keep alert to the problem of conformity and rigidity but our zeal needs to be tempered with an understanding of the practical problems we face in trying to serve our masters, the people of Australia, in peacetime.

☆ ☆ ☆ ☆ ☆

EDITOR'S NOTE:

Readers are invited to participate as members of the jury voting guilty or not guilty with short comments amplifying the reasons. Contributions will be published.

EASY WRITER

Ever since "ad hoc" burst on the scene in the early 50's as the IN expression there has been at least one new one annually; in 1974 the latest was "per se". For those who favour the meccano method of bolting together ready made phrases as a means of writing English, the following short list of phrases and meaningless words has been prepared as in indispensible ready use adjunct, and a basis to build on. The beauty of this method of communication is that, as its discoverer George Orwell said, it will not only conceal your thoughts from your reader, with any luck it will conceal them from yourself. At the same time, regular use of such expressions will give your work the unmistakable stamp of a man on the way up. The bogus air of erudition lent by the use of Latin tags and foreign language words is not to be scorned either; scatter a few around and then see how your boss rates you for intelligence! Good luck and good writing!

HELP PREVENT THINKING!

on completion of
approximately (never 'about')
per se
consideration to be borne in mind
prior to (never 'before')
credible (-ibility)
mutatis mutandis
recherce
scenario
bi-polar (and polarise)
criteria
Hegelian dialectic (don't worry, no one else knows what it means either)
consensus
militate against (sometimes "mitigate against")
decimate (when you mean almost wiped out)
realistic
significant (durability)
permissive
deja vu
in-depth (study)
de jure
acronym (make one up)
cost effective solution (apparently the cheapest one)
at this point in time
sophisticated
give grounds for
qua
Byzantine
serve the purpose of
capability
be subjected to
have the effect of
the contraction of – power
morale (when you mean contentment, happiness, etc.)
proliferation (of nuclear weapons
general thrust (of argument, diplomacy)
a false illusion (sic!)
status quo (ante)
the management of violence
spectre of nuclear war
a priori
detente
hard data
subjective
(e.g. a not unjustifiable assumption)
post facto
viable (-bility)
objective (adj)
sine qua non
pre-empt
realpolitik
expedite
hueristic (ah there, Herman Kahn)
high technology
dynamic (balance)
cadre
tokenism (and all the other ism's)
also, "Horizontal proliferation" and "vertical proliferation"
quantum (jump, proportion)
ad hoc
traditional naval tasks (carefully undefined)
man-management (never Leadership)
ne-isolationism (neo- almost anything)
digital
tear an arm off
iterative process
back to square one
a not un
ad hoc

An Example

"At this point in time, objective consideration of traditional naval tasks and the overall management of violence in a maritime environment, mitigates against anything other than cost-effective solutions. In-depth studies of high technology, which continues to make quantum jumps, gives grounds for believing that viable alternatives of significant durability will displace the less sophisticated a priori

knowledge claimed by current practitioners in the medium, whose unavoidable subjectivity inevitably calls into question their proposed solutions. Ideally, however, we need consensus and there is not unjustifiable argument that their opinions make a case for acquiring better hard data, and with credible scenarios as background, and carefully selected criteria, to go through the iterative processes, which will, on completion of the studies, have the effect of arriving at realistic conclusions to place before decision makers" . . . and so on.

To your pens, quill-drivers!

JAR

A Story with a Moral

Every story has a moral. This story concerns two people, an aircraft, and a bombing range. I had been sent to the United Kingdom to do an Air Weapons course and found myself posted to a place called Eglinton in Northern Ireland. For a variety of reasons I had ended up as the only pilot on course, which explains why I was scheduled one Friday afternoon to carry out a bombing mission by myself.

In those days, and I am talking about the happy days before "the troubles", it was the practice to use one radio callsign for Air Traffic Control purposes and another for range work. As I was to be the only aircraft on the range and also because I was a little lazy, I didn't bother to obtain the necessary range call sign.

I duly arrived at the range and requested permission to enter. A rather attractive female voice at the other end enquired as to my range call sign. When I told her that I didn't have one she announced that I could not use the range.

I countered by stating that I was the only aircraft scheduled to use the range and that in any case a range call sign didn't really matter.

This didn't go down at all well with the young lady at the other end, who, as a well trained WREN Ranger Assessor, considered the latter remark to be rank heresy. The verbal exchange went on for quite some time until I tried a bit of bluff; more or less coming ready or not. This worked and I was reluctantly allowed onto the range.

Well, to cut a long story short, following the bombing mission I made contact with the "voice" and arranged a blind date. Things clicked and we were married shortly after.

The moral of the story?

Well, four kids later on I can tell you that with some confidence!

"Never go on a bombing range without a callsign".

N.E.L.

It cannot be too often repeated that in modern war, and especially in modern naval war, the chief factor in achieving triumph is what has been done in the way of thorough preparation and training before the beginning of war.

Theodore Roosevelt: Graduation address,
U.S. Naval Academy, June 1902

There is not much advantage living on an island unless you command the waters that wash its shores.

Attributed to King Alfred

BOOK REVIEW

"OF NAUTILUS AND EAGLES: HISTORY OF THE ROYAL AUSTRALIAN NAVY"

by Peter Firkins

Cassell Australia $14.95 (recommended price)

Before launcing properly into this review, I would like to recall for the reader some details of one incident of RAN history which has much to justify its telling, although rather disappointingly, it is only covered sketchily in 'Of Nautilus and Eagles'. The incident to which I refer is the loss of the second *HMAS Sydney*.

The Australian public received their first official news of Australia's worst Naval tragedy in their morning newspapers on Monday, 1 December 1941. The Prime Minister, Mr. Curtin, had announced to the press late the previous evening that *Sydney*, carrying a complement of 645 (42 officers and 603 other ranks) was missing and presumed lost with all hands. A thick cloak of censorship shrouded the incident and initially there was no mention of where and when the cruiser had been lost.

Although rumours of disaster had been alive for some days before 1 December, it was not until 4 December, when survivors of *Sydney's* assailant, the German raider *Kormoran*, were coming ashore in Western Australia and news sources in Germany were reporting the loss of that ship, that significant details of the Australian cruiser's final fatal engagement became available in the Australian press. Tragically the very newspapers reporting these further details of *Sydney's* loss, were also reporting another major tragedy for the RAN – the sinking of the second *HMAS Parramatta* in the Mediterranean with the loss of most of her ship's company.

It is significant to remember that *Sydney* was sunk on 19 November 1941 – eleven days prior to the first announcement by the Prime Minister – and some five days before any real concern was expressed for her safety and an air and sea search mounted. Furthermore she was not sunk 300 miles West of Carnarvon as advised by the Prime Minister on 4 December 1941, but rather 150 miles only from that port as revealed later in the official histories.

I have dwelt at some length on the story of the loss of *Sydney* to provide some indication of the state of the art of naval history in Australia at present. This story also shows how the illusion of the 'lucky country' can well be shattered when offensive maritime action comes close to home.

Although the Naval Historical Society has done some fine work in recent years with its publication of individual ship histories, we have lacked a modern up-to-date account of Australian naval history from the earliest days of the RN squadrons based in Sydney until the present. 'Of Nautilus and Eagles' is now such an account.

Peter Firkins describes in this book all the major actions in which units of the RAN have been involved, together with the outstanding contribution by individual members of the service in such hazardous roles as mine and bomb disposal operations, and the coastwatchers in the South-West Pacific campaign of World War II. The Korean and Vietnam operations by RAN units are covered in the penultimate chapter of his book.

The comprehensive nature of 'Of Nautilus and Eagles' is where this book fills a real need but unfortunately the reader is deprived of any significant new information and there are still stories, containing valuable lessons for the present, yet to be told. The author has relied heavily on well-known published sources – notably the official histories of the two world wars, and for earlier information, Rear Admiral Feakes' book, 'White Ensign – Southern Cross'. Outstanding questions of Australian naval history, such as those stemming from the loss of the *Sydney*, remain unanswered and it is to be hoped that someone some day will take up the challenge of research.

The very comprehensiveness of the book does serve to reinforce the lessons of history available and I have a strong suspicion that his personal view of an apparent downward trend in the capabilities of the RAN is what prompted Peter Firkins to compile 'Of Nautilus and Eagles'. He is very, very much concerned with the lessons of history.

Although the author served in the RAAF during the Second World War and is now a Perth businessman, he quite obviously has a very real concern for the defence of Australia, and the RAN in particular. He is quite specific in the last paragraph of his book when he writes that the view

> " . . . that Australia is under no visible threat for a period of 10 - 15 years totally ignores the lessons of history, and particularly recent history, and the fact that it takes six to eight years to provide modern and adequate replacements and additions in materials and equipment.
>
> With regard to the navy, its sea-going units are ageing and its ships and aircraft are totally inadequate to provide proper surveillance of the 12,000 miles of Australian coastline, its approaches, and territorial waters, let alone deal with any future substantive threat or conduct offensive operations that may be required to guarantee security for the Australian continent."

The story of the sinking of the *Sydney*, if told fully, would I suspect highlight some of the potential dangers inherent in a navy which will experience increasing difficulty in maintaining the required standards of professional operational competence if present trends continue. The *Sydney* incident may also disclose some of the problems involved in mobilising the country's top defence machinery to counter hostile action in its own theatre of operations – shades of the well-worn criticism of the recent Australian defence re-organization considered within the context of continental defence.

One interesting thought which re-occurs on at least two occasions in the World War II chapters of 'Of Nautilus and Eagles' is that acts of courage and selfless devotion to duty by RAN personnel frequently failed to achieve the official recognition which could have been expected. The main examples cited are those of the coastwatchers, Captain Waller, and Lieutenant Commander Rankin and Leading Seaman Taylor of *Yarra*. Firkins suggests that their failure to achieve proper recognition 'underlines the deficiency of Australia's system of awards which, until recently, was far too dependent upon external influences over which she had limited control'.

Unfortunately the 'nit-picker' can have a field day with 'Of Nautilus and Eagles'. Apart from the inevitable misspellings and obvious printing errors, there are some errors of fact, particularly in the appendix which lists the ships of the Australian Navy at various historical milestones during the past 90 years or so. In the text we have for example, the cruiser *HMS Exeter* 'with 4000 tons of ammunition in her holds' (p. 92) (I suspect it may have been the Federal Line merchant ship of that name). On p. 171 we have Sub-lieutenant 'Maxie' Shean RANVR being lost by implication with Lieutenant Martin in X-9 during the approach for the *Tirpitz* raid, although some pages and about eighteen months of time later, he is very much alive cutting the Saigon-Hong Kong cable in another X-craft. – the passage crew were in fact lost with X-9 and not the operational crew (i.e. Martin and Shean) who would have taken over for the actual attack up the fjords.

The list of RAN ships for 1964 in Appendix Four omits three of the Coastal Minesweepers and *Bass* (to the personal chagrin of the reviewer who was in command of *Bass* during 1964!), gives the tonnage of *Banks* as 90 (should be 207) and lists *Bronzewing* as a Fleet Tug of 570 tons! The list for September 1939 includes six of the 'River' Class frigates, although the first of these, *Gascoyne*, was not in fact laid down until July 1942 and commissioned in November 1943.

'Of Nautilus and Eagles' is adequately illustrated with photographs, maps and diagrams of the major engagements. All in all it is not bad value for those who like their history in succinct doses.

Despite the 'nit-picking', Peter Firkins is to be commended both for his efforts in bringing the history of the RAN tautly together within the covers of one book and his apparent motive in highlighting the deficiencies in Australia's defence which are now resulting through an apparent forgetfulness of the lessons of history. As he says in his last paragraph, Australians could be likened now, as they were in 1942 by Sir Thomas Blamey, 'as like a lot of gazelles on the edge of the jungle'.

W. S. G. B.

(A convenient book order form for 'Of Nautilus and Eagles' is enclosed with this copy of the Journal. Institute funds will benefit if you make use of this form).

"BRITAIN AND HER ARMY 1509 - 1970"

by Correlli Barnett

Pelican $3.25

The author is well known already for his earlier books, "The Desert Generals", "The Swordberarers", and his television scripts. The blurb on the back of this recent Pelican describes it in these terms: "Here in a mature and full-scale history (Mr. Barnett) advances two main themes: that the Army has always been more central than the Royal Navy to Britain's survival and the British have always been reluctant to accept it as a necessity". This is surely enough to intrigue any professional advocate of maritime defence.

In fact, the author does *not* say that the Army has been more central to British survival than the Navy. On the contrary, he says, "The Navy can, and has assured British survival" . . . and, in the last paragraph, "In their history, the British solved the problem of reconciling military power with civilian government (and a civilian society) with remarkable success, fundamentally because of their immunity from invasion behind seas commanded by the Royal Navy . . . " (my underlining). Nevertheless, he is an exponent of the "continental" as opposed to the "blue water" school of military strategy for Britain.

Briefly his case is this; "Because British expeditions going and coming from battle travel by sea, protected by sea power (a) myth about British history has grown up. This "blue water" view of maritime power insists that small bodies of British troops fighting limited campaigns in distant theatres against detachments of a continental enemy isolated by the Royal Navy have a disproportionately large effect on a war; much larger than direct British intervention in a continental campaign". From there he aims to show that only when she has had an army on the European Continent has Britain's participation been decisive, and, where Britain has been unwilling or unable to field a continental force, she has had to find allies or mercenaries to do the land fighting. So, over the centuries there have been permutations and combinations of British armies, British paid mercenaries and Allied armies, but it is these forces in particular which have lead to decisive results.

Clearly, Mr. Barnett is convinced that his analysis of history is right; how much he persuades you is another matter. Perhaps, more relevant to Australia's unique geographical situation, he acknowledges the primacy of seapower, both Japanese and American, in the Pacific War.

It is an ambitious undertaking to present 461 years of history in 491 pages of print and illustrations but the author compresses his material well without skimping and achieves a good following narrative, full of interest (and incidentally the origin of that arcane word "dragoon"). So, if I now appear to make only critical comments, they should not be construed as a general disapproval, far from it.

A book of its avowed nature inevitably aims to include the whole spectrum of British defence thinking and activity, and, to take only a few examples, I find it a little surprising that 'Jackie' Fisher gets no mention at all; the RNAS, its activities on land in support of the Army and its early essays in strategic bombing, is omitted entirely. Trafalgar is relegated to a battle of much less importance than British myth (the author's word) would have it; criticism of Army leadership and management is played in a very low key. For example, after describing the Army reforms from 1901 onwards he says, on p. 372, "the British Expeditionary Corps (sent to France in 1914) was the best equipped, organised and professional Army that Britain had ever sent abroad at the beginning of a war", and he then amplifies this comment with obvious approval. The author's words are almost identical with those of the official British Army history which says that it was "the best trained, best organized and best equipped British Army that ever went to war".

> But the official history then goes on to say:
> "Except in the matter of co-operation between aeroplanes and artillery and use of machine guns. In heavy guns and howitzers high explosive shell, trench mortars, (and) hand grenades . . . it was almost wholly deficient. No steps have been taken to instrcut the Army in a knowledge of the probable theatre of war or of the German Army. The study of German military organisation and methods was specifically forbidden at war games, staff tours and intelligence classes."

Or, as one bitter comment would have it, "(The British Army in 1914) therefore, was incomparably the best in everything except the materials for its task and the training to enable it to use them".

The actual military value of the small British Expeditionary Force of 80,000 alongside a French Army of about 1½ million and opposed by the German Army of the Western Front of 1,420,000 is at least debatable, and since this is one of the pillars of Mr. Barnett's thesis perhaps it should have been argued in some detail. The political value of the British Expeditonary Force is another matter again.

One of the prime movers in this British option for a continental Army was General Sir Henry Wilson. When, as Director of Military Operations in 1910 he first develops the Army plan, and subsequently argues successfully for its adoption at the Committee of Imperial Defence in 1911, he is described (p. 370) as "a fervent admirer of the French Army". By 1918, (p. 405) when Lloyd George prefers Wilson's advice to that of the Chief of the Imperial General Staff (Sir William Robertson) who resigns as a result, this key figure, Wilson, is then described as "a glib and charming man, unsound in judgement", "whom politicians liked". But maybe these fragments are too slight for the obvious conclusion. The effects of blockades in total wars of nations are barely acknowledged, and the author treats economic warfare with some cutting disdain. No doubt you may find other points on which to question Mr. Barnett's views.

For those of us raised in the penultimate state of the British Raj there can be a sense of loss as the end of Empire is reached. Not that we in Australia should have fooled ourselves about our importance in it. India above all else, was the bright jewel of Empire in British eyes, a fact which the author makes very clear and one which Australians, generally, never realised at all.

Perhaps the most important point made in the book is the continuing theme of the niggardly approach of the successive British Governments, and the people who voted them to power, in allocating resources to the Army in particular, and Defence in general. The author ascribes this to a stongly held popular belief in Britain, that war is an aberration and peace is "normal", whereas he says, in a rather graceful simile, that history shows war and peace flow in and out of each other like two ribbons entwined. But Britain's pacifistic myth has cost the people dearly, culminating in the situation Britain faced at the end of World War Two. "It was a national disaster that the effort to WIN the war was incalculably greater and more costly than the effort needed to PREVENT war between 1933 and 1939. In 1945 for the first time in history Britain emerged from war completely exhausted and economically ruined". The first sentence needs some sort of proof, of course, rather than mere assertion, but it is almost certainly true. It also makes a point that servicemen may be inclined to avoid; national economic strength is the foundation of military strength. It is unlikely however, that Mr. Barnetts' moral will influence many democracies in peacetime to devote more resources to Defence. Why is it that some peaceloving nations so persistently, even wilfully, fail to learn from history? Perhaps because they do not read enough of it, and like Henry Ford think 'history is bunk', a dry subject for academics, schoolteachers and examinations. For your own sake do not fall for that misconception. Buy the book and read it, it is worth every cent of its price (even in a hardcover version which is available at about $16). The bibliography alone could help direct your future reading into profitable channels, while the index will allow you to go straight to matters which interest you particularly.

Altogether, it is an excellent (tax deductible) buy.

J.A.R.

"PORT PHILLIP PANORAMA: A MARITIME HISTORY"
by Captain John Noble

Hawthorn Press, $8.50 (recommended price)

The dictionary defines 'panorama' as 'a complete view in every direction' or 'a mental picture of a series of images or events'. In this respect, the latest book by Captain John Noble, Port Phillip pilot and maritime historian, is aptly named. Into a mere 155 pages is packed the full saga of the development of the ports of Melbourne and Geelong from the early explorations of Murray and Flinders until the recent improvements necessary to permit those ports to accommodate the large container ships and bulk carriers of the present day. It is all there and little of the history of Port Phillip has been missed out.

Captain Noble recalls for the reader such great names of Australian commercial shipping as Howard Smith, Peter Huddart, James Patterson, and their struggles for survival as shipowners in the inter-colonial coastal trade of the last century. He also tells of the origins of Williamstown Naval Dockyard and provides the reader with the historical explanation of many of the names of physical features about Port Phillip – for ease of reference, there is a comprehensive index. As well though, and here perhaps lies his book's greatest charm, there is a proliferation of little known anecdotes about Melbourne and Geelong over the years. Who knows for example that the initial quote for dredging the River Yarra from its mouth to the early Melbourne wharves near the foot of Spencer Street was 5,000 pounds!

The anecdotes related in Captain Noble's book are most interesting however, when they concern the ships and seafarers who have used Port Phillip over the years. Typical anecdotes of ships are the saga of the four and a half month voyage of the paddle steamer 'Thames' under sail from Melbourne to Hobart in 1843, and the disappearance of the Port Phillip passenger steamers *Comet* and *Citizen* whilst en route to the New Zealand gold fields in the 1840's. What greater Port Phillip seafarer though, than Captain Hartley Watson, who remained in command of the famous Melbourne tug, the *James Patterson*, for 41 years from 1906 until his retirement in 1947 at the age of seventy-five.

'Port Phillip Panorama' is clearly the result of one man's penchant for investigating the history of his working environment. I would suspect that it is the result of the long-term hobby of Captain Noble, who went to sea as an apprentice in 1929 and became a Port Phillip pilot in 1959 after serving as a master with the Union Steamship Company of New Zealand. His earlier book, 'Port Phillip: Pilots and Defences', to which 'Port Phillip Panorama' is a companion volume, dealt primarily with the origins of the Port Phillip Pilot Service. In putting together the historical account of that organization, Captain Noble provided posterity with a documented record of endeavour and achievement hitherto untold to the Australian public.

His latest book however, cannot be seen as an authoritative document of original historical research. In all fairness though, it must be said that it does not purport to be this. Rather it is the easily read armchair guide to the history of Port Phillip and the commercial ports therein. There is a bibliography and numerous well-chosen illustrations – a reproduction of a chart showing the early channels across Geelong's sandbar and Sir John Coode's 1879 plan of recommended improvements to the River Yarra and the Port of Melbourne are particularly interesting. In the text though, even accepting that the book is not an academic work of historicalresearch, I would have preferred to see formal reference made to the source of the frequent quotations. Although I am not at all an advocate of over-cluttering the text of a book with numerous footnotes, such references in a book such as this are important to those of us who would like to follow up further details of the little known incidents, which by necessity, are only sketchily covered as Captain Noble unfolds for the reader the whole panorama of Port Phillip's long history.

The main appeal of 'Port Phillip Panorama' will be to those who live on or about Port Phillip and who have an interest in matters historical, especially those of a maritime nature. To these people, 'Port Phillip Panorama' is recommended firstly as a book to read for information and enjoyment, and secondly as a book to keep for ready reference in an easily accessible part of the bookcase.

W. S. G. B.

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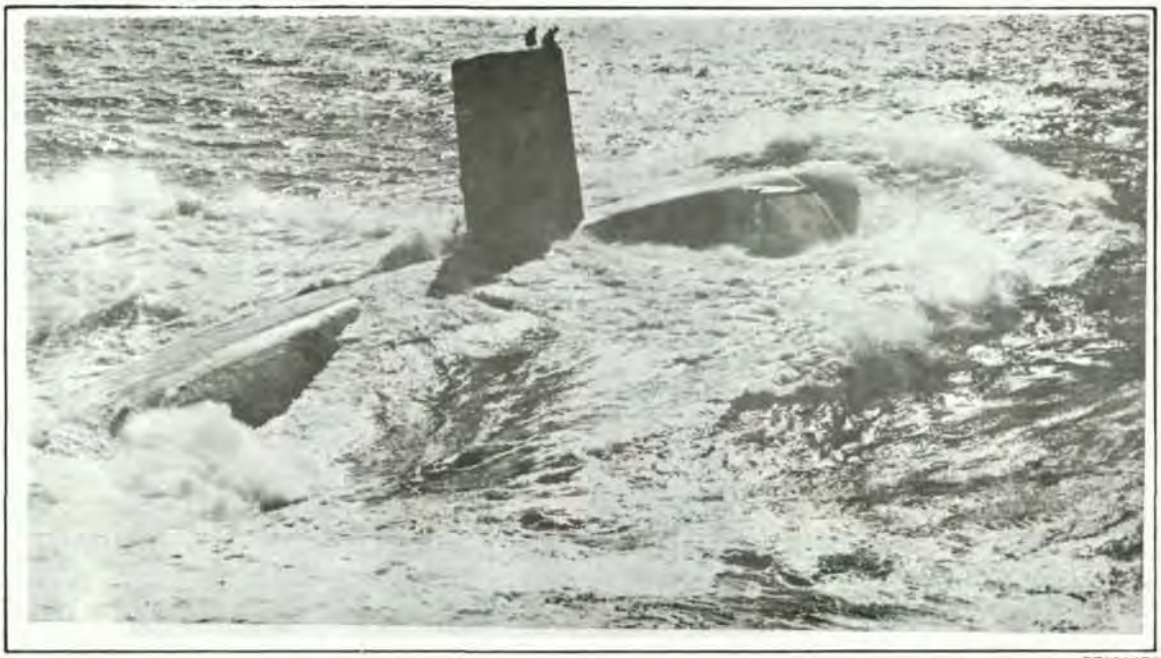

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