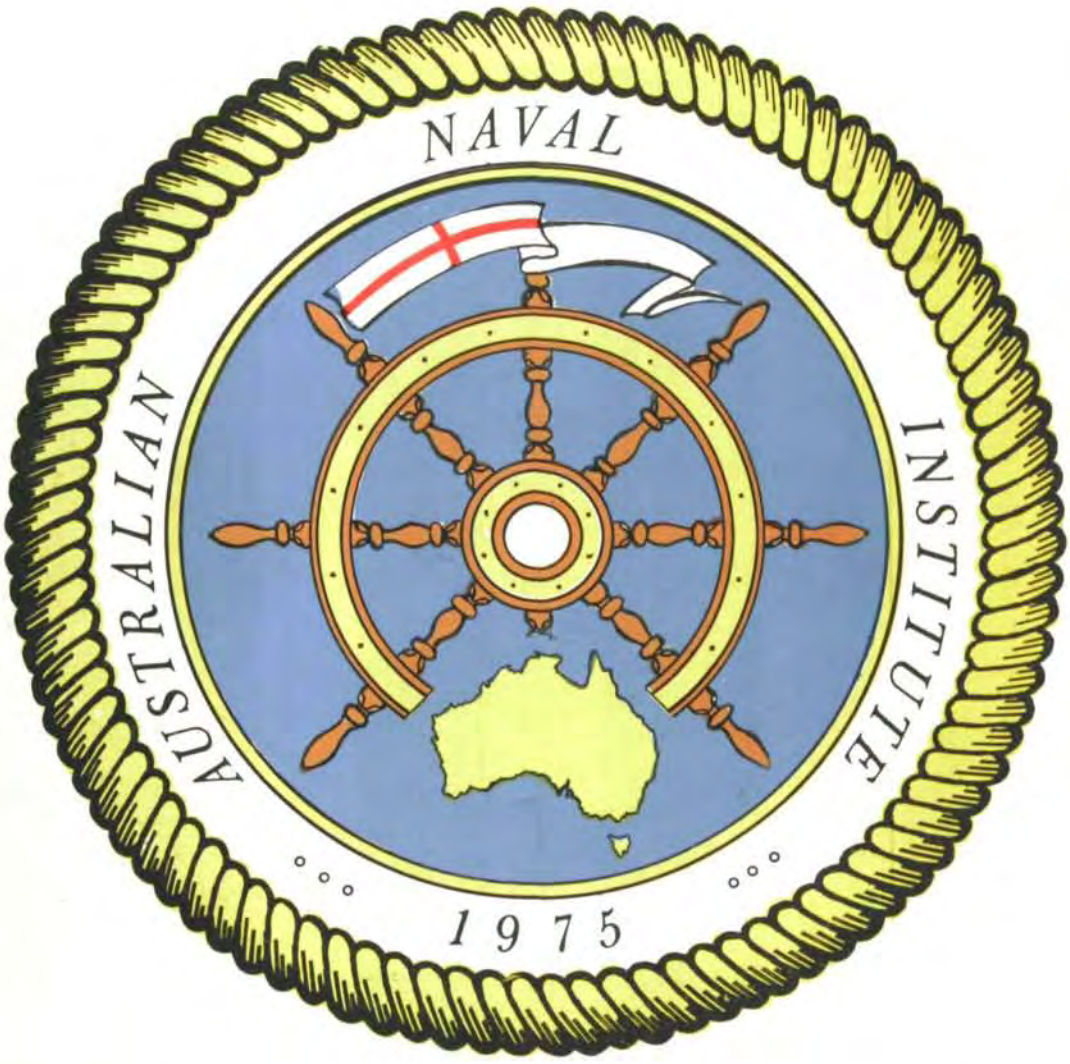
JOURNAL OF

THE AUSTRALIAN NAVAL INSTITUTE



VOLUME 2 AUGUST 1976 NUMBER 3

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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Members are reminded that renewal of membership subscription for the year commencing 1st October, 1976, are due on or before 31st December, 1976.

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OUR COVER

Our cover now features the crest of the Australian Naval Institute.

CHAPTER NEWS

Canberra

A meeting of the Canberra Chapter was held at the RSL National Headquarters on Wednesday, 30th June.

With the Convenor, Captain L. G. Fox RAN in the chair, Captain N. R. B. Berlyn RAN, delivered a paper titled "The FFG Acquisition–Some Aspects of the Management".

Numbered among the 26 members was one of our distinguished Honorary Life Members, His Honour Judge Trevor G. Rapke QC, BA, LLB, to whom the Chairman extended a particular welcome.

Captain Berlyn's interesting and informative address was followed by a lively question time which extended into the refreshment period after the meeting was formally closed.

Whilst the Chairman expressed his appreciation of the good attendance, he asked all present to encourage other members to attend the next meeting which will take place on 1930 Wednesday 29 September 1976 at RSL National Headquarters.

The next meeting of the Canberra Chapter will be held on Wednesday, 29th September 1976 at 1930 at the RSL National Headquarters, Constitution Avenue, Canberra. Rear Admiral G. R. Girffith, D.S.O., D.S.C., i.d.e., p.s.c., Chief of Naval Personnel, will speak on "Officer Development" and a large roll up is confidently expected.

FROM THE EDITOR

As will be immediately seen as each member receives his copy of this edition of the Journal, we have made the first major change in its production. The front cover on the previous editions was a reproduction of a painting by Dennis Hardy which we were allowed to use by courtesy of Mr. A. E. Stephen of Surfer's Paradise, and for this, we are particularly grateful to Mr. Stephen.

Now that we have our official crest, it is intended to use it permanently as the feature of the cover so that the Journal will be instantly recognised and our crest will become the symbol of the naval & maritime professionalism, which is one of the objectives of the Institute.

A second objective is to provide a forum for the exchange of ideas, and this objective is gradually being achieved. There has been a gratifying response to the appeal made in the last edition of the Journal for copy and it is hoped that this will continue.

One feature however which has not been taken up is the "I Was There When . . . " and your editor found himself tempted to write an article under this heading, commencing with 'I Was There When nothing happened. There I sat with pencils sharpened, the press ready to roll to inform the world of the remarkable experiences and achievements of one or more of our members, but alas, I sat alone, undisturbed by any such exciting account . . ."

Correspondence

The Editor,
Journal of the Australian Naval Institute July 2, 1976

Dear Sir,

Way back in in 1957 I had the pleasure to be AB in charge of a class of new recruits at FND, as it was then. One of that class was George Nekrasov, now Commander and author of the article on the Carrier, past and future–Journal, Vol. 2, number 2.

Our paths crossed but rarely and I paid off in 1968 as a POFC and am now in the Reserve after seven years RANER. Since leaving the Navy I have edited two editions of Fighting Ships of Australia and New Zealand and am currently providing the Australian section of Janes.

However, I feel I must query Commander Nekrasov's contentions in the early part of his story.

Surely his statement "The first carrier, however, was an American one–USS *Langley*–a converted collier . . ." must be queried. *Langley* was commissioned as a carrier on March 30, 1922. At that time the *Furious* had already carried out warlike duties in WW1 and was being further converted; *Argus* had taken on a flight of planes prior to the end of WW1 although had not flown sorties; *Eagle* had commissioned on April 13, 1920; *Hosho* commissioned on November 30, 1922 (just eight months after *Langley*) and was purpose-built as was *Hermes*, commissioned July 1933. The above information from Polmar's 'Aircraft Carriers' and other sources suggests that *Langley* was very much a latecomer in the flatop stakes.

France is left off the list of countries who experimented with flat-top carriers post WW1 in the following paragraph–Bearn?–and I'm sure that only ONE pair of Japanese carriers had complementary islands positions–*Soryu* and *Hiryu*?

In the next paragraph the "large, fast and expensive ships" includes *Eagle*, *Lexington* and *Kaga*. (Both L and K were laid down originally as Battle Cruisers). By inference this suggests *Eagle* was "fast"–a maximum of 24 knots versus 27.5 later increased to 28.3 and *Lexington's* impressive 34 knots.

Apart from the above I could not agree more with Commander Nekrasov in the tenor of his article and I would have the Navy pay more attention to educating those who pay taxes to its value–a project much in my mind and one reason for Fighting Ships of Australia and New Zealand.

Perhaps more comment on the role of the oft-maligned *Vikrant* would justify *Melbourne's* retention and effective replacement in time by a vessel or two of equivalent performance.

Graeme Andrews
5 Kent St., Epping, NSW 2121

How are the Social Changes Expected in the Next Few Years Likely to Effect the Navy

BY COMMANDER W. S. G. BATEMAN, B.Econ., R.A.N.

This paper by Commander W. S. G. Bateman, B. Econ. RAN, won first prize in the Officer Section of the 1975 Peter Mitchell Trust Essay Competition and is reproduced here by permission of the Chief of Naval Staff. The views expressed by the author are his own and not necessarily those of the Australian Government, the Department of Defence, the Chief of Naval Staff or the Australian Naval Institute.

"What is occuring now is not a crisis of capitalism, but of industrial society itself, regardless of its political form. We are simultaneously experiencing a youth revolution, a sexual revolution, a racial revolution, a colonial revolution, an economic revolution, and the most rapid and deep-going technological revolution in history." (Alvin Toffler, 'Future Shock')

So far this century there has been a tremendous increase in the pace of technological change, and this has brought about the decay of any sense of social permanence and a virtual end to a steady state in society, particularly in so far as the Western industrialised nations are concerned. These trends in turn have given rise to significant social changes with a major thrust towards the enhancement of the importance of the individual, his goals and his values. From a Naval point of view, the more resounding effects of these social changes will result from the pressures such changes exert upon customs and tradition.

The Navy is often regarded as the most conservative of the three services and this applies particularly in the case of Naval policies for personnel administration and organisation where the fundamental philosophies are the traditional ones many years old. Despite this fabric of tradition, it is the personnel of the Navy who are most affected by the social changes going on around them and hence it is to be expected Naval personnel policies will be those policies most likely to change as a result of social pressure. However, there will also be an indirect operational or functional effect through the increasing need to ensure that officers and sailors have a sense of purpose in their jobs which is contemporary with political and social thinking in society generally.

Social changes are not just a matter of increasing permissiveness, violence and the apparent rejection of authority by certain social groups. Although those issues are discussed frequently as representative of the changes which are occurring to and within modern society, they are far from being basic social changes; they are the less desirable effects, rather than the causes of what is a social revolution, even more shattering than the industrial revolution of the last century. Primarily the problem is that man's political and social knowledge, his knowledge of himself, has been unable to keep up with the accelerating pace of technological

THE AUTHOR

Commander Sam Bateman graduated from the RAN College in 1955 and as a 'salt horse' seaman, has had a variety of interesting postings afloat in the RAN including two small ship commands (HMAS *Bass* in the North Australian Area 1963-65 and HMAS *Aitape* in Papua New Guinea 1967-70) and Executive Officer of HMAS *Parramatta* 1971-72. He was awarded the Shadwell Testimonial Prize by the RN in 1965 for survey work undertaken by HMAS *Bass*. A three year posting ashore in Port Moresby associated with the development of the PNG Defence Force preceded his present posting to the staff of the Director of Naval Officers' Postings. After several years of external studies, he graduated B.Econ from the University of Queensland in 1971 and is now writing a Master's thesis on Defence Economics for the University of Papua New Guinea.

development and scientific discovery, of increasing automation and computerization, of almost unbelievable advances in medical science, and of the consequent growing complexity of government and economic management. Against this background, tradition which is sometimes defined as 'years of habit unimpeded by progress' has become all too glaringly fragile, and a doubtful basis for planning and decision-making in the future.

This technological revolution, which is much more fundamental than such superficial manifestations as the youth, sexual and social revolutions has been the concern of Alvin Toffler, who with his book 'Future Shock' has produced possibly the most penetrating and stimulating comment on social changes as they are occurring today. His thesis is that change in all facets of human endeavour is now sweeping through industrialised countries with 'waves of ever-accelerating speed and unprecedented impact'. The sense of permanence is dead or dying, and instead, man is being overwhelmed with a sense of transience—a feeling that what applies today will not necessarily be applicable tomorrow. In practical terms, transience is demonstrated by the increasing availability of disposable gadgetry, repair by replacement and the spread of modularism. In less tangible terms, the lack of permanence carries on into society with the trend towards job mobility and changing life-styles.

Particularly in Western countries, where private enterprise and entrepreneurial ability can exploit fully new innovations, man cannot escape the novelty of the latest scientific discoveries and the diversity of available choices—in education, in entertainment and even in basic life-styles. There are however, finite limits to human adaptability and when these limits are approached, man reaches the state of 'future shock'—the term coined by Toffler to describe the disease of change—'the shattering stress and disorientation that we induce in individuals by subjecting them to too much change in too short a time.'[1]

Although some individuals may react to this environment of change with regression, a turning inwards and a failure to accept change, the opportunity for a reaction to change, involving the resurrection of traditional norms, is not available to the community at large. Too much has happened in too swift a passage of time. Since the Navy is a microcosm of the community, the stubborn adherence to traditional approaches cannot remain a valid policy for the Navy in the long-term. The Navy, in all its policies, has to live with its own particular version of 'future shock'.

I have digressed at length on this background discussion of 'future shock' since it seems to be important that this concept should be fully appreciated if the effects of social changes on the Navy are to be seen as something deeper and more enduring than increasing liberalism in society and the resultant adverse consequences for military discipline and authority. Although Toffler's prognosis may be a little extreme, it serves a useful purpose by making us think about some of the more fundamental changes involved.

Whilst issues such as permissiveness and violence in the community are important and need to be considered by the Navy, they are nevertheless superficial with only a temporary deleterious effect for the service. As has been suggested already, they obscure the basic issues, the basic source of change which has been the concern of Alvin Toffler. If we stick with them alone, there is a real danger of not being able to see 'the wood for the trees.' The 'wood' constitutes the enduring social changes which should be more the concern of this essay rather than the effect on the Navy and its traditional military values of the superficial issues.

If technological change and the speed of its development are the root causes of permanent social change, then what we normally recognise as indications of social change are the effects. We may conceive of two categories of social change. Firstly there are the apparent changes which result as a consequence of the failure of certain men and women to keep up with the pace of change in the community. Toffler graphically describes this effect in the following way.

> "Change, roaring through society, widens the gap between what we believe and what really is, between the existing images and the reality they are supposed to reflect. When this gap is only moderate, we can cope more or less rationally with change, we can react sanely to new conditions, we have a grip on reality. When this gap grows too wide, however, we find ourselves increasingly unable to cope, we respond inappropriately, we become ineffectual, withdraw, or simply panic. At the final extreme, when the gap grows too wide, we suffer psychosis—or even death".[2]

Thus we have the growth of the 'drop-out' mentality and the apparent decay of community moral values and discipline. Self-fulfilment, ambition and social responsibility are unimportant to those who are in the grip of Toffler's 'future shock'. Such people are unable to keep up with the stresses and tensions of the seventies and they demonstrate their existence in films such as 'Midnight Cowboy', 'Easy Rider' and in Australia, 'Wake in Fright', as well as in the counter-culture movement and through the increasing consumption of tranquilizing drugs.

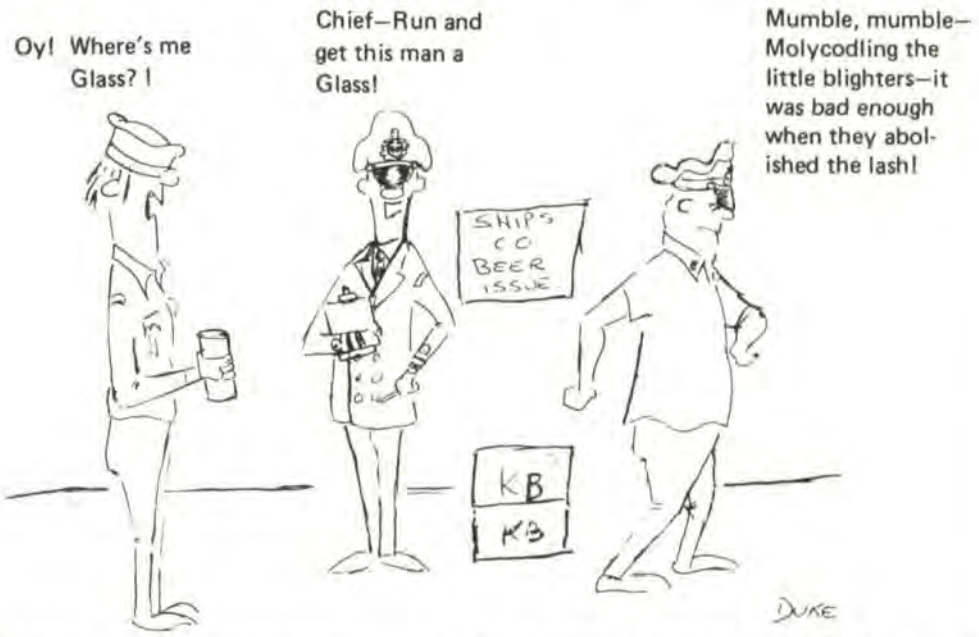
However, these are extreme demonstrations, and it is also possible to detect the effects of 'future shock' in more mundane aspects of everday life.

As far as the Navy is concerned, 'future shock' effects result in an increasing call being made on the services of social workers, and ultimately psychologists in a wider role than has been customary in the past. Eventually the situation may become so acute that there will have to be a conscious slowing down of the 'can do' philosophy, which has traditionally pervaded the Navy, since this philosophy tends to aggravate the effects of 'future shock'. In this context this essay will later argue that in sticking with traditional ideas of what young officers and sailors will (or should) put up with, the Navy is now expecting rather too much from such personnel. Technological man is better educated than his predecessors and fewer of his type relatively are going to be required to man modern warships. However, in view of his education and what is expected of him, he will also be much more temperamental, inquisitive and potentially rebellious than his predecessor. Technological change and the shift from manpower-intensive to equipment-intensive warfare are not without human costs as far as military forces are concerned.

The second and most important broad category of social change includes those changes which are virtually an integral part of technological change itself. These changes are permanent and irreversible. In many areas they will require in due course consequential changes to the traditional Naval way of doing things. Such an outcome seems inevitable although at present many of these changes to the customary Naval approach would seem quite radical.

The social changes in this latter category include more equal employment opportunities for women, increased community standards of education, greater opportunities for leisure, a widening generation gap and a more tolerant approach to deviant behaviour. What is most readily apparent from this list of issues is an increasing trend towards a diversification of values and a breakdown of consensus about what is the most desirable life-style. Most societies until comparatively recently operated with a broad central core of commonly shared values but there are now firm indications, particularly in the Western nations, that this core has contracted leaving at its periphery a wide range of divergent life styles and values. Furthermore the tendency is towards the centre. Because the Navy, as a conservative bureaucracy slow to react to change, lags behind society and clings to the social values of yesterday, we are yet to fully appreciate the extent of the impact on Naval personnel of the diversity of social pressures alive in society today.

Much has been written in recent years about the social pressures now impinging on servicemen and the apparent conflict between community values and the so-called military values. Although it must be admitted that social changes have affected the Navy already, it is still difficult to find any consensus about how a disciplined military force



should react to liberalism in the community. Under Admiral Zumwaldt, the United States Navy, to the apparent applause of the younger generation of officers and sailors, took steps to permit areas of personnel freedom and individuality and to reduce needless harassment of personnel by traditional techniques of administration and organization. More recently however, a reaction has set in and we find an American naval officer writing in highly critical terms in his main professional journal that 'during the past decade, faced with a dynamic society in foment, our top leaders effectively sullied the mantle of leadership by ignoring the tried and true military principles and by attempting to buy youth off with beards and beer in the barracks'.[3] Similarly another U.S.N. officer criticises his service for 'belatedly jumping on the bandwagon of social change' and permitting itself 'to reflect all of the confusion, doubt and self-indulgence that surrounds us'. In his view the Navy must re-establish the Naval way and 'make the decision to go against the grain, to establish and to demand from our people a set of standards and an order of dedication that is our own, and not "a reflection of society".'[4]

What can be salvaged from these opposing views –on the one hand, 'Zumwaldtism', and on the other, the rather inevitable opposing reaction? What threads can be brought together? The first thing this controversy demonstrates is that one effect of social change on the Navy is a healthy re-examination of the customary Naval approach to all facets of personnel administration. Despite the recent reactionary criticism, most of the Zumwaldt innovations remain and whilst they may have seemed radical at the time of their introduction, many of them are now institutionalised and may well become the traditions of tomorrow. Such is the process of evolution and we cannot turn a Nelsonian 'blind eye' to it. Recent generations have been very conservative but times are changing fast. Although the Navy may lag behind the rest of society in social attitudes, in the long-term it must come around to accepting those very social attitudes which at first seemed so dysfunctional and deleterious for service administration and discipline. It should not be forgotten that flogging was retained for certain offences in the Royal Navy and the United States Navy well after public corporal punishment was anathema to the rest of society. The critical problem of the present is that so much has changed in recent years. Even more importantly though, there is little reason to doubt that Toffler is correct and the process is continuing more rapidly than ever.

The problems of adjusting a Navy to social changes were illustrated by the report of the United States House of Representatives Special Sub-committee on Disciplinary Problems in the United States Navy, which examined the mutinies on board the aircraft carriers *Kitty Hawk* and *Constellation*. This sub-committee found that so-called Navy 'permissiveness' had encouraged the protests of the sailors involved through a tolerance down the chain of command of a questioning of valid orders of command. However such a finding was not unexpected since members of the sub-committee were drawn form the House Armed Services Committee which is a notoriously conservative 'watch-dog' for the Armed Services, being invariably comprised of traditionally-biased conservative older politicians frequently with military service behind them or from constituencies which include large military installations. Rather than seeing the disturbances as an inevitable consequence of the Zumwaldt innovations, the sub-committee could well have sought other explanations of the apparent break-down of discipline. Internally, there were the gross organizational problems involved in the management of four thousand men in the one ship, but more importantly, the external pressures involved make it difficult to blame apparent 'permissiveness' in the Navy alone. The United States generally at the time of the carrier incidents was in the last convulsions of the Vietnam involvement and the situation in the U.S.N. was as fertile for mutiny as the 'what is the use?' and 'why should it be us?' attitude prevailing in the low morale British Pacific Fleet in 1945. This situation, where there was a lack of proper military sense of purpose, was further aggravated by the continuing social pressures of race, drugs, sexual permissiveness and the 'Playboy Philosophy'. The carrier disturbances highlight how social pressures can act on a Navy and also how, such pressures can bring about a re-examination of the so-called military values vis-a-vis values in the community at large.

When we contemplate the basic military values of courage, obedience respect for order and authority, esprit de corps, comradeship and a sense of honour, the first thing that should occur to us is that such values are not really the special prerogative of the military; they are in fact also traditional civic values indispensable to mankind regardless of political and social order. The effect of social changes on such values should be seen only as a question of degree and not as something which is necessarily going to bring about a total collapse of the military ethic. If so-called 'permissiveness' in society leads to the re-examination and the abolition in the Navy of 'nit-picking' sources of irritation in the daily routine, and if an up-dating of the code of 'Theirs not to reason why, Theirs but to do and die' leads

to a new sense of purpose in the military, are we really to perceive of social changes as having only adverse effects on the Navy? The traditional values remain because they are 'survival' values. These are the values which have survived over the centuries and are not merely matters which have become sanctioned by practice comparatively recently.

Indeed a distinction has to be drawn between tradition in the sense that military man is courageous, loyal and disciplined and tradition in the sense of what may be regarded as customary rather than enduring fundamental issues. Naval customs, as distinct from traditions for the purposes of this argument would include such things as piping the side and between ships, officer of the guard and the ceremonies of colours and sunset, but also should be extended to include matters such as the so-called traditional methods of organization and administration. The significant distinction is that this latter category of customs are by no means essential–they may be even unnecessary, wasteful or in the worst extreme, foolish.

from those basic 'survival' values which are the foundations of the military ethic. Conservatism as applied to behaviour or conduct and loyalty in the armed forces is basic to the modus operandi of the military but conservatism for conservatism's sake is not essential, probably not even desirable, and we should be prepared for change, even in functional, organizational and administrative areas.

Some examples may be appropriate. Military forces of Western nations endeavour to cling doggedly to a traditional role of external defence, with perhaps some capability for internal security operations. Operations involving the peaceful use of military force (PUMF) or military aid to the civil community (MACC) are considered not quite 'right', they are not traditional, unless (and it is a very strong 'unless') they can be construed as serving some military goal, as for example, civic action operations in Vietnam to achieve military objectives, and in peacetime, training Army engineers in their technical (military) skills, through civil road-building or bridge construction operations. Countries of

Because technological change has produced both new techniques of fighting and changed social patterns, we must not only be prepared to accept change from the traditional Navy way, but also be alert to detect those areas where change could result in improved economy and efficiency. This is not to say however, that there should be departures

the third world take a broad, fresh view and unashamedly assign developmental roles to their defence forces–for a start, it is economically rational that they should do so. They could not afford to do otherwise.

There are some indications however, that change is already advancing in our own attitudes in this

area. The disaster of Cyclone Tracy in Darwin and the success of military relief operations have driven home to the Austalian Defence Forces the point which the Minister for Defence made in a recent article that Australia's peacetime defence forces must be seen to be 'skilful, visible and useful . . . by both servicemen and the public'.[5] It is evidence of a significant change in attitudes that neither serving military personnel nor the community generally would now accept a barely visible Defence Force based on external defence against some vague indefinite threat and stimulated by service 'For Queen and Country'. The educated and inquisitive modern serviceman requires a sense of objective which is tangible and not solely tied to something emotional and a 'no threat for fifteen years' strategic assessment.

To give a Naval example, the idea that part of the Navy should be employed professionally as a coastguard force is rejected because it is seen (traditionally) as not being quite the 'right' sort of task for the Navy; it is not professional. A coastguard-like role does not fit the concept of a Navy still primarily organised and trained for major Naval operations, in co-operation with powerful allies and associated with prolonged struggles of sea power. Times have changed however, and young officers and sailors with their less traditional upbringing experience increasing difficulty in extracting a complete sense of purpose from the conservative Naval role when they fully appreciate that a coastguard or constabulary role can be equally as valid for a modern Navy. Technological change has created a situation where increasing attention is being paid to the economic value of the sea, including both fisheries and offshore oil, natural gas and other mineral resources. Increasingly maritime nations will wish to improve their capability for the full-time policing of coastal zone and territorial waters. If the public is to obtain value for its Naval investment, logically in a relatively small nation, such as Australia, it should be the Navy which assumes this coastguard or law enforcement role, although tradition (at least recent tradition) militates against it. These digressions on Naval functions and roles are not at all 'red herrings' as far as the main theme of this essay is concerned. They illustrate the need for a changing sense of purpose in a modern Navy confronted with rapid technological and social change. They are also representative of what Professor Partridge is getting at when he observes that 'defence or military planning and execution of policies proceed now more and more within a wider context of political and social thinking'.[6]

An example can also be given which illustrates the potentially inhibiting effect of traditional Naval organization. It has already been mentioned that one area of social change in the next few years which will affect the Navy is a tendency towards greater opportunities for leisure in the community. This will be manifested among other things in increasing holiday or leave entitlements. Most of the Australian merchant service now accrues leave at the rate of .8 of a day's leave for every day on articles. Further increases in the basic leave entitlement for Naval personnel must be expected until the stage is reached when ships will be tied up in harbour to allow personnel leave periods, in excess of the time actually required for maintenance, dockings and refits. Minor war vessels have already reached this stage and with such ships there could now well be thought of dropping the traditional concept of 'one ship, one ship's company, one captain' which is both implicit and explicit throughout Naval Regulations and Instructions. A patrol boat, base-ported in Cairns, makes the long haul around Cape York to a fisheries patrol in the Gulf of Carpentaria and then back again after seven or eight days on task to allow its ship's company rest and recreation, although there would be better value for money if the crew were relieved on task at Gove, or Weipa or Groote Eylandt.

Whilst there is concern about the increasing slice of the defence budget being absorbed in manpower costs. There is still a need to be alert for the economies to be gained by better utilization of our limited equipment. After all the cost of an additional spare crew for each patrol boat would only be in the order of $A250,000 per annum at present prices and this is insignificant compared with the annual maintenance cost and the depreciated capital cost of the ship itself.

Although tradition at present suggests that even patrol boats are commissioned ships with their own appointed Captains, the time is very near when social change manifested in a demand for a higher quality of life and more leisure throughout the community will make it necessary to change personnel more frequently in a warship to ensure that maximum operational availability is achieved and Naval personnel are not left too far behind the rest of the community as regards the perquisites of employment. With further imaginative policies, such a concept would also help to minimize posting turbulence, obviate the need for sea-shore rosters and permit seagoing personnel more time at home with their wives and families.

Consideration can now be given to some other aspects of social change which are going to place stress on the customary and traditional Naval way. Firstly, there are those aspects which have a direct effect on Naval customs and traditions and then

there are those aspects which have a rather more indirect impact being involved for example, with a changing social attitude towards military service. Combined together these effects produce a tremendous pressure which will inevitably precipitate change in what may be at present regarded as 'the Naval way', although such custom may itself be not more than a century old. Underlying all these effects however, is the common denominator –the common root cause which is the accelerative thrust of technological change in all its dimensions.

Although the greatest threat to 'the Naval way' from the diversity of values held by society theoretically comes from the greater tolerance to deviant behaviour being shown by society, it is not possible to view this threat seriously at least in the short term of the next few years. Homosexuality, pornography and sexual permissiveness potentially undermine those 'survival values' mentioned earlier but it is difficult to see that in the foreseeable future social pressure will be put upon the Navy to accept any liberalising of the service attitude towards homosexuality for example. The 'gay liberation' movement has thrown out its challenge recently to the armed forces of the United States, the most 'permissive' society of all, but so far has met with little success. Naval values, or military values generally, will always tend to be repesentative of the values at the core, or where the greatest consensus exists, and thus we do not need to be too apprehensive of the diverse values towards the periphery. However this does not prevent us from being tolerant as individuals.

Turning now to issues where a broad base of social consensus already exists, 1975 has been International Women's Year and this has precipitated an increasing community awareness of the problems of women and the goals of the women's liberation movement of recent years. The Navy has followed the example of society generally by some widening of the job opportunities for women. Lest though there is any reader who may feel that these are temporary phenomena which will eventually disappear, it is necessary to reflect upon the origins and objectives of the women's liberation movement. This movement is not just concerned with the achievement of women's equality with men in society, it is more a question of the complete breakdown of any system by which types of human beings are seen as having certain avenues of self-expression and self-development based on predetermined sexual roles. The possibility of such a far reaching social change has been rendered possible by the technological developments which have made physical strength an obsolete consideration in most occupations and also have permitted women to have the means of controlling their personal biology.

We must deduce that equality of opportunity for women is here to stay and the associated social pressures will mean that the armed services will have to pay more than token lip service to the concept. With it though equally is the need to ensure that women in the services do not become more equal than men in the sense that they have additional entitlements or receive more rapid promotion than their male contemporaries. Once again these socially desired objectives will only be achieved if the Navy compromises on some of its customs and traditions.

Possibly though the most serious consequence of the women's liberation movement as far as the Navy is concerned, is the effect that this movement has had on the attitudes of the wives of Naval personnel. Not only is the modern Naval wife becoming more articulate and aware of the alternatives available, she is also becoming much less willing to subjugate herself to her husband's career. Increasingly Naval wives, who like their husbands are better educated than their predecessors, are thinking of their own careers. Since Naval marriages are occurring at a younger age now than ever before, the Naval wife when she marries has frequently not even completed training for her chosen vocation.

The Navy appears to expect a greater degree of movement by personnel from one location to another than the other two services. The frequent moves, which can occur early in an officer's or sailor's married life, cut completely across the socially acceptable family cycle, particularly since the wife is invariably still training or working or has young children to look after. She is often not at all keen to observe the traditional 'pack and follow' responsibility of the Naval wife. The argument that 'if they don't like it, they shouldn't have got married in the first place' holds little water since the non-compliant views do not occur in isolated cases but rather are typical of a whole generation of young women. The pressure that these young women can bring to bear on their husbands does not seem to be properly recognised yet by they Navy and is just another example of how the Navy is expecting a degree of loyalty from its young men, particularly its young officers, which is well above what is expected in most other vocations, including the other two services.

Another social change which is a direct consequence of rapid technological change is the widening generation gap. Today's thirty year old, although he himself may not wish to be identified with the ideals and values of the middle-aged group, is so identified in the eyes of the eighteen

or twenty year old. A decade of lifetime now spans wider experience than ever before–the equivalent perhaps of twenty years of experience only twenty or thirty years ago.

Man's knowledge is increasing exponentially and the young people of today are 'required' to absorb much more education during formal schooling at the primary and secondary levels than previous generations. At the tertiary level, acceptable post-graduate work of a decade or so ago has become undergraduate work today. Academic standards have increased throughout society. The young student of today has to have more time to learn if he or she is to absorb everything which is considered now basic knowledge, although this knowledge may represent a significantly wider and deeper range of knowledge than was expected twenty or thirty years ago. Each school hour is important and thus curriculum development, course programming and the evaluation of more efficient teaching techniques are important aspects of modern educational administration.

Apart from education, the widening generation gap is also a consequence of the so-called 'emancipation of the young'. In most Australian states now, the eighteen year old is a fully fledged citizen able to vote both in State and Federal elections, marry, drink and gamble of his own volition. Although the services have paid recognition to the concept of adulthood for eighteen year old servicemen through the payment of adult rates of pay, we have also to be sure that some of the more petty Naval customs of discipline and administration can stand up to adult examination. Though eighteen year old sailors may not in every case have reached the mental and emotional maturity to appreciate fully an explanation in response to their probing, nevertheless they do expect, even whilst serving in a disciplined force, a satisfactory reply to their basic adult right to question 'Why?' If no satisfactory reason can be given, then change must be contemplated even if it seems that some custom or tradition must go out through the window.

To give another example of the consequences for the Navy of the widening generation gap, it is inevitable that the warrant and chief petty officers of today should be the most reluctant to accept change. Whilst the younger wardroom and petty officers messes happily accept imaginative changes in a ship's routine (for example, flexibility demonstrated by no 'call the hands' on Sundays and working daily routine on Saturdays at sea in return for a weekday on Sunday routine in harbour), the senior sailor messes are left muttering in their beer and tend to react unfavourably to such changes. An American Naval officer has described this problem for the U.S.N. in the following terms,

> "These superior inferiors, who entered the armed forces when permissiveness was a gleam in Dr. Spock's eye, who worked their way through the ranks, and who rose to leadership positions anticipating the traditional functioning of their roles, now often find that is not the case. Having had little or no influence in shaping new disciplinary policies and often unsure of what is now required of them, they feel frustrated and forgotten".[7]

Thus it is the older senior sailors who under the pressure of social change impinging on the traditional Naval way, feel most disturbed by the changes they perceive as undesirable.

Conversely among the officer corps, it is the younger well-educated officer who becomes disenchanted with Naval life because it does not offer him the satisfaction he expected. This is a very real problem which seems likely to become even more acute in the next few years. The Navy in peacetime enjoys a reasonably satisfactory recruiting image but we should be more concerned about what happens to our young officers after they have entered and completed their initial training. If the relative resignation rate for young officers is running higher in the Navy than in the other two services then this provides sufficient demonstration that despite the possibly greater attraction of the Navy initially, something may be wrong in the longer term. The Navy is in many ways still the most old-fashioned and conservative service and possibly it is the very retention of old-fashioned ways which disturbs the young Naval officers. Or it could be the 'can do' philosophy mentioned earlier which overstresses the already overstressed young mind (environmentally rather than professionally) but does not provide the necessary intellectual stimulation the well-educated young mind requires.

The Royal Australian Navy has endeavoured to exist for some years now with 'Rolls-Royce' intentions and commitments based on a 'Holden' budget for manpower and finance. Whilst the goal of striving for what is ideal is a worthy one, nevertheless the Navy exists in the world of reality which is dictated by very real economic, political and social constraints. When a 'can do' attitude exists at the top, and the Navy continues to be over-committed, then the burden which is being borne lower down in the Naval hierarchy is forgotten. This burden is in terms of posting turbulence, short notice postings, a lack of proper career planning, deferred leave and generally crisis personnel management involving departures from any recognised 'rules' and the need for individuals to accept situations which are less than satisfactory. In the extreme situation,

operational commitments, regardless of priority, are placed before personnel considerations. Ships' programmes are changed, planned periods of service away from home are extended with little warning, and the personnel involved are simply just expected to adjust. Such situations are accepted happily in times of national emergency, but good reasons are required in less critical times.

The trend of social change in Australia at present is such that today's young sailors and junior officers are much less likely to happily accept these situations, disenchantment sets in and resignation becomes inevitable. Paradoxically it is the man with the better potential who thinks of moving on to seek something better for himself; at the other extreme, mediocre man tends to remain in the Service poorly motivated with an 'it's only a job' attitude which in turn, like the proverbial 'rotten apple', sets in train further disillusionment among those coming along behind who are still trying to do a good job. The traditional argument that 'if they don't like it, they shouldn't have joined' is completely negative and gets the Navy nowhere. The solution can only lie in more weight being given to personnel matters throughout the whole range of peacetime Naval organization and administration.

It must also be disturbing for the modern trained young officer to observe how both his immediate superiors and the more senior officers of his Service apparently are constrained to a plodding process of development in a manner which is no longer typical of either the public service or private enterprise. Although rapid promotion to positions of meaning and influence is increasingly common in these latter two sectors of society, potentially very efficient and capable young Naval officers are held back by the rigid Naval hierarchial system of promotion and development, regardless of their apparent ability. For obvious military reasons an improvement in this situation will be difficult to achieve. However it has not been helped by the apparent low status and unrewarding nature of many of the jobs now allocated to uniformed officers of the middle management seniority levels in the central defence organization.

Some of this dissatisfaction is inevitable in an increasingly job mobile society in which it is no longer typical for a person to serve one employer throughout his or her working career. Higher levels of education for officers undoubtedly pose for the Navy the possibility that officers will be led to other interests in any case, regardless of any critical self-appraisal of where their chosen service is taking them. This is all inevitable and must be accepted. It must also be accepted that the so-called 'profession of arms' to be truly professional must ensure that its principles and rules are mature and stimulating rather than unenlightened and inhibiting.

So far discussion has revolved around the possible consequences for the Navy of certain social changes likely in the next few years. However it is also relevant to consider the significance of any consequential change in society's attitude to the Armed Services. What are the consequences for the Navy if the value structure of society tends towards seeing military forces as being both marginal and dysfunctional? Alienation of the military from the rest of society is potentially a real problem in all democratic countries, especially as the forces of liberalism hold sway. Increasing alienation unfortunately is inevitable if advocates of the traditional military situation endeavour to combat the lower regard in which the services are held by public outbursts such as have been heard in recent years from former senior military officers and organizations such as the Navy and Returned Servicemen's Leagues. These attempts to cling to the past seem almost naive in the present and do little to improve the image of the services or instil a sense of purpose in the younger generation of officers and sailors. It is rather like endeavouring to extinguish a fire by pouring petrol on it.

We cannot escape the unfortunate fact that a Naval career is no longer held in the same esteem it once was. This is apparent in the field of officer recruiting where although numbers generally are satisfactory, compared with the past, relatively few applicants come forward each year for entry to the Naval College, despite the better academic opportunities now available. Many secondary school headmasters must advise their students against such a career, and it should be the cause for the Navy's greatest concern that this trend appears to be continuing . The fact that it is continuing is part and parcel of the same factors which lead to greater alienation between the military and the rest of society. Defence and military planning need to be seen within the wider implications of political and social thinking and if large-scale war is no longer viewed as being likely in the foreseeable future in the political arena and by society at large then it is quite regressive if former senior officers and military public relations exercises still seemed to be aimed at something which is of the past and rather unrealistic in the present. Is it any wonder that officer applicants are not forthcoming when they can only conceive of themselves as applying to join something which is anachronistic and based on ideas rather out of touch with what they themselves see as reality? In these times of rapid social

change, a contemporary recruiting image is more important than ever.

The major personnel problem for the Navy during the next few years is going to be how to soften the effects of social changes whilst ensuring that there is no degradation of professionalism and a military sense of purpose. The solution to this problem is a complex one requiring a degree of imagination and creativity which is unfortunately all too rare in a bureaucratic organization steeped in tradition and which is not attuned to a stream of rapid technological and social change. Paradoxically during the last few years we have seen in Australia a significant growth at the centre of an elaborate bureaucratic structure for managing the Defence Forces. This structure with its new kinds of hierarchial relationships, particularly civil-military, besides being potentially dysfunctional as far as ready adaption is concerned, is also packed full of disillusionment and dissatisfaction as far as the military professionals are concerned. It loses sight also of the fundamental relationship between employee morale, public relations and recruiting. If society has a view of the military as being staffed by disenchanted service officers then it is unlikely that the younger generation of ambitious potential senior officers of the future is going to be attracted to such an organization for a career in the long-term.

The most important pre-requisite of relatively smooth adaption to social change is the existence of an efficient 'feedback' system to carry ideas and murmurs of discord from the lower echelons to the higher level of command. The 'system' should be a multi-channel one for both formal and informal communications. The requirement is that the command should receive advice that something is wrong in good time to plan and organize the process of adaption before the adverse consequences of a failure to adapt start being experienced. This is what good organizational management is about; to stifle these communications whether formal or informal, in the interests of the traditional way of doing things is dysfunctional for the system as a whole. In these days of rapid social changes, the Navy requires an efficient 'feedback' system as it never did before. It should also be apparent from what has already been said that the usual guidance provided by custom and tradition is quite unlikely to be adequate to meet the challenge of this age of transience.

Furthermore it is impotence on the part of the Navy to sit back and wait for 'feedback' to flow up through the system. Some effort should be made to seek out problems. Organizational experts speak about the concept of the 'social audit' which refers to the ability of an organization to conduct a critical self-examination to determine to what extent it is satisfying the basic needs of its members. There are many ways and means available to an organization to help it achieve its objectives and it must always be alert to use those ways and means which provide the greatest satisfaction and self-fulfilment for its members. It is only in this way that the organization will become truly efficient in the most complete sense.

As far as the Navy is concerned, the concept of the 'social audit' is represented in practice by the divisional system working properly, the creation of the Personnel Liaison Team and the establishment of the Defence Force Ombudsman. However, whilst the latter two innovations are steps in the right direction, there is still much to be done. For a start, whilst setting up the 'feedback' system is important, it is equally important to ensure that the signals fed back up the system are acted upon and not just regarded as 'whistling in the wind'.

Somewhat cynically it could be said that the major task of a military force in peacetime is the management of its manpower—recruitment, training and administration. On reflection there is much truth in this statement and if initially the requirement to pay greater attention to this task means an escalation in manpower costs, this should not act as a deterrent since in the longer term, there are significant savings involved through greater organizational efficiency.

Toffler's 'Future Shock' and its ramifications for the Navy guide us to the observation that greater attention than ever before should now be paid to personnel management. In the traditional view the most important part of a Navy is its ships but now in these days of rapid technological and social changes, it should be seen as a truism to say that personnel are now more important than the ships they man. This suggests the strengthening of the Divisional organization and the personnel Directorates at the centre so that there can be a proper reaction to the problem signals from below as they arrive via the medium of formal and informal channels of communication (letters, signals, by interview, phone call, posting 'dream sheets', etc.) or through the reports of the Personnel Liaison Team and the Defence Force Ombudsman. Crisis management in the personnel area is simply not good enough these days—problems must be fully staffed for cause and effect.

To carry this argument to its logical extreme, social changes in the next few years, if fully appreciated by the Navy, will go far towards producing a situation where some quite radical changes are required; if not even a whole restructuring of the organization particularly as far as

the personnel management function is concerned. It has taken us not much more than one hundred and fifty years to reach our present level of personnel administration from the stage when manpower management was virtually non-existent and the press gang was the Naval Careers Office. However if we measure man's increase of knowledge during the entire last century as x, then his increase in knowledge so far during this century is surely in the order of 10x or even more. A similar rate of improvement applied to developments in Naval administration and organization dictates the increasing need for the Navy to properly manage its men if it is to go forward and keep pace with society generally.

If this essay has been at all exhortative, then there have been three main suggestions. Firstly, the social changes expected in the next few years will require Naval personnel to have a firm sense of purpose, albeit possibly a new purpose, if they are to take their proper place in the new society, educated, liberal and inquisitive that it will be. Secondly, the same social changes will dictate an increasing need for the Navy to pay much more attention, than it has hitherto, to the full range of personnel management functions running the full cycle from initial recruiting techniques to the availability of pre-discharge re-settlement training. New philosophies will be involved and many will be anathema to tradition and custom.

Finally and possibly the most radical idea, is that social changes have created a situation where there should be a conscious slowing down of the traditional 'can do' Naval philosophy if the Navy is to attract, and most importantly, retain its more able officers and sailors. Paradoxically it is the individual with the better potential who rejects the organization if it keeps him under undue pressure as a result of what is all too frequently seen as mismanagement of the personnel function. The major thrust of social change dictates the need for the Navy to pay more attention to its personnel as individuals, and this cannot be done if the organization is kept forever on the boil with high operational standards being achieved and all operational commitments being met efficiently but at some human cost.

Behind these ideas is the main theme of this essay that the social changes expected in the next few years will have their most dramatic effect on the Navy through the pressure they will exert on what are regarded as Naval tradition and customs. The pressure will be manifested in virtually all areas of Naval endeavour. This prospect should not be disturbing–rather it should provide the challenge of the years ahead. We need to remember John Stuart Mill's words (which Alvin Toffler surely must applaud) that 'the despotism of custom is everywhere the standing hindrance to human advancement, being in increasing antagonism to that disposition to aim at something better than customary'.[8]

NOTES

1. Alvin Toffler, Future Shock, (London, Pan Books, 1971), p. 12.

2. ibid., p. 168.

3. Captain F. C. Collins USN, 'The Loss of Leadership', USN Institute Proceedings, Vol. 101, No. 4, April 1975, p. 32.

4. Lieutenant Commander K. C. Jacobsen USN, 'The Stranger in the Crowd', USN Institute Proceedings, Vol. 100, No. 4, September, 1974, p. 38.

5. Hon. W. Morrison MP, 'The Challenge of Peace', Pacific Defence Reporter, August, 1975, p.7.

6. Professor P. H. Partridge, 'Education for the Profession of Arms' (Canberra, Australian National University Press, 1969.) p. 5.

7. Lieutenant James Webster USNR, 'Disciplining the All-Volunteer Force', USN Institute Proceedings Vol. 100, No. 11, November, 1974, p. 38.

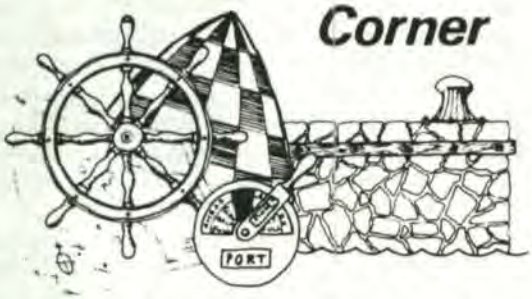
8. John Stuart Mill, On Liberty, (London, Everyman's Library, 1964), p. 127.

A PREDICTION FROM 1944

Action is the true end of the Western religion, contemplation of Eastern; therefore the West is in need of Buddhism (or Taoism or Yoga) and the East of Communism (or muscular Christianity) and this is just what both are getting. Undergoing the attraction of opposites we translate the Tao Te Ching and the Bhagerad-Cita, they learn the Communist Manifesto."

–"The Unquiet Grave"

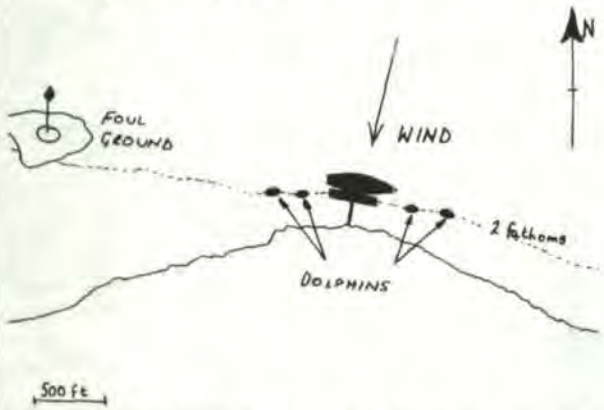
Shiphandling Corner



THERE BUT FOR THE GRACE OF GOD . . .

What Happened?

This incident occurred at a small port in the Far East. The ship was a Daring Class Destroyer and had been ordered to fuel there before going on to Singapore. It was the only reason for the visit. The fueling berth was like this:



The weather was fair with a gentle easterly blowing. There were no tidal effects at any time. While it would have been more appropriate to berth bows west, and there was a choice in the matter, it was decided to berth Starboard side to, so as to keep the Port side free of mechanical damage; and therefore look the more beautiful for the C-in-C, who would undoubtedly be on hand to watch the ship's arrival in Singapore. Local advice was that after 1800 the easterly would drop and it would be calm and still, a usual condition after sunset in that area. There were no tugs available.

At 1600 the ship went alongside, no anchor was used. By 1930 the light breeze from the east had backed to north, and was gusting to 25 knots. Fuelling was due to complete at about 2100 and the ship needed to sail then to make the reported E.T.A. in Sinagpore, without having to exceed the economical steaming speed.

Prayers were offered that the wind would drop by 2100, but these prayers were not answered. There were then two choices left it seemed. Either to stay until the wind eased, and arrive late in Singapore (in some ignominy) or attempt to get away. One worry was the foul ground on the port quarter, and the other, the danger of the bows blowing down on to the shallows between the dolphins and the T-jetty.

A plan to get away was developed; it was to drop the port anchor underfoot and veer the cable to about 1¼ shackles as the ship moved astern, until the bows, well fendered, could rest on the eastern end ot the T-jetty. In this position some leverage could be gained from the jetty while the engines were used to get the ship's stern well clear of the line of the shoal area. When the stern was clear, its tendency to fly up into the wind should assist the process of getting away into deep, clear water. At the same time a force would be applied by the port anchor, and as stern way was gathered and applied another force, these together should produce a parallelogram of forces effect, to keep the bow from scraping down the jetty. That was the theory anyway. A forespring (No. 3) was also available to produce turning movement by using some ahead power if needed.

If this plan did not work the intention was simply to give up until the wind dropped, remain alongside, and bear the shame later.

As planned, the ship moved aft until the cable was bar taut and the bows were in position, quite safe from falling off to leeward. Miraculously, or so it seemed, it all worked. As the stern turned further up wind the bows lifted gently from the jetty. As the clearing bearing to foul ground to the nor' west was passed, more stern way was gathered and the ship's inclination to fly up further reduced the adrenalin flow on the bridge. With both stern and bow clear of all danger the anchor was dredged out into safe water, the anchor was weighed, and the ship arrived on time looking beautiful.

What Self-criticism is Offered?

On later reflection the Captain kicked himself for several faults:

a. The aim is always the safe handling of the ship. In this case it should not have been confused with any considerations about the appearance of the port side. What good is a beautiful ship's side if the ship does not meet its commitments, or worse, is grounded? Bows west was the seamanlike approach to this not too difficult berth.

b. Knowing that there were no tugs to assist and that weather is not as predictable as was assumed, whether the ship berthed bows east or bows west, why not lay out, say, 7 shackles of cable while going alongside? Then it would not have mattered

what the weather did. If the weather was calm, as predicted, it would have seemed like an unnecessary precaution, and there might have been some ill-informed criticism, but no one could deny it was seamanlike. If the weather went bad, as it did, there would have been no cause to worry and the foresight of the Captain could only be regarded as a plus for his mature wisdom.

Lessons Learnt

As with all military operations, the selection and maintenance of the aim is the first and most important principle, and ship handling has as its aim, the safe and seamanlike handling of the ship, in this instance, 300-odd lives and an expensive and almost irreplaceable asset. Do not ever let the aim be clouded by what can only seem, in hindsight, irrelevant thoughts of the Admiral's opinion of the yacht-like appearance of your ship. Secondly, whether there are tugs or not available, an anchor is the finest and most controllable tug in the business, if the opportunity is there to use it.

A Professional Wrecker's Comment

This case highlights the importance of:

a. Producing an overall plan for berthing and unberthing which is flexible enough to meet all situations, prior to arriving at the berth, and

b. knowing own and ship capabilities.

If the departure plan used (parallelogram theory) had been developped before the ship berthed, I feel that the unanswered prayers and high adrenalin flow prior to and during the departure would not have occurred. The plan would have been developed on "knowing" what the ship could do not "hoping" the ship could do it.

The more prudent way of carryinv out the evolution would have been the "port side to" using an anchor but the plan used, if thought out beforehand and knowing own, and ship capabilities, is still valid.

CYCLOPS

A SMILE FROM LADY LUCK

If an accident may be said to occur when all one's luck runs out at once then possibly the failure of a set of hazardous circumstances to culminate in a deserved disaster might be described as the opposite.

I was a prime participant in one such incident which took place in Hervey Bay in the fifties when I was Captain of an O.M.S.

Two minesweepers, of which I was the junior, had been exercising "A" sweeping; on completion of the exercise the ships proceeded towards their anchorage for the night carrying out equal speed OOW manoeuvres en route whilst maintaining the original "A" sweep distance of three quarters of a cable. Speed was 12 knots. Owing to a shortage of signal staff orders were passed by voice circuit and were being monitored by the OOW himself so it was very much a one man operation.

My OOW was a mature and experienced RANR officer with a full watchkeeping certificate from wartime days: I was impressed with the skill and enthusiasm with which he was carrying out the manoeuvres and the obvious enjoyment and value he was deriving from his 13 days annual continuous service with me.

Eventually, with the anchorage ahead but still some distance away the ships found themselves on a course of 178 degrees line abreast with my vessel to port. I was on the bridge leaning on the port telegraph and facing away from the leader. I was deep in conversation with the first lieutenant on some subject of abiding interest. My confidence in my OOW was implicit

At this stage the senior officer decided a two degree adjustment was required for an accurate anchorage course so came the order "Turn 180". When the order was given the ships had been steady on course for maybe three minutes after half an hour of continuous manoeuvres; the anchorage was still well ahead; hence the OOW was tuned to manoeuvres rather than to minor course adjustments.

Therefore, possibly not surprisingly, the order was interpreted in error as "Turn 18"—a complete reversal of course, ships turning together) and accordingly the OOW ordered "Starboard 15". Had no counter order followed then no danger existed. My ship would have passed close but safely under the stern of my senior with no harm done but for red faces. However, it was not to be, the ship had swung through about 45 degrees when the OOW realised his mistake; he ordered "Hard a-port". It was this order and the tone of voice in which it was given that alerted me to potential hazard.

By the time I had assessed the situation my bow was swinging fast to port with the jackstaff apparently keeping station on the leader's bridge which was approaching rapidly; a collision was maybe 10 seconds away.

What to do? There was no time for any voice order to be absorbed and executed; a reversal of course would ensure a right angle ramming rather than the evolving sixty degree crunch. One forlorn option remained; my hand was already on the port

telegraph. I rang full astern, double (emergency) rings.

My Chief ERA had been taking the evening air in the starboard waist a couple of paces from the engine room entrance door. The manoeuvres of the past half hour had been attracting his casual attention and when the ship turned to starboard apparently to cross under her consort's stern he took a passing interest only. Suddenly, as he watched the turn was checked and the ship began to swing rapidly to port and there ahead, far too close, was the leader. A collision was imminent.

The Chief ERA knew his duty; in literally a couple of bounds he was on the engine room plates and as he arrived the port telegraph rang full astern. Before the second ring was complete he had elbowed aside the astonished watchkeeper and flung the linkage into astern with no concession to the continuing input of steam. The flying pistons of the port engine stopped dead with a thump which shook the ship; they dwelt a split second then instantly resumed their previous spinning but in the opposite direction.

The strain on an engine subjected to this manoeuver is immense and is normally quite unacceptable but this was an emergency and now thanks to the prompt action of the Chief ERA in a matter of a few seconds the 12 knot thrust of the port engine had been completely reversed.

For those on the bridge the instantaneous reaction to my engine order bordered on the miraculous. Before my hand had left the telegraph handle there was a vast shuddering and vibration throughout the ship and white water was boiling on the port quarter. The turn tightened abruptly until a few seconds and some frantic orders later I fetched up in echelon with my leader, course 180 degrees, speed 12 knots minus, distance between ships 2 feet. No contact occurred.

In retrospect contributing factors to the incident were:

a Overly close stationing of ships. Three quarters of a cable at 12 knots equals twenty two and a half seconds.

b Initiation of an order obviously open to misinterpretation especially in the context in which it was given.

c Impetuous overconfidence on the part of the OOW followed by bad judgement.

d Most importantly, lack of attention and supervision of an officer under training by the Captain (me).

However, by the most extraordinary luck (aided and abetted by the initiative and dash exhibited by the Chief ERA) the ameliorating factors outweighed the contributing factors by a whisker, or in the event two feet, as follows:

a The luck in the unconventional design of the ship; controls on the bridge; reciprocating
c engines with the unique facility of reversing at full power in a matter of seconds.

b The luck that the Captain happened to have the port telegraph actually in hand.

c The luck that the Chief ERA saw the emergency developing and so arrived in the engine room prepared for emergency orders.

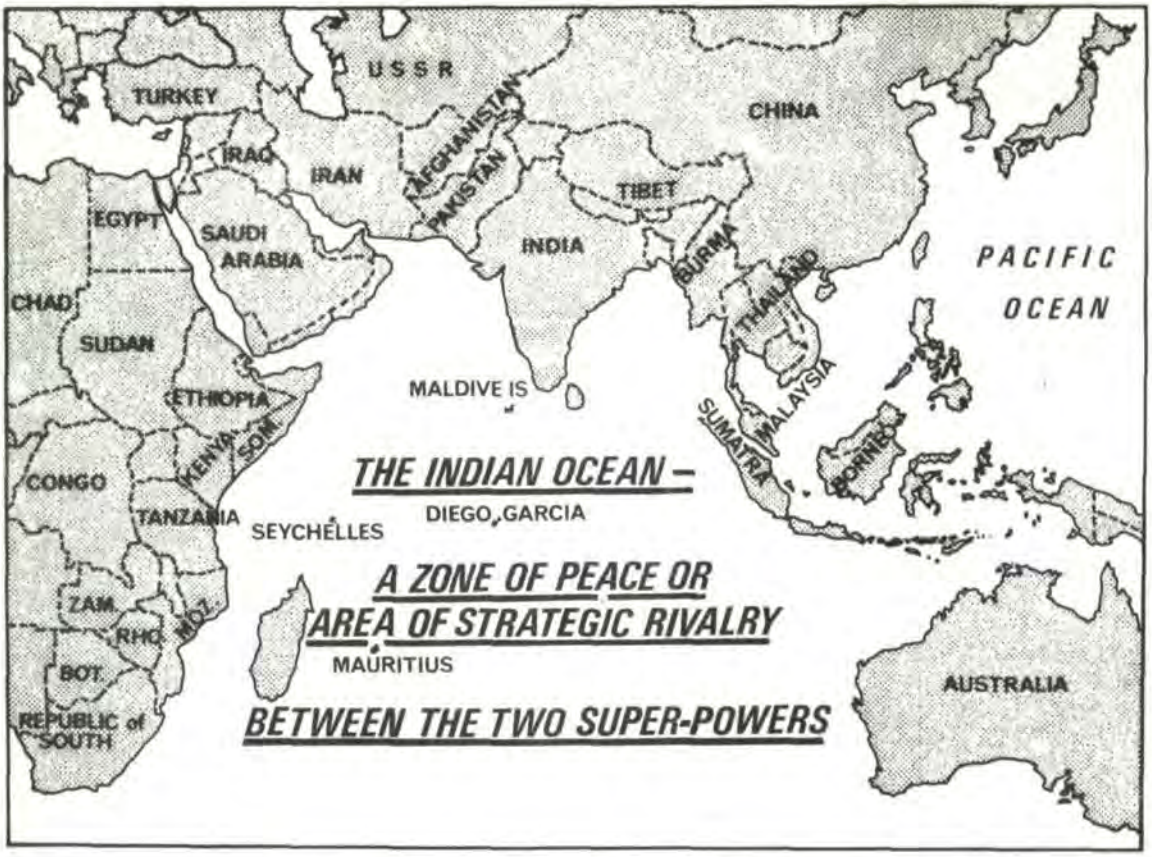
They say it is better to be born lucky than to be born rich.

WOC

ON RESPECT FOR DEAD WRITERS

Our merits do not come of age until we discover that the great writers of the past whom we patronize, dead though they be, are now less far more intelligent than ourselves."

—"The Unquiet Grave"



This article was based on unclassified sources e.g. press reports, U.N. documents, published before 1975. Since that time further developments have occurred and, in that sense, the paper is now dated. Later reports and information could suggest some amendments and this fact is acknowledged by the author. However it is published in its original form, unamended, as a basis for discussion of this topical subject.

SYNOPSIS

This paper discusses the growing importance of the views of the littoral and hinterland States vis-a-vis those of the great and super-powers in determining whether the Indian Ocean will be declared a Zone of Peace or will continue to be an area of strategic rivalry between the two super-powers.

The author, after tracing the history and giving some detail of the concept of a zone of peace, discusses the interests of both the great-powers and the littoral and hinterland States in the Indian Ocean. He considers that, with the continuing development of the nations in the area and the maintenance of the process of 'detente', the significance of the demands for the Indian Ocean to be declared a zone of peace will increase, but in the final analysis, the super-powers will not relinquish their authority in the Ocean if they consider it has a direct effect on their security. Indeed the Indian Ocean will remain an area of strategic rivalry between them unless and until they agree otherwise.

INTRODUCTION

Under the increasing influence of the Third World nations, for whom ancient history can be of more significance than recent events, change is taking place in today's world at an unprecedented pace and with unprecedented significance to the world balance of power. This rate of change is placing great demands on both human and natural resources. Nevertheless it is important that perceived ideas be processed into practical actions which take account of the evolving political aims of all nations, young and old, rich and poor. Superpower deliberations need to take account of the ambitions of smaller nations, giving due consideration to local as well as international political, economic and social, trends and developments.

Despite man's ideological and technological advancements in recent decades, the world remains threatened by war and nuclear holocaust. This situation stems from the legacy of 1945 which offerred the world a choice between communism

and free enterprise. No nation has avoided attempts at influence by either the USSR or the United States as the champions of each cause. The Soviets continue to have as their aim the relegation of capitalism in favour of communism. Both super-powers use political, economic and military force as weapons to defend their positions.

By 1971 super-power space technology and nuclear capability were such that each had the resources with which to destroy the other and combined resources with which probably to destroy the majority of mankind, but the polarisation of the world's nations to each cause was becoming less clear with emergence of Third World nations. While the main contest between the super-powers had been centered on Europe, significant events elsewhere were influencing the balance of power. Unprecedented economic growth had resulted in a gradual diffusion of wealth and therefore power; China and Japan had achieved great-power status; the countries of Europe had formed the European Economic Community; many nations had become independent and others had achieved economic strength such that they were beginning to influence the control of major economic resources.

In 1971, also, the USSR and the United States began an 'era of negotiation' on major world matters such as arms control, Europe and the Middle East. They demonstrated that co-existence might be a practical proposition for some of the world's problems. The process of 'detente' commenced. China was admitted to the United Nations in 1971 and in the same year President Nixon ended the American diplomatic boycott of China. Under the pressures of the Vietnam situation the United States began to examine its role of 'world policeman' in the Indian Ocean and Asia. The Soviet Union also began to show increasing interest in extending her influence in these areas. The Indo-Pakistan war in the same year provided the Soviet Union with the opportunity to improve its position in South Asia at the expense of the United States and China. The United Kingdom by 1971 was no longer a significant force east of Suez. The world was recognizing a change in the nature of the balance of power. Increasing nationalism and powerful economic forces were working to change the world society.

ZONE OF PEACE

In this changing world, at the height of the Indo-Pakistan war in 1971 the General Assembly of the United Nations resolved that the Indian Ocean, within limits to be determined, together with the air space above and the ocean floor subjacent thereto, should be designated for all time as a zone of peace. The arrangements envisaged for this zone of peace were quite dissimilar from those already agreed to and implemented in the contiguous Antarctic ocean. The Antarctic is a demilitarised zone whereas the intention regarding the Indian Ocean is not to create a demilitarised zone but a zone in which the great-powers will theoretically be excluded or will at least have their activities drastically curtailed, while at the same time no restrictions are envisaged on the legitimate development of the military capabilities of the littoral and hinterland States.

The General Assembly, in resolving in 1971 to declare the Indian Ocean a zone of peace, called upon the great-powers to enter into immediate consultations with the littoral States of the ocean with a view to halting the further escalation and expansion of their military presence in the ocean, and to eliminating from the ocean all bases, military installations and logistical supply facilities, the disposition of nuclear weapons and weapons of mass destruction and any manifestation of great-power presence in the ocean conceived in the context of great-power rivalry.

Ceylon and the United Republic of Tanzania sponsored the resolution which was supported by all littoral and hinterland States with the exception of Australia, Madagascar, Singapore and South Africa, who all abstained. Of the permanent members of the Security Council only China voted in favour of the resolution; the remainder, all of whom could be considered major maritime powers, abstained.

The 55 nations who voted in favour of the resolution envisaged that the right of free and unimpeded use of any zone of peace by the vessels of all nations would remain unaffected in accordance with the norms and principles of international law, subject only to agreement that warships and military aircraft may not use the ocean for any threat or use of force against the sovereignty, territorial integrity and independence of any littoral or hinterland State in contravention of the United Nations Charter.

In 1972 the General Assembly again called upon the littoral and hinterland States and major maritime users of the Indian Ocean to support the concept ot a zone of peace. By 95 votes in favour with 33 abstentions the Assembly agreed to establish an Ad Hoc Committee to study the implications of a zone of peace. Significantly Australia and Madagascar, both of whom in 1971 abstained from voting in support of the Declaration, were now members of the 15 member Ad Hoc Committee and, of the littoral and hinterland States, only South Africa abstained. France and the USSR still could not

support the resolution because they felt there were unacceptable inconsistencies with the international laws of the sea. Other nations, including the United States, while supporting the principle, had reservations concerning implementation. In giving support to the principle of a Declaration, China observed that the object could not be achieved without the co-operation of the countries closely related to the ocean, namely the USSR, the United Kingdom and the United States.

In considering the progress made by the Ad Hoc Committee in December 1973 the Assembly reaffirmed its support for the objectives of the Declaration for a zone of peace and requested the Secretary General to prepare for the Ad Hoc Committee, a factual Statement of the great-powers' military presences in the ocean with special reference to their naval deployments, conceived in the context of great-power rivalry. The Statement as finally presented indicated that France, the USSR, Britain and the United States were the only external great-powers who deployed ships to the ocean or who had military facilities in the area.

The information in the Statement which had been prepared by three nominated experts from India, Iran and Britain was based on the best assessment by the experts of the available data from open sources. The Statement indicated clearly that France and the USSR had greater port and anchorage facilities in the area for support of ships, than Britain and the United States, while these latter countries had greater communication support facilities. Such a situation was not surprising having regard to the proximity of the NW littoral sea to the USSR for communication purposes and the reliance by both Britain and the United States in the past on afloat support for fleet units in the area.

The General Assembly with increased emphasis, 103 nations in favour and 26 abstentions, in December 1974, urged the littoral and hinterland States, the permanent members of the Security Council and other major maritime users to give tangible support to the establishment and preservation of the Indian Ocean as a zone of peace and called upon the great-powers to refrain from increasing and strengthening their military presence in the region as an essential first step towards the relaxation of tension and the promotion of peace and security in the area. The Assembly also called upon the littoral and hinterland States to enter, as soon as possible, into consultations with a view to convening a conference on the Indian Ocean.

The increasing support for a Declaration of a zone of peace in the Indian Ocean as indicated by the significant change in voting in the Assembly since 1971 is clear evidence of the rising voice of the younger nations of the Third World and of the changing balance of power. This expression of demand has continued to be voiced quite forcibly despite the more traditional counter arguments of the majority of the great-powers and in particular France, the USSR, Japan, Britain and the United States. These counter arguments have centred around traditional needs for special conditions relating to implementation, conditions which must protect the rights and interests of the great-powers and in particular the super-powers, but which do not rule out eventual agreement to a zone of peace.

Both super-powers will thus be determined to keep their options open until the proposal is further refined. The need for development of the proposal is recognised by the Assembly which has resolved that priority is to be given during 1975 to defining the limits of the Indian Ocean in the context of a zone of peace, what constitutes a foreign military base, all basic concepts and terms relevant to implementation of the Declaration of the ocean as a zone of peace, and which States are littoral and hinterland States of the ocean.

It is significant that those littoral and hinterland nations of the Indian Ocean whose people are of European extraction have at times co-operated with the African and Asian States to restrict great-power rivalry in the area. The support of the littoral and hinterland states for the Declaration will continue, but the Indian Ocean is unlikely to be a zone of peace without super-power commitment to that cause. The growing interest in this cause in places other than the General Assembly is exemplified by a recent resolution introduced into the United States Senate calling for negotiations with the Soviet Union on the mutual limitation of naval deployments in the Indian Ocean. In any event the littoral and hinterland states both individually and collectively must show that the advantage to the super-powers lies in maintaining peace in the Indian Ocean and that the great-powers are not at a disadvantage in relation to others in the area.

GREAT POWER INTERESTS

The basic great power interests in the area are not territorial but either economic or political. It is the protection and enhancement of these interests which involve the great-powers militarily in the Indian Ocean in support of their foreign policies. Traditionally, European industrialised nations have depended upon raw materials from the countries around its periphery and in turn these developing countries have been dependent upon imports from Europe. In more recent times Japan and America have both joined their European trading partners in the area and the vast demand for oil from the

nations in the vicinity of the Arabian Sea has focussed great-power and more particularly super-power interests.

NATO is very much dependent upon oil supplies from the littoral and hinterland nations for its survival and there have been suggestions that NATO should take more definitive steps to protect its south-eastern flank to ensure continuation of these supplies in time of crisis. Such is the requirement for oil from the area that in the Indian Ocean there is an average of one ship every 25 miles in the sea lanes between the Arabian Sea and South Africa. With the opening of the Suez Canal there may be some reduction in this density but it will remain significant. Densities of similar orders of importance pass through the eastern focal point between Malaysia, Singapore and Indonesia.

Until alternate sources of energy become available Japan's economic survival will remain dependent upon the free passage and continuous flow of oil through the Indian Ocean and its eastern focal point. To ensure such flow, Japan will continue to influence the development of an increasing number of nations in the area. Already, in return for oil, Japanese technology and industrial goods and complexes are being exported to the area as the result of trade agreements of significance. Any interference or pressure from the USSR to limit Japan's activities in the area could further damage Japanese/Soviet relations and increase the likelihood of an expansion of Japanese defensive naval capability. Alternatively increased pressure could devolve on the United States to protect Japanese interests in the area, as an offset for continued use of bases in Japan under existing mutual security treaties. It is more likely that Japan with the full support of the United States will increase her defensive maritime forces and that she would support the Declaration of a zone of peace, especially if this resulted in limited Soviet expansion in the area.

France, because of her access to North African oil supplies, is less dependent upon energy sources from the Indian Ocean, but as part of the enhancement of her world role as an independent great-power with an independent nuclear capability, France is following a policy of maintaining, if not expanding, her interests in the area. These interests are both economic and military with particular emphasis on maritime interests and the effect of any revised international laws of the sea on those interests.

In 1974, despite rival claims by Somalia and Ethiopia, President Giscard d'Estaing visited the strategically important French territory of the Afars and the Issas in which country France intends to continue to maintain significant forces to protect her interests and to provide a stabilising influence in this potentially unstable area. France supported the reopening of the Suez Canal which should result in some rejuvenation of the port of Djibouti, a relatively modern port and naval base, strategically placed to the north of the key Soviet base at the port of Berbera in Somalia in the eastern approaches to the canal.

As further evidence of continued if not increasing interest, France has recently decided to expand military facilities at Reunion island, east of Mauritius, to replace those which had been maintained previously at Diego Suarez. The latter facilities are being developed by France for the Malagasy Republic to whom control will pass in 1976. In addition, France continues to maintain effective relations with South Africa and can be expected to endeavour to exercise further her influence in countries bordering the strategic Mozambique channel, through which vital oil supplies flow to Europe and other western industrialised countries.

Although French influence will continue to diminish as the drive for independence within her existing territories continues and comes to fruition France can be expected to continue to resist a Declaration for a zone of peace unless conditions of implementation protect her interests and continue to permit her uninhibited use of the seas for both military and commercial purposes.

Britain's traditional responsibilities and political interests in the Indian Ocean are now almost negligible. Nevertheless, Britain's balance of payments' position will remain for some time affected by trade with the area. Oil imports from the area will be less when North Sea oil is available in commercial quantities although it is likely that imports of heavy oil fuel from the Persian Gulf will continue to be essential.

As announced after the recent Defence review, Britain intends to withdraw from her non-NATO commitments wherever this is consistent with her newly assessed fundamental military and political obligations. Britain has no legal obligation to maintain forces in Malaysia or Singapore. Forces will be withdrawn from Gan and from Mauritius, any residual or future commitments being met from the modest base at Diego Garcia. While remaining a member of SEATO and CENTO, no forces will be declared to either organisation and existing contributions to exercise will be reduced drastically. The Simonstown Agreement with South Africa has been terminated. For economic reasons relating to the vital flow of oil to Britain existing arrangements with the Sultan of Oman will continue for the present, although the need for associated RAF staging facilities at Masirah will be kept under review.

Britain's traditional interests in the area will thus disappear. British investment will of necessity also reduce as available funds are used in developing British industrial capacity for full participation in Europe. The area will remain an important market for British manufacturers, including those who supply military equipments to the developing nations of the regions, and it would be in the interests of Britain for the Indian Ocean to be declared a zone of peace, especially if conditions of implementation protected her freedom of the use of the high seas and restricted the Soviet presence and thus influence in the area.

The spread of communism remains the aim of the rulers of the Soviet Union. For political and economic reasons, Soviet actions in the Indian Ocean would appear therefore to be aimed in the long term at fostering Marxist style governments sympathetic or subservient to Moscow, and in the medium term, at the establishment of Soviet advisers and supplies of arms in developing countries in sufficient numbers to influence the actions of governments and thus tilt the military balance in the area in favour of the USSR.

In contrast to these aims, Soviet strategists have suggested that the Soviet presence in the Indian Ocean is related to an essential improvement in internal east-west communications to be achieved by substituting more economic and convenient sea routes for existing rail routes and to the Soviet space programme which requires that Soviet ships be stationed in the ocean to ensure the safe descent of Soviet space craft.

In achieving their aims it is apparent that the Soviet Union would hope to step, either directly or indirectly, into the vacuum left by the British withdrawal and thus establish hegemony over the entire area. In so doing they would hope to frustrate Chinese penetration of the area, to counteract the growing influence of Iran, strategically placed geographically on the Soviet Union's southern border, and to achieve sufficient influence or control over a number of the major oil producing States to enable the USSR to ensure that the supply of oil from the Indian Ocean to Western Europe, Japan and the United States would be dependent, at least in part, upon Soviet goodwill.

In pursuance of these interests the Soviet Union has been increasing the frequency and number of deployments of naval and scientific vessels to the area from both the Pacific and the Black Sea fleets. A major military complex has been reported to have been constructed at Berbera in Somalia, including modern port facilities, communications, an airstrip, barrack accommodation and rework facilities for missiles, either surface-to-surface or air-to-surface. With the re-opening of the Suez canal this base has even greater strategic significance. Soviet naval visits are also becoming more frequent to ports in Mozambique, the Malagasy Republic, the Seychelles, Mauritius, Aden, Socotra, India, Sri Lanka and Singapore. There are indications also of more frequent use and expansion of their large network of 'ocean moorings' in areas off Malagasy, Mauritius, Seychelles, Cargados islands, the St. Brandon group and the Maldives.

In addition to their interest in gaining political influence in the area the USSR has a very real interest related to the defence of the Soviet Union. Since 1963 the Soviet navy has been expanding to counter the increasing threat of seaborne nuclear attack from areas remote from the USSR, such as the Arabian Sea, from which the extended range American submarine launched ballistic missiles can target much of the Soviet Union and from which American strike carrier forces could operate in support of any Middle East war or in support of action related to a renewed oil embargo. A solution to the Arab/Israeli dispute would remove from Soviet consideration much of the urgency which is now attached to expanding her influence in the Arab nations and oil producing States as a counter to the influence of the United States, but the Soviet presence as a counter to seaborne nuclear attack would remain of prime importance.

The Soviet Union is confident that aircraft carriers can be surveyed continuously by a combination of surface ships, submarines and satellite but that submarines can only be tracked through the use of submarines and special devices fixed to the sea bed. Hence a continuing build up of Soviet naval activity can be expected in the region to counter the potential threat from American forces or until the Soviet Union is constrained by the United States or by the efforts of the littoral and hinterland States. Such a build up is not seen as contrary to the principles of the process of 'detente' but as part of the achievement of the Soviet goal of at least parity of military forces with the United States. Opening of the Suez Canal will assist in the expansion of the Soviet presence by reducing their lines of communication from the USSR by some 6500 miles and will greatly assist the USSR to vary her force strengths at short notice to match those of the United States in the area. The Soviet Union therefore could not be expected to support a Declaration for a zone of peace in the Indian Ocean unless she could reach agreement with the United States on a balance of forces which in the Soviet view was advantageous to the long term interests and defence of the Soviet Union. Such a limiting force agreement is seen as a logical step, if the present balance of power between the

two super-powers is to be maintained and the process of 'detente' is to be continued.

China, being self sufficient in oil, at least in the short term, has few interests in the Indian Ocean related to the oil resources therein. Her main interests are related to countering Soviet influence in the area and to influencing the littoral and hinterland States in the two great rural continents of Africa and Asia. In general, China has not sought to be directly involved in the area but to play a role which would strengthen the Third World nations to ensure their victory over super-power hegemony in the area. China now sees not the United States surrounding her, but the Soviet Union, and in particular sees the Indian Ocean developing as a Soviet lake unless Malaysia, Indonesia, Australia, France and other nations support the United States in countering the Soviet build up in the area.

China has recently enlisted the help of Australia in countering the Soviet bid for hegemony in the Indian Ocean against which China is committed firmly. It has long been the aim of China to have access direct to the Indian Ocean from the continent of Asia. China can be expected therefore to continue to support and indeed to encourage the littoral and hinterland States in their drive to have the Indian Ocean declared a zone of peace, especially if such a Declaration serves to limit super-power expansion into the area.

The United States has few traditional interests in the Indian Ocean. Main interests are those associated with her security and the defence of the free world namely, the supply of oil, industrial investments and trade, membership of NATO, SEATO, and CENTO, communication and space tracking facilities and maintenance of open access to the world's oceans for American ships and maritime forces and those of other nations. American dependence on oil from the area reached via the Indian Ocean will diminish as the Alaskan fields are developed and more nuclear power plants are commissioned, but indirectly, because of NATO dependence on supplies of oil from the Indian Ocean littoral states, the United States will continue to have a major interest associated with the oil producing nations.

Despite firm commitments associated with CENTO and the essential need to maintain communications and space tracking stations in the area as part of world wide systems, the American presence in the area has remained modest with embryo facilities at Bahrein, Asmara and Diego Garcia, and more substantial facilities in Australia. The United States has denied consistently that her nuclear armed ballistic submarines have been deployed to the area and there is no evidence to prove otherwise. Nevertheless, to protect her economic and political interest in the area, the United States can be expected to continue to insist on the freedom of use of both the Arabian Sea and the Bay of Bengal. These areas will remain of vital strategic importance to the United States.

In summary, American interests are varied but real. They are important to her credibility and to the maintenance of 'detente'. The United States will continue to have a vital interest in the freedom of the seas in the area, in the favourable development of a number of littoral and hinterland States, with whom bilateral pacts guaranteeing their independence and integrity exist, in the uninterrupted flow of oil through the Ocean, and in the continued use of its strategically placed communications, space tracking and basic support facilities. Above all the United States will have a continuing interest in balancing the presence and influence, either direct or indirect of the Soviet Union. The United States can be expected to continue to support in principle a zone of peace. It could agree to such a zone as part of an overall agreement on a balance of maritime forces in the area as a continuation of the process of 'detente', especially if such agreement limited effectively the build up of Soviet forces in the Ocean and gave the United States a right to be present in sufficient force to maintain the strategic balance between the two super-powers.

THE LITTORAL AND HINTERLAND STATES

Within the littoral and hinterland States surrounding the Indian Ocean reside some thousand million people. There is every possibility that by the end of the century there will be twice that number. These States contain many of the world's most valued resources. The majority pursue rural economies and are still developing socially, economically and politically. Some thirty of them have been decolonised since 1947.

Competition, if not veiled hostility, between neighbouring states is more the rule than the exception. Internal conflict of interests arising from economic, religious or racial discontent is prevalent. Many such conflicts have their origin in imposed borders dating from colonial times without regard to origins of race or culture, resources or viable economies. No single nation is yet sufficiently developed economically or politically to be able to play an independent leadership role in the area, without the support and influence of the external great-powers. Yet there is increasing evidence that the littoral and hinterland States, as they attain greater stability and resources, wish to exclude external powers from the area and in particular the super-powers, especially if their continued presence will lead to rivalry which will prevent the orderly development of nations in the area.

The States with inherent leadership potential are India, Iran, South Africa and possibly Australia, the latter being rather remote from the hub of economic and political power bases in the area and South Africa being restricted by non-acceptance of her apartheid policies.

India, a nation with the largest population of any state in the area, has the greatest potential for leadership and influence but is now preoccupied with internal problems. Internationally, India has been preoccupied by her relationships with both Pakistan and China. It is only since the Indo-Pakistan war of 1971 that attention has been drawn to the Indian Ocean as a focus of Indian policy. India has the largest navy in the region and occupies a central geographic position, strategically placed in relation to both the eastern and southern sea routes from the oil rich nations. Her technological potential has been ably demonstrated by the recent explosion of a nuclear device, an explosion apparently unco-ordinated and inconsistent with India's foreign policy objectives.

Britain has always envisaged India as the eventual leading power in Asia and has attempted to encourage India to take a role of increasing responsibility to fill the vacuum as British forces and influence have been withdrawn systematically. India, however has failed to respond favourably to British proposals and has continued to profess her neutrality, although in practice, because of her differences with China and American support for Pakistan, has inclined towards some support for Soviet activities in the region, having signed a Treaty with the USSR in 1971.

Despite some detectable bias towards Soviet activities, India strongly advocates that the Indian Ocean should be neutralised and declared a zone of peace. In so doing, India does not indicate any lessening of desire to be the major maritime and military power in the area. It is not inconceivable that India will move into the Maldive Islands after the British forces withdraw, as any nation controlling these islands could pose a real threat to the free use of the seas by India. Nor is India unaware of the precarious position in which she would find herself in the unlikely contingency–one which cannot be ruled out in the future–of hostile Soviet actions in the area, contrary to India's interests.

There is evidence that India and Iran are collaborating to create a formidable axis of power in the northern periphery straddling the Persian Gulf nations and Pakistan. Both financial and economic assistance have been negotiated in recent years. Iran has also negotiated a peaceful solution with Iraq over the Kurdish problem leaving her more free to concentrate on building up her maritime forces to influence the power base from which the control of the Indian Ocean could be exercised in the future.

Iran has visions of control over the Indian Ocean being exercised in the future by South Africa, Iran, India, Malaysia, Singapore, Indonesia and Australia. At present, like other potentially powerful nations in the area, Iran is following generally neutral policies which permit the enhancement of her military and economic capacity. Iran also, like other nations in the area, is purchasing arms and industrial equipment and know-how from a variety of nations and in the interests of neutrality and independence of action does not necessarily exclude purchases from the Soviet Union or China.

The sale of arms to the richer nations of the area could hold the key to the future alignment of nations and the ultimate balance of power in the Indian Ocean area, although the future alignment of the poorer nations along the eastern coast of Africa and the southern shores of the Arabian Sea could well prove also to be critical. Present indications are that Mozambique, Tanzania, Somalia and South Yemen are tending to align themselves in sympathy with the USSR or China rather than following an independent or neutral course, and the future alignment of Ethiopia and Oman must be considered doubtful. In the long term the majority of these nations can be expected to remain non-aligned with the super-powers and to support regional pacts which will ensure their separate national development.

In this regard, there has been a number of proposals originating from states in the area for both political and economic co-operation between groups of nations, none the least in importance being that between oil producing nations. Iran has visions of formalised economic co-operation between a number of nations in the area. Egypt, Saudi Arabia, the United Arab Emirates and Qatar have recently formed a giant Arab industrial development organisation financed mainly from oil revenues, to purchase or produce weapons, spare parts and other military and industrial equipments. Such organisations can be expected to increase the rivalry and competition from the great powers including the super-powers for either supremacy or a balance of power in the area through the supply of arms, technicians and advisers or through agreements permitting the establishment or use of base facilities.

By virtue of its geographical position South Africa cannot be ignored in any consideration of the balance of power in the Indian Ocean. Rich in natural resources, relatively well industrialised and not very dependent upon oil from the Indian Ocean, South Africa has the potential to influence in a meaningful way the future of the African continent.

Her influence at present is being curtailed by the boycott in the United Nations and by the apartheid policies which successive governments have pursued. The penetration of the Soviet Union and China into some of the littoral States and the Indian Ocean, although of concern in the short term, cannot be considered of real consequence to South Africa in the longer term. The bulk of South Africa's trade is shifting away from Europe towards Africa, Asia, Japan and Australia.

Inevitably with the cessation of the Simonstown Agreement both the Soviet Union and the United States will be opting for an arrangement for use of these facilities. With British interests no longer effectively conflicting with those of America in the Indian Ocean it is likely that the United States will inherit the use of these strategically based support facilities, to balance what appears to South Africa to be an increasing influence and presence in the Indian Ocean of the Soviet Union.

At the eastern gateways to the Indian Ocean lie Australia and Indonesia, Malaysia and Singapore. In pursuing an even-handed and more independent policy of foreign relations Australia supports quite strongly the neutralisation of the Indian Ocean and the restriction of super-power influence or rivalry in the area.

In the absence of any quantifiable military threat to Australia in the next 10 to 15 years, the Australian Minister for Defence recently stated that Australia was placing emphasis on building up the self-reliance of her forces so that they can have a better capability for independent action in Australia's own neighbourhood. At the same time, Australia was making every diplomatic effort to discourage both the Soviet Union and the United States from embarking on any military escalation policy in the Indian Ocean.

Australia's Prime Minister indicated in a recent radio broadcast that Australia's long term security and strength rested on the important relationships which were being developed currently with Indonesia, Japan and China, on support for the Association of South-East Asian Nations–ASEAN–and on prevention of super-power confrontation in the Indian Ocean. Above all, Australia's security rested on the success of 'detente', between the United States and the Soviet Union and with associating China in a wider detente.

Ir is relevant that a proposal for a zone of peace and neutrality in the Asian region is gaining support in ASEAN, of which Indonesia, Malaysia, Singapore, Thailand and the Philippines are members. Australia supports this proposal which, when developed further, is to be fowarded to the great-powers for their consideration. Any such zone would be contiguous to the Indian Ocean. More importantly it is a further illustration of the increasing desire of Third World and medium nations to keep areas of the world free from super-power rivalry, and in particular from super-power maritime rivalry.

Indonesia, Malaysia and Singapore have recently agreed to set up a tripartite council on navigation, safety and control of pollution in the Straits of Malacca. The outcome of the International Conference on the Law of the Sea will have an important influence on the control of the Indian Ocean, its gateways, gulfs and seas, but it will in no way militate against the firm desire of the littoral and hinterland States for the Indian Ocean to be declared a zone of peace free from continuing super-power rivalry and predominating interests.

In summary, there is substantial and increasing evidence that the littoral and hinterland States are of the opinion that super-power competition within the Indian Ocean should be brought under a measure of control which would in time lead to stability in the area and to an acceptable Declaration of the Indian Ocean as a zone of peace.

CONCLUSIONS

With the continuing development, socially, economically and politically, of the littoral and hinterland States and the diminshing power and influence of the great-powers the pressures for the Indian Ocean to be declared a zone of peace can be expected to increase.

In their development the majority of littoral and hinterland States, including those whose people are of European extraction, will seek to remain independent and thus enhance their common interests. Regional co-operation will increase and encourage the separate development of nations.

Iran–in conjunction with the smaller but resource rich states in the Persian Gulf–India, South Africa and Australia, will continue to press the region's claims for autonomy of the Indian Ocean area.

A solution to the Arab/Israel dispute would be in the interests of the littoral and hinterland States, as it would reduce tension and thus assist them in their aim to limit the presence and influence of the super-powers in the Indian Ocean.

In the development of the resource rich littoral and hinterland States trade, including the sale of arms, could be a source of rivalry between the great and super-powers in the area. Equally the dependence of NATO and the western industrial nations on the supply of oil from the littoral and hinterland States could be a continuing source for rivalry between the super-powers.

The Arabian Sea and the Bay of Bengal are of strategic importance in the overall balance of

power between the two super-powers and thus the Indian Ocean, at least in part, will remain a source of rivalry between them unless a limiting force agreement, apparently favourable to each in the context of the overall world balance of power, is achieved.

Negotiation of any limiting force agreement will depend upon such factors as continuation of the process of 'detente', the continuing resolve of the littoral and hinterland States to pursue their proposal for the Indian Ocean to be declared a zone of peace and their ability to influence great and super-powers to accept a practical solution.

For the present the difficulty will remain to define the proposal for a Declaration and implementation of a zone of peace in more detail and to define the roles of the super-powers in such a zone.

In the next decade the super-powers are likely to find that the body of world opinion as expressed now in the General Assembly of the United Nations in support of a Declaration for a zone of peace will begin to find support in other forums which rule or have an effect on world affairs.

In the final analysis, although the significance of the demands of the littoral and hinterland States will increase, the super-powers will not relinquish their authority in the Indian Ocean if they consider it has a direct effect on their individual security. Indeed the Indian Ocean will remain an area of strategic rivalry between them unless and until they agree otherwise.

'RESEARCHER'.

Early in the war when the cruiser HMS *Penelope* and the destroyer HMS *Antelope* were serving in the same fleet I overheard the following conversation between a signalman on the flag deck of my ship and the Chief Yeoman of Signals on the bridge:

"Bridge, this is flag deck. Pennylope is calling us by light."

"Not Pennylope you ignorant twit. Pennellopee, Pennellopee!"

"Sorry, Chief."

Pause.

"Hey Chief, now Antellopee's calling."

WOC

During the Korean War operations off the west coast of North Korea were the responsibility of the British Commonwealth Navies.

In those days it was the custom of ships to anchor nightly close in to the coast according to a predetermined pattern ordered by the Senior Officer present.

Dusk was falling one evening when the current Senior Officer (a very famous name in the RAN) came on to his bridge and peered keenly around his group of ships. His attention was drawn to the Navigator, busy at the chart table.

"What are you doing Pilot?"

"Coding up the positions for the night stations, sir." was the reply. Code was necessary as all our transmissions were monitored by the communists.

"Hell, let's not worry about that Pilot, there are several ways to kill a cat. Here, give me the chart and the TBS." (Talk between ships).

Watched by his dismayed officers, with the chart as a guide and using the call signs of his group the Senior Officer sent his message, loud, clear and in plain English:

"Westforce this is Leader. Night stations for tonight. Imagining the island of Chodo to be the batting end and the island of Sokto to be the bowling end then Redrose will go silly mid on, Haywain fine leg, Diggership slips, Allblack gully, Canuck cover point while Leader will take square leg and umpire. Over."

The delight of the operators in the Australian, New Zealand and British ships could be detected in their voices as they replied with a smart "This is soandso. Roger. Out."

There was the sound of an open circuit, tentative throat clearing and a long, long pause; then came a broad and plaintive Canadian voice:

"This is Canuck. Say again your last message please."

WOC

CONTINENTAL v MARITIME STRATEGY

"Though the object of being a Great Power is to be able to fight a great war, the only way of remaining a Great Power is not to fight one, or to fight it on a limited scale. This was the secret of Great Britain's greatness so long as she stuck to naval warfare and did not try to become a military power on the continental pattern."

–A.J.P. Taylor
"The Origins of the Second World War"

RAN FFG Acquisition

An address to the Australian Naval Institute, Canberra, Wednesday, 30th June, 1976

by CAPTAIN N.R.B. BERLYN, RAN

Introduction

In the last issue of the Journal of the Australian Naval Institute a writer with the nom-de-plume "Slingshot" wrote of the need for professionalism in the Navy, and at one stage he invited us all to appreciate the differences between Management and Leadership. The more you think about that the more difficult it becomes. Most of us have firm concepts about what we mean by leadership, but how do we define management?

Since my subject tonight is "Aspects of the Management Role in the RAN FFG Acquisition" I should define the context in which I shall be talking about Management. Perhaps it is no accident that, in this particular definition, the "Skilful handling and cajolery" of my pocket Oxford seems less apt than the "Judidious use of means to accomplish an end", which I found in a borrowed Webster's. This latter definition implies the existence of information, rules and techniques with which to reach judgements, availability of physical and other resources to be deployed as a result of these judgements, and identified goals which collectively form the end or objective to be achieved. Logically, identification of the objective should come first.

Objective of the RAN FFG Project

The RAN FFG Project is the total effort involved in the introduction of two Guided Missile Frigates into the RAN. The objective is to achieve the best possible result for Australia in acquiring from the United States two Guided Missile Frigates plus their support, by incorporating certain RAN modifications designed to increase operational performance and the implementation of RAN habitability standards, by working to the constraints of the overall USN FFG Program thereby minimising cost and obtaining timely delivery, and by early and concerted action to identify through the development of an integrated logistic support plan the areas most suitable for Australian Industry Participation. Note the use of "Australia" rather than "RAN" in the objective.

Through the Chief of Naval Materiel I am responsible to the Chief of Naval Staff for coordinative management of activities in this and other departments and organisations toward accomplishment of this objective. The term "Coordinative Management" sounds splendid and is defined in some hallowed official prose, but what it actually means is quite another matter! In a sense this talk is about its meaning and its application in the different phases of the RAN FFG Project.

Project Development to Date

At this stage it is probably necessary to acquire some background in the development of the Project in order to appreciate the role of management. Figure 1 shows some of the more important stages to the present date together with a brief outline of the USN program.

Upon cancellation of the DDL Project during August 1973 the Naval Board established the New Destroyer Project with terms of reference which included participation in studies required for a new program, and consolidation of the experience gained in the DDL Project.

The DDL Review was completed by the end of 1973 and most of its 22 recommendations were accepted. Subsequently some have been fully implemented whilst, because of their complex implications, others have progressed but slowly. Without labouring the point, it is worth noting that an important aspect of management involves avoiding repetition of past mistakes. This was the motivation for the DDL Review.

THE AUTHOR

Captain N.R.B. Berlyn joined the RN as a special entry cadet (E) in 1952. By 1958 he had completed periods of sea training and qualifed in Specialist Marine Engineering at the Royal Naval Engineering course at RNC Greenwich. Captain Berlyn has served in HM training & cruiser *Devonshire* '52, carrier *Theseus* '53, cruiser *Newcastle* '56, carrier *Bulwark* 58-59 and cruiser *Tiger* '61-63. In 1964-65 he was on exchange service as Practical Training Co-ordinator at HMAS Nirimba. In 1965 he joined the RAN and after a two year posting as MEO of *Vampire* he became Senior Project Planner at GID for three years. In '71-72 he served as MEO of Melbourne and after attending the AJSSC in 1973, he joined the DDL Project as Programming and Planning Manager. In late 73 he became RAN New Destroyer Project Director, which became RAN PF Project Director and finally RAN FFG Project Director. Captain Berlyn is a chartered engineer and a member of the Institution of Mechanical Engineers and the Institute of Marine Engineers.

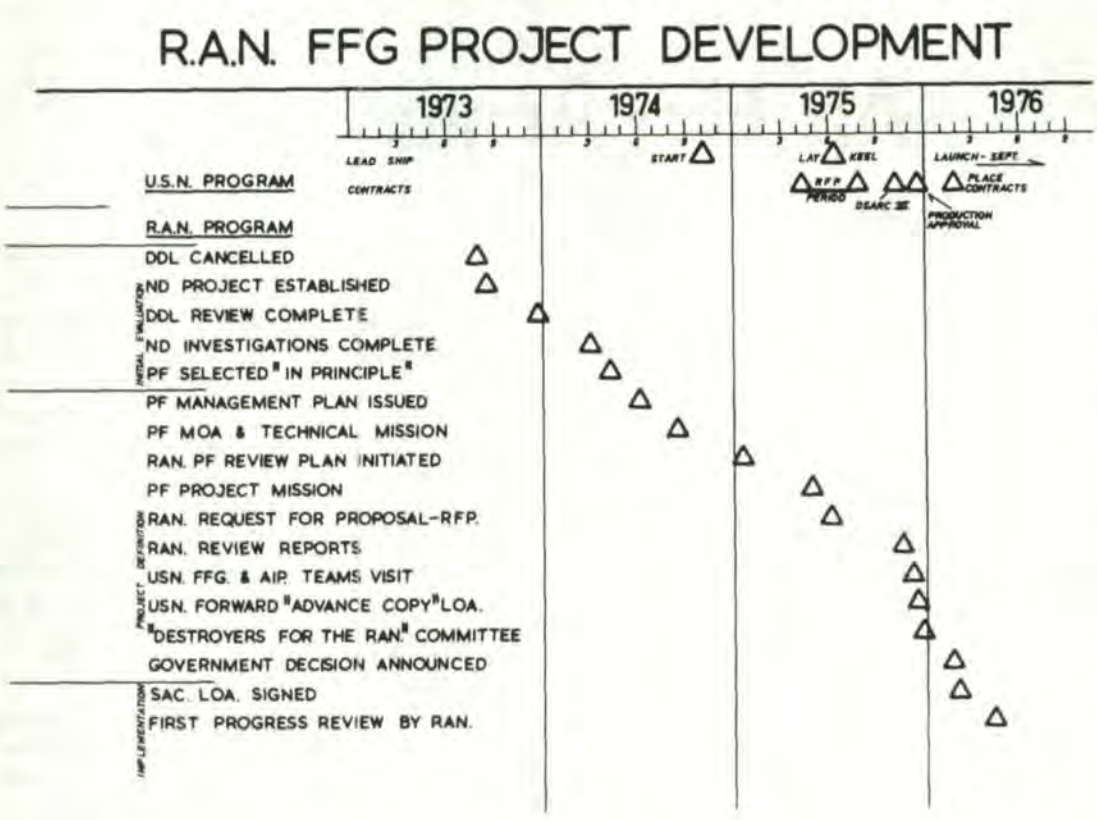


FIGURE 1

The New Destroyer Investigations, in which a Navy-Defence–Department of Supply team called the Defence-Navy Destroyer Group participated, were completed in early 1974. The team investigated some 65 different ships and on the 9th April 1974, following consideration by all the appropriate committees, the Minister announced that "as the first step we should acquire two destroyers of United States design, known as the Patrol Frigate, and the Government has agreed that negotiations should be opened with the United States Government for this purpose".

By late June the RAN PF Project Management Plan had been issued. This was a development of the plan prepared for the DDL Project but reworked to cater for an overseas build and incorporating lessons learnt from the DDL experience. It is worth noting that not one Patrol Frigate had been constructed at this stage, and thus our overall desire to secure cost and risk reductions by participating in the US program, had to be tempered by the need to avoid expensive commitments until a viable US FFG production program actually existed.

Since the fundamental condition of any purchase under United States Foreign Military Sales Legislation is that the customer Government will reimburse the US Government for all costs incurred some careful arrangements were required. The keystone of our overall acquisition strategy is the Memorandum of Arrangements which was negotiated by the Minister to ensure that the FFG Purchase does not develop into an open ended commitment for Australia. The Memorandum signed by Mr. Barnard and U.S. Deputy Secretary of Defence Mr Clements provides the framework within which detailed arrangements have been developed for the acquisition of FFGs for the RAN. Apart from stating the fundamental Australian requirements it identifies review points when Australia could withdraw from the Program and it provides protection in event of cancellation at these points or for a number of other reasons.

The MOA envisages a series of subsidiary arrangements for its implementation and authorises "The RAN PF Project Office, the Office of the CNO and the USN PF Project Office, as appropriate to be responsible for the management of the acquisition

of the RAN ships, support materiel, training and the USN PF Project". The technical mission in September 1974 was the first step in development of the subsidiary arrangements and the exchange of detailed data.

The next important milestone was the development and implementation of the RAN FFG Review Plan. I have already implied the risks of entry into a development program. To reduce these risks the USN undertook a very comprehensive test and evaluation program in order to prove the assumptions of performance capability built into the PF Combat System and Propulsion System design. Two land based test sites were developed, one for the combat system and one for the propulsion system. Additionally, individual items of FFG equipment have undergone tests at sea in various ships; these include the main engines, the controllable pitch propeller, radars, sonar, fire control system and 76mm gun. In terms of ship acquisition this is probably as close as it is possible to come to the "fly before buy" concept. Under the MOA we secured access to all the data generated in this test and evaluation program. The review plan essentially established how this data would be used and consolidated, to permit an independent assessment in Australia of the viability of the PF concept before final commitment to the acquisition.

The next milestone was the RAN PF May 75 mission. Its prime purpose was to approve the content of the tender schedule for RAN originated modifications which was to be put to all prospective USN FFG builders. During the project investigation phase the desirability of making some changes to the USN design to suit special RAN requirements had been established. These were investigated in depth both here and in the United States. Some RAN modifications were eventually adopted by the USN, for example the fitting of a fourth main generator, and the rest were made an integral part of the package on which the shipbuilder would bid for our ships. This package was called the RAN Request for Proposals and, in effect, invited prospective bidders to alter bids they were even then preparing for the USN program of ships, to include two additional and slightly different ships for the RAN.

The latter part of 1975 was a period of intense activity. Some highlights were the progressive completion of reports required by the review plan, the visit of two USN teams to update our knowledge and improve our understanding of various aspects of the project, and the commencement of the final phase of decision making when the Secretary established a high level group to make recommendations on "Destroyers for the RAN". Driving the overall timing was a clause in the MOA which required Australia to advise the US of its intentions on the FFG acquisition within 10 weeks of the formal US decision on the USN FFG production phase. This was to ensure that whilst we could take our decision in the light of the USN decision, we would not delay their programs.

The definition stage of the Project ended with the announcement of the Government decision on 18 February 1976 to acquire two FFGs for the RAN, and signature of a Foreign Military Sales Letter of Offer for the two ships on the 19th of February.

Some Management Goals, Problems, & Techniques

Figure 1 shows three distinct phases of development which I have called "Initial Evaluation", "Project Definition" and "Implementation". The particular goals in each phase are different and consequently require different skills and techniques. In the time available it is only possible to illustrate this with a few examples.

In its simplest form the goal of the initial evaluation phase was to establish, from a wide range of ships available, a short list representing the "Best Buy" for Australia in each level of ship size/capability. For those who wish to know more of the general method by which this was actually achieved the process is explained in an article in the Navy Quarterly of Summer 1974. What is not explained, at least explicitly, are the difficulties in securing within the time available the necessary data to a uniform level on all ships, nor the problems in devising a fair way of comparing "ship A" with "ship B". The latter problem was tackled with some originality and progress was made. The Project team provided a substantial input towards a more scientific approach, however it does appear to be an important field for further study.

The techniques for assessing operational effectiveness of weapons systems are fairly widely understood; but how should factors such as seakeeping, habitability, surviveability, growth margins and reliability be compared, especially in ships of different sizes and at different stages of development? Yet more difficult is the problem of combining individual judgements on all these factors into a summary, which presents to the decision makers a fair and, equally important, a believable picture. Perhaps the Journal of our Institute would be a good vehicle in which to explore this topic?

The goal of the Definition Phase was literally to identify the boundaries of the Project, and its full implications, in order to produce a viable plan for harnessing all the resources which would be necessary in the Implementation Phase. The start-

ing point was the Memorandum of Arrangements, or more correctly the preparatory work involving several Departments which preceded it. After a thorough exploration, a position paper was produced specifying exactly our aims, the underlying reasons for them, and the difficulties which might prevent their full satisfaction by US authorities. The point here is the virtue, indeed absolute importance, of timely preparation or homework before entering negotiations with organisations as large and complicated as the US DOD/USN. By way of illustration, during one particular session in the initial working level negotiations, the Australian group was having a difficult time. In fact we were told with increasing vehemence that a particular condition we desired could not be accommodated. Our representative from the Attorney General's Department proposed several variations to reach the desired position, but all to no avail. Eventually, he went to a blackboard which was conveniently present in the room and wrote down a formulation which appeared to be just another variation of the same thing. Turning to the most voluble member in the opposing team, he started to ask about the acceptability of his written words. He was stopped in his tracks by a firm statement to the effect "No way could that be accepted because it would be in contravention of the US Armed Services Procurement Regulations, and a host of other things besides". Our man expressed some surprise, and with a deadpan face he then handed out copies of the relevant section of FMS legislation, with the very words he had written underlined in red! Naturally we took that point and a few more in the ensuing confusion.

Turning now to preparation of viable plans it should be axiomatic that a full exploration or reconnaissance must first be accomplished.

The real difficulties inherent in a particular project can become impossibilities if they are tackled with an inadequate appreciation of the need for long range planning in order to meet prescribed timescales for Departmental business. Anyone who has been through the process of gaining approval for a new position, to the point when it is actually occupied, will know that it does take several months even if everything goes smoothly. Similarly, the processes involved in securing Government approval to a particular phase of a project, via the Departmental Committee structure, take considerable time and should relate to the overall Budget preparation process.

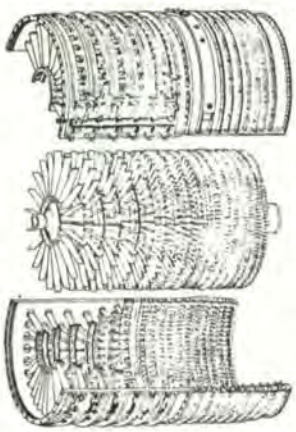
When buying overseas it should be remembered that it costs money to make the necessary visits and this in itself requires forward planning. The OVC requires twelve weeks notice; gaining security clearances and arranging optimum itineraries also takes time. The results of such visits should be well

WHERE SHOULD THE RAN REPAIR FFG GAS TURBINES ?

Some of the options :

IN COUNTRY :
- REPAIR AT MODULE OR PART LEVEL
- REPAIR SITE :
  - DOCKYARD
  - GOVERNMENT FACTORY
  - AIRLINE OPERATOR
  - SPECIAL FACILITY
- SCALE OF OPERATION :
  - RAN ONLY
  - INCLUDE COMMERCIAL CAPACITY
  - INCLUDE USN ENGINES
- OTHER SERVICES FACILITIES
- TEST & TUNE NEEDS
- NUMBER OF SPARES :
  - ENGINES
  - MODULES
  - PARTS
- STORAGE & HANDLING
- STAFF & TRAINING

ETC — ETC — ETC —



Some of the Authorities:

- OFFICE OF THE PURCHASING COMMISSION
- DEPAPTMENT OF INDUSTRY AND COMMERCE
- TREASURY
- ATTORNEY GENERAL'S DEPT.
- FOREIGN AFFAIRS
- DEFENCE CENTRAL :
  - DIMP DIVISION
- DEFENCE (NAVY OFFICE)
  - DNEP
  - DGDM
  - DMED
  - DNQA
  - DGSUP-N
  - DNAE

ETC —— ETC —— ETC ——

Decision: ?

THEN SIMILAR QUESTIONS REGARDING OVERSEAS REPAIR.

FIGURE 2

worth while, but there is a tendency to produce staggering quantities of information, the distribution and application of which can present a management problem which is not always appreciated. Before developing this theme, some broad description of the Defence Navy Office Organisation is needed.

We have a functionally oriented management structure in which at successive levels below CNS are divisions, branches and sections responsible for clearly defined functions. Essentially, expertise is segregated into the divisions, and these are broken down into branches or directorates where each is concerned with a particular application of this expertise. Whilst such organisations are attractive, in that skills and knowledge are concentrated into viable units offering a depth and range of experience and also promotion structures, they do suffer some disadvantages. These become readily apparent when a relatively straight-forward question happens to impinge on several different functional groups.

For example: "Where should we repair gas turbines?" We recently called for registrations of interest from local organisations wishing to participate in a small funded study to establish their potential to undertake the major maintenance of the FFG propulsion gas turbines. Figure 2 lists the functional groups with a voice in the selection process which will establish which firms should actually be commissioned for the study. It is likely that evaluation of the output of the study itself and selection of the eventual contractor will involve an even wider group.

Project management exists because functional organisations, left to their own devices, are often unable to solve such problems in a timely fashion. Conversely, without Project Management, it is often difficult to find a particular authority to accept responsibility for reaching a solution.

In the RAN FFG Project we have found a technique loosely described as "Task and Responsibility Analysis" particularly helpful in developing viable plans. Figure 3 shows in summary form the tasks which make up the RAN FFG Project. It should be understood that such a diagram looks deceptively simple, but in fact should not be firmed up, even at this level, until there is a very clear appreciation of exactly what constitute the major tasks of the Project. As is noted, each box must be supported by a clear statement of what it contains. Figure 4 shows an example of such a statement.

The next step is to analyze each task against the functional groups believed to be involved in its achievement. This involves a working appreciation of "who does what" in Defence-Navy. Figure 5 shows such an analysis in matrix form.

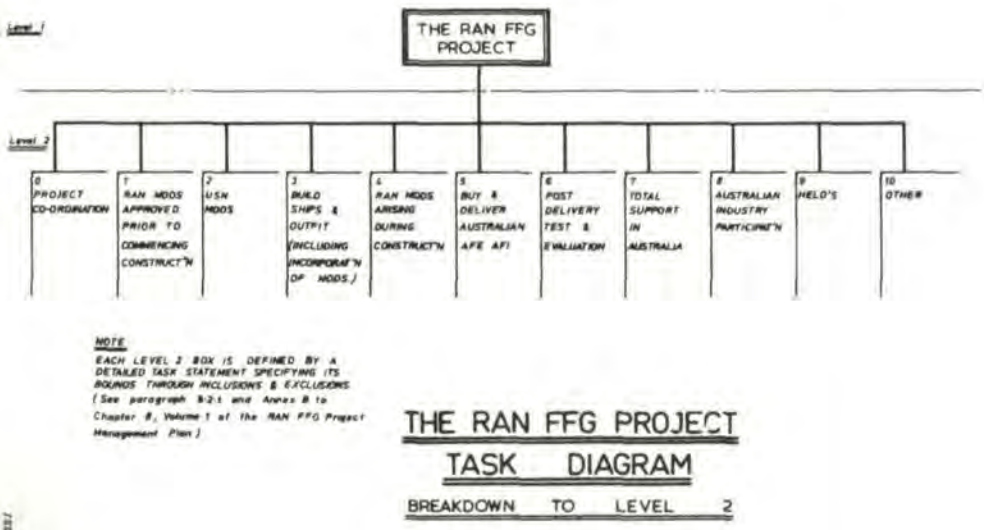


FIGURE 3

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RAN FFG PROJECT - TASK BREAKDOWN STRUCTURE DEFINITION

NUMBER ASSIGNED: 7

SHORT TITLE OF T.B.S. NO.:

TOTAL SUPPORT IN AUSTRALIA

DEFINITION:

This is the task of identifying and acquiring the initial support materiel, training and facilities in Australia to support the Guided Missile Frigates after delivery.

Support materiel in this sense is all items of supply required for RAN inventory stockholdings, including: reserve equipments; rotatable items of equipment; repair pool items; insurance items; breakdown spares; ammunition and missiles; complete documentation/handbooks etc; general consumables, etc.; and equipment to outfit the dockyard, other government and commercial repair and maintenance establishments, the destroyer tender and training establishments as required for the operation, maintenance, training and support of the ships.

INCLUDES:

The task includes developing the maintenance concept, policies and plans for the ship and its equipments, together with the ship's Planned Maintenance System and Refit Specification; developing and quarter bill; developing and implementing a training plan for naval and civilian operational, maintenance and service personnel; implementing Supply procedures to develop shipboard allowance lists and storekeeping procedures; developing procedures to assess the funds required for the ships' logistic support, instigating action in respect of providing follow on-supply-and-technical-support for the ships; and other associated logistic support aspects.

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FIGURE 4

RAN FFG PROJECT WBS ELEMENT / PARTICIPANTS	FFG PO A	DGNP B	DGNO C	DGDW D	DGSUP-N E	NAVAL STAFF F	ILSMT G	DEFENCE CENTRAL DIMP DIVISION H	ANA (W) I	USN J	OTHER
0. PROJECT CO-ORDINATION	P	A (PM)	A (DH)		A (SDC)			A (DIDLO)	A [PROJECT LEADER IN USA]		
1. RAN MODIFICATIONS APPROVED PRIOR TO COMMENCING SHIP CONSTRUCTION	A	A (PM)	P (DH)			A				A - NAVSHIPS - NAVSEC - US DESIGN AGENCY	
2. U.S.N. MODIFICATIONS	P [For the co-ordination of Australian consideration and decisions] THROUGH-THE-CONFIGURATION-CHANGE-PANEL (CCP)									P (ORIGINATOR)	
3. BUILD SHIPS AND OUTFIT (INCLUDING INCORPORATION OF MODIFICATIONS)	A	P (monitor)	A [To extent of reviewing shipbuilders & Mod ECP's]		A					P RAN Shipbuilder	
4. RAN MODIFICATIONS ARISING DURING SHIP CONSTRUCTION	P THROUGH-THE-CCP									A	
5. BUY AND DELIVER AFE AFI	A	P (PM) (DNEP)	A		A			A			
6. POST DELIVERY TEST AND EVALUATION	A	P	A			A				A	
7. TOTAL SUPPORT IN AUSTRALIA	P (to coordinate) THROUGH, THE ... ILSMT						P				
8. AUSTRALIAN INDUSTRY PARTICIPATION	A (ILSM)	A			A		A	P		A	
9. HELICOPTERS	A	A			A	P (DNAP)		A			A (DNAE)
10. OTHER	A							A			

CONFIGURATION CONTROL PANEL (CCP):
CHAIRMAN: FFG PD
REPRESENTATIVES:
DGNO - DGNP - DGDW - DGSUP N - DGNOR

LEGEND:
P = PRIMARY RESPONSIBILITY
A = SIGNIFICANT ASSOCIATION WITH WORK

INTEGRATED LOGISTIC SUPPORT MANAGEMENT TEAM (ILSMT):
CHAIRMAN FFG ILSM
MEMBERS
DFM - DNO - DNEP - DNLPC - DFSR - DGNO - DNSUA - DNMS - DNMP - DNT - DEF CENTRAL DIMP DIVISION

2 ISSUE

FIGURE 5

Having reached broad agreement with all authorities concerned that their roles are fairly described in the matrix, it then remains to develop a mutually acceptable task statement with each authority. I think it is important to note that each element in it must relate directly to the Task Breakdown Structure, and additionally the agreement, must be recorded with some formality. A functional authority, armed with such an agreement, can prepare his plan to satisfy his role in the project upon a firm basis. Additionally the Project Directory has a framework against which to compare and monitor the plan which is eventually produced.

Figure 6 shows another example of the matrix analysis technique which was used to establish in late 1974 how, and by whom, the detailed assessment of USN test and evaluation data and other information would be undertaken in the RAN FFG Review conducted during 1975. Those who were involved in the assessment would recall the sheer volume of data and the limited time in which it had to be assimilated in order that the overall 'ten weeks' constraint for the Australian decision could be met.

Perhaps by now the meaning of coordinative management is becoming clearer. However the RAN FFG Project is in fact charged with some specific functions quite apart from the coordination role. These are:

Data Managmement,
Configuration Management,
Financial Management, and
Introduction of the Integrated Logistic Support Concept for the RAN FFGs.
Reporting to higher management on overall progress.

For data management we run a small data centre. All FFG data is channelled into this centre and an EDP listing is maintained. As previously mentioned, our basic access to data was enshrined in the MOA. In subsequent working level discussions we were advised to place a RAN officer with the USN FFG Project Office, specifically to ensure our needs would be satisfied in a comprehensive and timely manner. A Lcdr of the Weapons Electrical Specialisation was posted in early 1975. This arrangement has proved most successful and in due course the RAN T & E Officer's services have become of great use to the USN Project Office also.

Efficient Data Managmeent is an essential prerequisite to Configuration Management. In both fields the work being done in the RAN FFG Project is intended as a pilot study for wider application should it prove successful.

	RAN PERFORMANCE ASSESSMENT GROUP	CHARACTERISTICS REVIEW AND APPROVE RAN PF FSABL	ESTIMATES PREPARATION AND REVIEW	CONTRACTURAL REVIEW AND LOA TERMS	LOGISTICS SUPPORT STATUS	RAN PF PROJECT MANAGEMENT ARRANGEMENTS STATUS	AUSTRALIAN INDUSTRIAL PARTICIPATION STATUS
PFPD	A	P	P	P	P (PF ILSM)	P	A
DGND	A (PF DM)	P (DNC'S & SPECS)	A (RAN [illegible])			A	
DGNP		A	A	A	A	A	A
DGDM					A (DFM/DNB)	A	
DGNOR	P					A	
NSA	A						
FASCofS-N			A (REP)	A (REP)	A (REP)	A	
ASNTS			A	A			
DNLPC					A (REP)		
DFSR					A (REP)		
DNMP					A (REP)		
DNT					A (REP)		
DVAP						A	
DEFENCE CENTRAL	A (REP)			A			A
DMI				A	A (REP)	A	P
AG's DEPT				A			
TREASURY				A			

RAN PF PROJECT — REVIEW PLAN

AREAS TO BE REVIEWED

P = Primary responsibility. A = Associated responsibility.

FIGURE 6

Configuration management is the discipline of applying technical and administrative direction and surveillance to identify and document the characteristics of an item, controlling changes to these characteristics, and recording and reporting change processing and implementation.

Until our FFGs are delivered, configuration management is the responsibility of the USN. However this was also the situation with the DDGs and, subsequent to their delivery, we found ourselves ill prepared to handle and maintain their configuration records. The DDG modifications have been made more difficult as a direct result. Accordingly, we are attempting to learn and exercise this new management discipline. A computer based system, to be known as the Central Record of Equipment and Materiel (CREAM), is being designed and developed to handle the data associated with the FFG Project. The system will eventually embrace interrelated activities leading from initial identification of items, through design, procurement, installation and maintenance, to recording appropriate estimates and spreads of authorisation and expenditure. It will cover: (a) configuration definition (b) data management (c) procurement and (d) funds control. The comprehensive data base will automatically provide at least: (a) the master equipment list (b) the configuration definition index (c) overall and detailed schedules of equipment (d) lists of drawings in nominated sequences (e) reports and listings of master file data in any nominated sequence of key fields (f) descriptions of line items of spreads of estimates of authorisation and expenditure (g) lists of equipments by compartments (h) list of weights, CG's etc and (i) dump of all and/or selected master file data. Due cognisance has been taken of existing procedures in the design of the CREAM system so that it will not only cater for the immediate needs of the FFG Project but also, as necessary, for other projects undertaken by Department of Defence (Navy). Unfortunately actual programming of "CREAM" has been delayed.

As far as Financial Management is concerned, the important feature of the arrangements for the Project is that the Director is charged with the full responsibilities of Vote Coordinator for the FFG element of the Naval Construction vote. Accordingly, there is a strong Finance and Administration cell actually in the Project team. This was developed from the earlier DDL arrangements.

The work of the group, which is headed by a Principal Executive Officer, has gradually shifted in character from that of a specialist destroyer-type estimating team, into one concentrating on estimating and contractual definition work directly associated with RAN FFGs, and from this, into a financial monitoring and reporting group watching over some $330 Million. Much of this money is to be spent in the US, which has financial control and reporting systems which are rather different from those in Australia, and this in itself has created certain difficulties.

Through each of the phases of financial management the existence of a strong specialised group has enabled top management to be provided with acceptable estimates and recommend negotiating positions in what have been some very short time frames.

A major FFG Project Office function is the introduction of the Integrated Logistic Support (ILS) concept. The ILS concept was described in the last issue of the Journal of our Institute and therefore I will not expand it further tonight, other than to illustrate the particular approach taken in the FFG Project.

An ILS work breakdown structure for the Project has been developed and of course it is supported by a matrix analysis and individual definitions of the contents of each of the 55 boxes. Nearly every one of these is the concern of several functional groups, indeed the example quoted earlier is a practical ILS problem. Clearly ILS for the FFGs is a sizeable management task requiring a disciplined approach.

Following an analysis of functional responsibilities against the ILS work breakdown it became clear that certain directorates had responsibilities in a large number of the boxes. Under normal Navy procedures the usual technique for any problem involving several directorates is to start a file and to circulate it sequentially. It is well known that this system can take a considerable time to produce an answer! Were it to be applied to all the ILS boxes it is clear that the possibility of achieving our goal which is "Adequate support in country by the time the ships arrive here" would be remote.

The use of a committee to solve a particular problem is also well understood, and can save time. However, the mind boggles at the thought of an individual committee for each of the boxes. Since many of the boxes involve the same group of people, but in different roles, they have been invited to be represented on a permanent FFG ILS Management Team which meets regularly. In these meetings which are chaired by the RAN FFG Project ILS Manager (Cmdr) they become aware of the broad progress and priorities of all the developing FFG support activities. Difficulties created by the divided responsibilities are discussed and resolved in committee. Naturally the results of an agreed solution have to be endorsed by each functional head being represented.

Time prevents further expansion of this theme, but it is worth noting that in the complicated field of technical assessment of spares which leads to decisions on how many of a particular item to purchase (say gas turbines which are very expensive) we have provided the ILS Management Team with a full time working group under their general direction. This is the Maintenance Task Working Group. The core of the group is composed of working representatives from directorates having major responsibilities in this field and is led by an FFG Project Engineer. Additional representation is sought when appropriate. Accommodation, office services and other support is arranged through the FFG Project. In effect this arrangement provides a suitable environment where all the contributors to a particular investigation can work together in what could be called a "parallel" consideration of the problem, as compared with the traditional "series" approach inherent in the file treatment of a problem.

The last of the FFG Project Office functions is progress reporting to higher management. The difficulty here is not that insufficient data is available, but rather the reverse. We have tried to develop a report in a format and of a quality appropriate to the size of the project. In brief, its features are that it is a stand alone document, it contains a very short executive summary which references back into a rather more meaty text and file and message references are supplied for those who wish to dig still further. Financial information is presented in a rather novel format which may be found easier to comprehend than some conventional tabular statements. Whilst production of such a report is time and labour intensive, it is a valuable management discipline and forces decisions upon exactly what should be brought to the attention of higher management. Additionally it is already proving an invaluable starting point for recoonstructing "why", "how" and "when" things happened.

This paper would not be complete without mention of the new approach being taken to watching our interests during the construction of the ships. Traditionally the RAN has relied upon liaison teams containing a suitable mix of Naval and Civilian expertise. There can be no doubt that this system has served us well, but it is not without its problems. These flow from the fact that, most frequently, the teams have no formal existence in the contract. Consequently, they can be the unwitting cause of contractual claims at a later date. It is no secret that shipbuilding claims in particular are a source of considerable political heat in the United States at present.

It would of course be quite unreasonable to invest in something as complex and expensive as a warship without some degree of National oversight during the long period of its construction. The approach now adopted involves placement of seconded Australian personnnel into mutually agreed positions within those USN organisations concerned with management of the ship acquisition, and oversight of construction. These people will ensure that we have access to adequate information. Figure 7 shows how they are disposed in the United States.

Each individual is working for the United States Navy in a task which is the direct result of our order. Compared with the liasion approach, these people are doing work rather than observing work. In today's jargon, they not only identify problems for Australia but help to solve them too.

A safety valve against possible conflicts of interest exists in a formalised reporting procedure

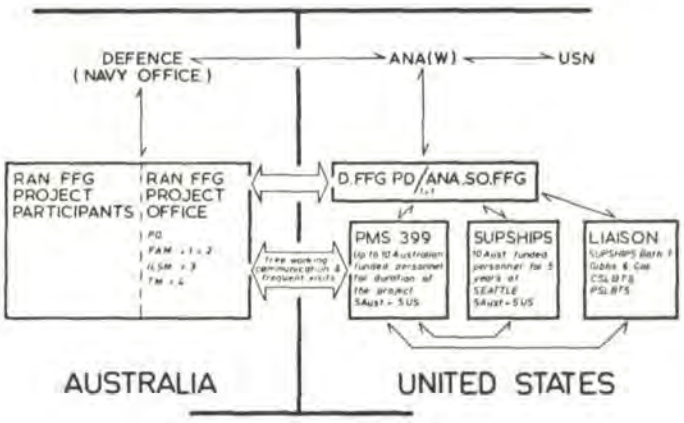


FIGURE 7

through the USN Authorities. This could be backed by an external cell should the need become apparent, but all our experience to date—and we have had officers working in the USN FFG Project for some 4 years—indicates that there is no problem in achieving full and frank co-operation. Of course the Contract does allow for a standby crew but this is limited to 50 per ship and only in the 12 months before delivery.

Because the RAN FFG Project is happening simultaneously at both sides of the Pacific, arrangements have been made for the USN and RAN FFG Project Offices to conduct regular joint reviews of all aspects of physical and financial progress. The first of these took place in May this year and is shown in Figure 1 as the final item.

Finale

I hope that this talk has emphasised the changing nature of management tasks and techniques required as the Project has developed. Such change creates the need to deploy different people and to vary the size and location of the project group as appropriate. Perhaps this is not adequately recognised in our organisational/establishment procedures which seem better suited to provide "permanent" occupants for rather static hierarchical structures typified in the classic functional organization.

Ahead of us are many challenges which will call for the most careful management; integration of the helicopter which is yet to be selected, adaption to the management of a propulsion system which introduces some new technologies to the RAN, and determining and arranging the support for the Combat Data System, to name but a few.

Additionally I have not even touched upon an aspect of the Project which currently occupies a considerable Navy Defence effort, namely the attempts to maximise Australian Industry Participation in the whole FFG program. Substantial effort is being exerted by US and Australian authorities in developing an adequate level of Australian Industry participation. Perhaps when we have some demonstrated successes in this field it will be time enough to talk on how it would be managed. For the present it suffices to observe that success we must have, if we are to maintain in the long term a viable industrial base for supporting our ships and Navy.

In this, as in all other fields of the Project, I am convinced that the importance of a viable plan which is produced in good time, and is understood and accepted by all participants, cannot be over emphasised. Of course there must be flexibility to take account of changing needs and there must also be a regular review process. The resources to implement such a plan are controlled by numbers of men each of whom is faced with his own priorities and problems. People need to know what is required of them, why, and when. They also like their efforts to be properly understood and registered. In this context I would like to close with the thought that leadership and management, at least good management, may be more closely related than the writer "Slingshot" originally suggested. Perhaps this is not new thought since Lao-Tzu, the seventh century BC Chinese philosopher, wrote:

A leader is best
When people barely know
That he exists;
Not so good when people
obey and acclaim him;
Worse when they despise him;
But of a good leader, who
talks little,
When his work is done,
his aim fulfilled
They will all say,
"We did this ourselves."

Perhaps it would not be inappropirate to substitute "coordinative manager" for "leader".

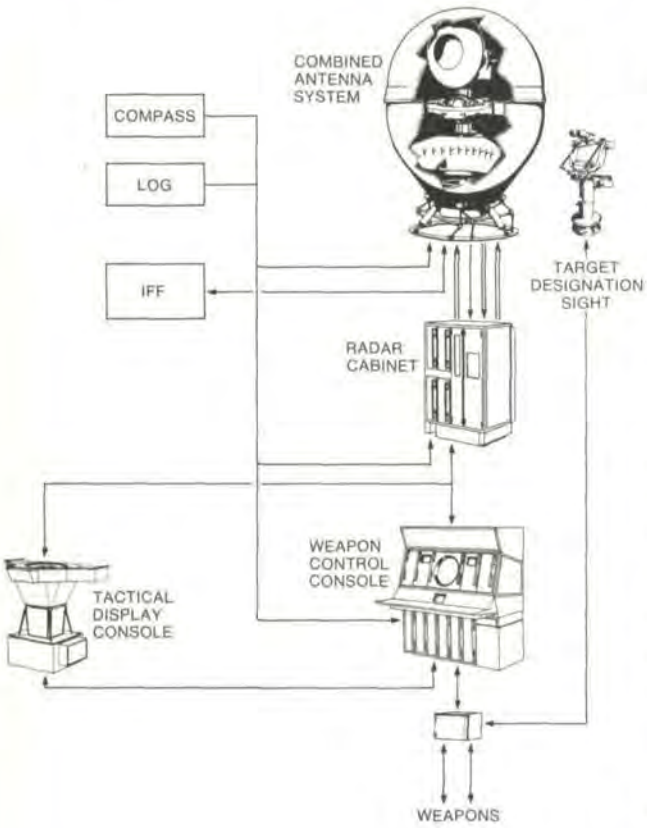
. . . ▣ . . .

ON CONFORMITY

"Even among scholars there is no more unhistorical falling than that, in order to command, you must learn to obey. A more temperamentally insubordinate lot than the outstanding soldiers and sailors of the past could scarcely be found. In England one has only to think of Wolfe and Wellington, Nelson and Dundonald, in France, Napoleon's marshals in this respect at least were worthy of their master."

—Liddel Hart, "Why don't we learn from History"

Signaal's Mini-Combat System



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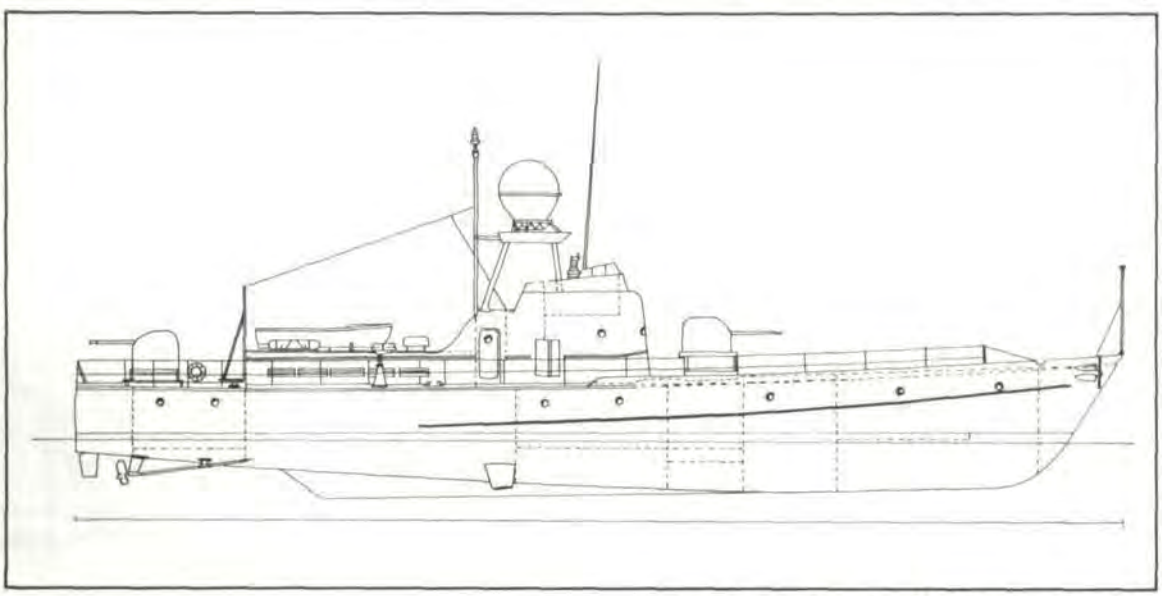

Surveillance Satellites
The End of the Surface Warship?

BY 'COSMOS'

(The author wishes to remain anonymous so that neither his seniors nor his juniors will feel in any way inhibited in their comments, particularly if they wish to disagree.)

Since 1919 there has been a fairly continuous stream of public pronouncements that the end of the surface warship, any bigger than coastal craft, is at hand. It began with Lord Fisher who said that the aircraft and the submarine would do the trick. He was backed up by any number of senior naval officers, Sir Percy Scott, Admirals Bartolome, Hall, Mark Kerr, Wemyss, and in America Admirals Sims, Fiske and Fullam; in Germany, Admiral Scheer. Billy Mitchell staged his demonstration in 1921 to prove that ships were sitting ducks for aeroplanes and convinced a lot of people. The more famous names were ably supported by Defence Correspondents and editorial writers over the years.

The submariners were a little more discreet, and did not make such a fuss as the airmen but, although quieter in public, there was not much doubt that they thought Fisher a man of sound judgement.

World War II provided the opportunity to test the theorizing of the previous twenty years. The results fell somewhat short of the predictions. Submarines did sink quite a few surface warships, but new tactics built on developing technology, allowed them to remain in business, at a price. Aircraft, too, presented serious problems but they did not have it all their own way either. Even under conditions of air inferiority Cunningham's Fleet retained sufficient control to remain a major factor in the Mediterranean theatre. Ships were lost, to be sure, but the surface fleet continued to exert its influence despite high level bombers, torpedo bombers, dive bombers and radio controlled glide bombs. Where air cover was available and it was backed up with determined gunfire, attacking aircraft could be badly mauled. At the Marianas turkey shoot in 1944 over 360 attacking planes were shot down by the task force in one day.

Yet pre-war polemics had lasting effects. Editorials in Sydney newspapers after Coral Sea made it seem that the battles had been won by land based air and, by implication, the writing was on the wall for surface navies. In fact, as we all know, they continued to survive and took their own aircraft with them for use both in AAW and ASW, and for strike.

The Kamikaze towards the end of World War II tirggered off the missile era for ships and caused the development of the maritime SAMs, Sea Slug, Tartar and the rest. Supported by AEW, shipbased radar, and EW, a defence consisting of the CAP outer defence, missiles and finally guns, turned aircraft attacks into just another hazard of the trade. It was the submarine, developing rapidly through the snorkel boat, the Barbel huss and nuclear propulsion, which looked as though it was more likely to make Fisher's predictions come true. And most Western navies, at least, began to devote the greater part of their resources to ASW. Large unanswered questions were raised about tactical nuclear weapons, but more immediately pressing than the nuclear question was the effect of missiles and how to beat them. The torpedo boat of the turn of the century reappeared as a surface to surface missile firer. Aircraft acquired Air to Surface missiles and Submarines acquired sub-surface to surface missiles. Whether or not the warhead was nuclear or conventional, the missile in all its forms began to, and does, dominate tactics as the weapon for both offence and defence. And of course it spurred interest in improving the gun, so that better gun systems are now becoming available, with weapons such as Phalanx and "smart" shells. A light weight 8 inch gun has been developed which can go into a 4000 ton destroyer hull. There is talk of a power laser, the Science Fiction Death Ray of the 1930's, at last.

On the whole though, it seemed that, in the see-saw world of armaments, given the right technology, surface navies could and would survive. The offen-

sive missile firer had a long range accurate weapon but he was stuck with the problem of target location and positive identification before weapon release if he was to enjoy his advantage. And existing vehicles through the now-conventional range, from aircraft carriers down to escorts, could exploit this and every other possible weakness to come up with the tactics to survive and still do their job. The classic virtues of surface seapower, flexibility, mobility, and a degree of tactical anonymity could be maintained, were necessary and were worth keeping.

It was at this point that those who were influenced by Fisher and his successors and looked for the end of the surface warship, came up with their trump card, the surveillance satellite. An invulnerable, omniscient surveillance satellite system, they said, was now possible, and capable of providing the missile firer with all he needed and in real time. Fifty odd years after Fisher's original letter to the London Times in 1919 his prediction was about to come true at last. Surface navies, larger than patrol craft, could be relegated to history. The future of blue ocean warfare belonged to the submarine, the aircraft, the missile, and the satellite.

Just what are these surveillance satellites and what can they do?

THE SATELLITES

So much unclassified information has already been published by now that it is difficult to believe that most readers have not already got a very complex picure. Apart from the usual snippets and articles in "Aviation Week and Space Technology" the following short and by no means complete list of publications can fill out in more detail any points missing from the sketch outline which will follow: "Arms Control" Scientific American publication, "Secret Sentries in Space" Klass Brassey's "Defence Year Book 1976/1976" and Adelphi Paper No. 52 (Institute of Strategic Studies).

ORBITS

Satellites may be geo-stationary, sometimes described as synchronous equatorial orbit some 22,000 miles above the equator where they appear to an observer on earth as fixed. They may be in asynchrnous polar orbit rotating round the earth and therefore appearing to shift west with, and, during, each orbit. Asychronous satellites can be placed at varying heights above the earth's surface and with suitable motors can be controlled to change height. Below about 80 miles from the earth's surface they begin to be affected by the atmosphere and the resultant drag will cause them to lose momentum and burn up after a period measurable in days, say between 14 and 21. An orbital period of about 90 minutes has been quoted.

KNOWN SENSORS IN USE OR BEING DEVELOPED

a. Optical–Photography, TV.
b. Infrared–Linescreen pictures.
c. ESM–Interception or Direction Finding or both ("Ferret").
d. Radar–The only active sensor. Probably sideways looking, can use M.T.I.

MEANS OF RECOVERING INFORMATION

a. Physical–Ejection of photographs, tapes, etc. on command in a safe area.
b. Radio–1. Slow Time–Play back on command, of recorded information to a suitably located grounded station.
   2. Real Time–Direct radio link with ground processor/user.

ACCURACY/RESOLUTION

a. Optical–At 100 miles height 1 foot resolution is practicable
b. Infrared–Not known, but 4 feet is certainly achievable and probably a great deal better.
c. ESM D.F.–Accuracy should be at least as good as surface D.F. systems.
d. Radar–As for surface and other airborne radar.

STRENGTHS/WEAKNESSES OF SENSORS

a. Optical–Positive identification of visible objects, but blind at night or above cloud.
b. Infra-Red–Depending on resolution could also achieve positive identification day or night, but not through cloud.
c. ESM–Positive identification of known targets. Defeated by silence policies.(?)
d. Radar–Looks through cloud, independent of silence policies. May be jammable (?). May be spoofed, chaff, expendable jammers (?)

Note: The permutations and combinations of the strengths and weaknesses of these sensors are such that multi-sensor satellites or surveillance satellite systems incorporating birds with different orbits, to achieve the desired degree of coverage, would seem to be needed. Thus if the target tried to jam a radar then the target might be detected and located by an ESM satellite.

LONGEVITY

a. Synchronous–Say 7 years.
b. Asychronous–Depending on orbital height and usage, 12 days, to 12 months.

NUMBERS–USSR

Since 1969 probably 250 reconnaissance birds up to about 30 a year, presumably of various types (unknown). Said to have launched one in 1968 and one in 1972 (types unstated) especially to cover major NATO maritime exercises. Brasse's also says "In October 1973 the Soviet Union launched five COSMOS satellites to cover the

Middle East war zone, and in 1974 two more were launched." This comment may give some indication of the numbers which could be put into use if the situation warranted. It also could be grossly misleading either way.

The foregoing gives a brief child's guide to what is published in the publications quoted, but if the writers (who seem very interested in the ocean surveillance aspect) are correct, we have a new factor with us now, or it will be present in the very near future. Can anything be done about the surveillance satellite? Or is this the final straw? Should we mind if it is?

It would hardly be appropriate to argue through the mass of hypotheses which now become apparent, and in any case it would be far too long an exercise for this Journal. It is perhaps enough to imply some conclusions by merely asking some questions without attempting to answer them. If the ocean surveillance satellite is such a bogey for surface naval forces, why are (presumably) hard-headed governments in possession of at least as much knowledge (and undoubtedly more than we can glean from unclassified sources) still building carriers, cruisers and destroyers? Are surface ships to be regarded merely as visible instruments of diplomatic power which are only being maintained out of sloppy emotional thinking, or as a bluff? If satellites are such a menace, to mobile surface naval forces how much more of a threat do they represent to fixed land bases? And relatively static land based forces? Are satellites permanently invulnerable to countermeasures? Is the anti-ship missile permanently invulnerable? The questions are almost endless, and the means and time to find the answers are limited, but it would be a tragedy if we were unable to devote resources to the sort of rigorous examination which now appears essential to resolve the doubts apparently being raised by surveillance satellites.

History does not repeat itself but there are sometimes uncanny resemblances to be found. When Fisher and others made their pronouncements in the 20's, they sowed seeds of doubt which had far reaching consequences.

In Britain the Committee of Imperial Defence established the Naval Shipbuilding Sub-Committee. Five politicians, three of whom were former First Lords (Churchill, Geddes and Long), and Beatty, the First Sea Lord, made up the membership. After extensive enquiries and many expert witnesses they ended up split down the middle, and Cabinet with two conflicting reports. The net effect was a painful and ultimately expensive indecision. This may be contrasted with what happened in America. Initially, attitudes and policy stemmed from written papers, as in Britain. Then the problem was wargamed, (as amplifed in a separate article) not once but many times, and the need for aircraft carriers was made plain. The U.S.N. began diverting resources to the development of Naval Aviation.

The moral way be over-simplifed, but it does suggest that wargaming is one way we might try to resolve current doubts, if indeed any exist.

After Trafagar

The following is a copy of a letter submitted by Lieutenant Commander P. Bruce-Walker, RANEM, written by his great-great grandfather on board HMS Bellerophon in November 1805.

H.M.S. Bellerophon at Sea Latitude 50°N, Longitude 14°06W. 22 November, 1805.

Dear Mother,

I wrote you a few lines from onboard the Leviathan in haste, to assure you of my safety after the late memorable action, and was in hopes before this time to have had the pleasure of giving you an account of my arrival in England for which I am now on my passage, the Bellerophon being so much disabled in the action as to be in want of a thorough repair. The papers will have given you a fuller account of the action than I can, but lest you should accuse me of idleness I will give some particulars, which may, I hope, give you some amusement. Lord Nelson took the command of our fleet on the 29th of September, and though we had before that no doubt of success in the event of an action, yet the presence of such a man could not but inspire every individual in the fleet with additional confidence. Every one felt himself more than a match for any enemy that there was any probability of being opposed to, and as we knew the combined fleet has positive orders to put to sea, every eye was anxiously fixed towards the shore, and every signal that was seen flying on board our repeating frigates was expected to convey the welcome intelligence. We were not long kept in this state of suspense, for about nine in the morning on the 19th October, a ship was observed firing guns and making signals for the enemy's fleet being getting under way. The Admiral immediately made signals for a general chase and to prepare for action. You may easily conceive with what alacrity this was obeyed. In a quarter of an hour 26 of the finest ships in the navy were under all sail, and formed a glorious sight; the wind was favourable and in a short time the Bellerophon, Belleisle, Orion, Leviathan and Polyphemus showed their superiortity of sailing and got far ahead of the fleet which continued under a press of sail the whole ensuing night, steering for the Straits which was supposed to be the enemy's destination. At daylight we were in sight of Gibraltar; a frigate made signals for a strange fleet N. by E. when we were recalled and signals made to form the order of sailing. We then stood back again to the northward; the weather was thick and squally so that we saw nothing of the enemy that day, though the Agamemnon and our frigates formed a chain betwixt them and us, and communicated by signals all their motions. During the night we plainly discerned their signals and remained in the most anxious expectation till the next morning, when, at daylight, we saw them to leeward, and immediately beat to quarters and bore down on them in two columns with all sails set, Lord Nelson in the Victory leading one line, Admiral Collingwood, in the Royal Sovereign, the other, in which the Bellerophon was the fifth ship. The day was remarkably fine, our fleet consisted of 27 sail of the line, seven of which three deckers, two 80 gun ships, fifteen seventy-fours, and one sixty-four. Whilst we were bearing down on them they formed in a close order of battle, French and Spaniards alternately, and waited for us with great intrepidity. A few minutes before the firing commenced, Lord Nelson conveyed by telegraph the following sentence to the fleet "England expects that every man will do his duty." This was received onboard our ship with three cheers and a general shout of, "No fear of that."

At 10 minutes past twelve the Royal Sovereign opened fire on the enemy's centre; at 12.20 she broke their line and engaged a Spanish 3-decker to leeward, who was followed by the Mars, Belleisle and Tennant, which engaged their respective opponents without breaking the line; at 12.25 we opened our fire, at 12.30, broke the line astern a Spanish 2-decker, fighting both sides in passing through, at 12.35, whilst hauling up, fell onboard L'Aigle, a French 80 gun ship, our fore yard hooking with her main yard. The action soon after became general. L'Aigle was the best manned ship in the combined fleet, and was full of picked grenadiers, who annoyed us most dreadfully with musketry. The Bellerophon was equally well manned, and had she been fairly alongside her opponent, would soon have carried her, and even in the disadvantageous situation in which we were placed, we very soon drove them from the lower

deck; and though we could only bring our foremost guns to bear upon her, whilst we received her whole broadside and the fire of four other ships. We had nearly silenced her fire when she dropped astern of us. But you will be able to judge of our situation from an extract from our log:

"1235 Fell onboard the French two-deck ship L'Aigle whilst hauling to the wind, our fore yard hooking with her main yard; kept up by a brisk fire on her on our starboard bow, and a Spanish two-decker the Monaroa on the larboard bow, at the same time, receiving and returning fire from a Spanish two-decker on larboard quarter, and receiving the fire of a Spanish two-decker athwart our stern and a French two-decker abaft the starboard beam. At 1, the main and mizzen topmasts fell over the side, at 1.5, the master and 1.11, the captain fell, still foul of L'Aigle, and keeping up a brisk fire from the main and lower deck guns; quarter deck, poop, and forecastle being nearly cleared away by the enemy's musketry chiefly from the troops onboard L'Aigle. 1.20 the jib boom was shot away; at 1.40, L'Aigle dropped to leeward under a raking fire from us as she fell off, our ship at this time unmanageable from braces, bowlines etc., shot away; 1.45 L'Aigle was engaged by Defiance, 2.5 she struck."

After we had thus got clear of our principal opponent, who did not return a single gun whilst we raked her, and two others of them had been engaged by the Dreadnought and Colossus, we were now only opposed to two Spanish seventy-fours, one of which, the Monaroa, shortly afterwards struck and was at 3 o'clock taken possession of by our second Lieutenant, myself and 8 men. The remaining one, the Bahama, struck to us in about half an hour afterwards, and was taken possession of by our fourth Lieutenant. There was very little firing after this except from five French ships making off to windward, which fired on both the Bellerophon and Monaroa. One of them was taken by the Minataur, and at 7 minutes after 5 the firing ceased, when 21 of the enemy's ships remained in our possession and one on fire, which soon blew up, another sunk in action. Among the prizes were three Admiral's ships, the Commander in Chief, Admiral Villeneuve, was taken as was the Santisima Trinidad, a Spanish 4-decker of 138 guns the largest ship in the world. Such a victory could not be expected without great loss. Our ship, as was to be expected from her situation, suffered very considerably, having 28 killed outright, 127 badly, and about 40 slightly wounded; 23 are since dead of their wounds. Our prize, the Monaroa, had suffered still more, having upwards of 250 killled and wounded, and the ship very much injured in every respect.

Till now everything had been favourable to the British, and from the . . . fineness of the day we had every prospect of bringing 20 of our prizes to England; but in the ensuing night a storm came on, such as I had never witnessed, and for the four following days we had a much severer struggle against the elements than the enemy. You will imagine what have been our sufferings, in a crippled ship, with 500 prisoners onboard and only 55 Englishmen, most of whom were in a constant state of intoxication. We rolled away our masts except the fore mast; were afterwards forced to cut away 2 anchors, heave overboard several guns, shot etc. to lighten her; and were, after all, in such imminent danger of sinking that, seeing no ship near to assist us, we at length determined to run the ship on shore on the Spanish coast, which we should have done had not the Leviathan fortunately fallen in with and saved us, and all but about 150 Spaniards. The ship then went ashore and was afterwards destroyed. We were more fortunate than several of our countrymen, who were lost in the prizes; others were taken prisoners by the French and Spaniards, who rose up and carried them into Cadiz. So dreadful was the storm that only four of the prizes, one of which is the Bahama, are left in our possession, they are now in Gibraltar. Three got back into Cadiz, five on shore near that place, and the remainder either foundered in the gale or were destroyed by us to prevent their again falling into the enemy's hands. All the British ships (were) . . . fortunate enough to weather out the gale. Thirteen of the most disabled put into Gibraltar, the Bellerophon was one. I did not join till the 3rd inst., the day before she sailed in company with the Victory and Belleisle for England. I had the mortification to find my chest had been broken open during my absence, several of my clothes stolen, and nearly all my linen either lost or torn by the wounded for bandages, my hammock and bedding had likewise been shot away in the action, which is the more unfortunate as I can so ill afford to replace them. I suppose I have made about 20 prize money in the late action, which would have brought me upwards of 100 had we not met with the dreadful storm which destroyed our prizes, but when I shall receive this or get back to England is now equally uncertain, for we have lately had such violent easterly gales as have driven us far to the westward of England and Ireland, and till we get a fair wind it is impossible with crippled ships like ours to make any way towards home.

Henry Walker

BOOK REVIEW

'THE GREAT NAVAL RACE' **by Peter Padfield**
(The Anglo-German Naval Rivalry 1900-1914)

Hart, Davis, MacGibbon, London
(Our copy from Napoleon's Military Bookshop, 375 Pitt St., Sydney)

If Peter Padfield is right, and there is no reason to suppose that he is not, then this reviewer must eat some humble pie, because in reviewing Michael Howard's "Continental Commitment" (ANI Journal November '75) statements were made which were probably wrong. The statements concerned the attitudes of Fisher and Wilson, as First Sea Lords, towards having a Naval Staff, and to not having plans for the impending war with Germany. Padfield, who has gone deeper into the events of this era, says that Fisher and Wilson did have plans, but refused to divulge them to anyone "for fear that once the Army and the politicians got hold of (them) all secrecy would be lost" (p. 257). Similar reasons are given for not having a Naval Staff, where, it was thought, even the office cleaners might become privy to Naval secrets. (Fisher at one stage leaked false plans of an "Invicible" class battle cruiser, plans which found their way to Germany and resulted in the building of an obsolete armoured cruiser, the Blucher, according to the author). It seems fair to observe that, while this was taking distrust of the "Frocks" too far, it makes more sense than a stubborn pig-headedness and an outright failure to make specific plans, as I had suggested. Nevertheless the end result was the same. General Wilson's staff talks with the French had committed Britain morally anyway, and Wilson was in little doubt that things would go his way. (He later described the 1911 Committee of Imperial Defence as "an historic meeting of great men mostly entirely ignorant of the subject"[1])

It is a little surprising that others who may have read their Marder, or know more about this era have not questioned the opinions I offered earlier. It would be a pity if those who did know had simply let the matter pass without comment.

But back to the book. It is comprehensive, balanced, lucid and easy to read. Padfield lets the impressive cast of characters and their momentous activities tell their own compelling story, or rather stories. The German navalists and Admiral Tripitz in particular get ample coverage; the envious Wilhelm, who "turned out more conceited more arrogant, more illiberal and a more breath-taking liar than if his mother (the Princess Royal of England) had turned him over to the Bismark from his cradle", is a major figure; Fisher, and Scott (among others) are depicted fighting to reform a Navy grown complacent, and make it so powerful and efficient that it might perhaps deter war, while at the same time suffering the distractions of the running battle with Beresford and his followers. Fisher cannot be wholly blameless, ("Favouritism is the secret of efficiency") and with his own clique, the "Fishpond", he was almost bound to create enemies. But Beresford merely appears childishly, petulantly and wilfully insubordinate, and he actively encouraged indiscipline in his officers. Lambton, Sturdee and Custance, gravitated to him out of a common dislike of Fisher and made bullets for him to fire. The fact that the rift was so deep and so public with both sides giving their views to men of influence, and even passing them to the newspapers, seems almost incredible today. Beresford accusing Scott of insubordination over his mildly ironic signal "Paintwork appears to be in more demand than gunnery", has an unpleasant likeness to Satan rebuking sin. The fact that this incident became the subject of a cartoon in Punch (which is reproduced) gives some indication of how damaging it all was in public.

Vice Admiral Custance is described as one of the "historical" school who opposed Fisher's 'Dreadnought' policy, and wrote articles which were published in Blackwood's Magazine. Perhaps this is what prompted Fisher's outburst, "History is the record of exploded ideas", and it could be the origin of some attitudes to history prevalent today. It should be made plain therefore that Custance, for all his alleged intellect, was deluding himself about history in what seems to have been a higly romantic manner, to judge by the sample quoted in this book; Fisher himself applauded Corbett's more objective analysis which resulted in the latter's "Some Principles of Maritime Strategy". One Custance does not invalidate the idea of learning from the past. The trick is, how?

I have strayed too long into this side issue (a subplot in the book) and have not mentioned other major players, Edward VII, Esher, Lloyd George, Gray and all the rest, including, of course, the young Churchill. As Padfield says "one can only marvel at a golden age which could harness such giants".

When the race came to the test, and the land forces were deadlocked, seapower became the Allies only advantage, and it barely survived the submarine warfare of 1917. But Wilhelm's navy ended up scuttled at Scapa Flow. It is a great, tragic and moving story of a period which has shaped so much of our century and, indirectly at least, affected all our lives. For those who have been devoted to "Edward VII" and "Upstairs, Downstairs" on television this book could be enjoyed simply at that gossiply level, but there is a great deal more to be gained from it than that. One of Padfield's earlier books, "Agony of Collisions" was good; he has come some way since then. His thorough research, his presentation, and his style show increasing maturity as a writer on maritime subjects. The references, index, illustrations and printing complete an excellent work.

One for your bookshelf. To keep.

JAR

1. Quoted by Ropp — "War in the Modern World".

AUSTRALIAN NAVAL INSTITUTE (INC)

ANNUAL GENERAL MEETING 1976

The Annual General Meeting of the Australian Naval Institute will be held at 1930 on Friday, 22nd October 1976 at R.S.L. National Headquarters, Constitution Avenue, Canberra.

All Office Bearers and Councillors are elected at the Annual General Meeting. Only regular members may vote and hold office. Voting must be in person at the meeting and proxies are not allowed.

Nomination of candidates for election is to be in writing, signed by two members of the Institute and accompanied by the written consent of the candidate, which may be on the form of nomination and should reach the Secretary by 8th October, 1976.

The Office Bearers of the Institute are:

a. President
b. Senior Vice President
c. Junior Vice President
d. Secretary
e. Treasurer

The Council of the Institute consists of:

a. The Office Bearers
b. Ten regular members known as Ordinary Councillors.

The formal Notice of Meeting and Agenda, Nomination Form for election of Office Bearers and Councillors and a Memorandum of Annual Subscriptions due for the year 1st October 1976 to 30th September 1977 have been inserted in this edition of the Journal for members' convenience.

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1975-76

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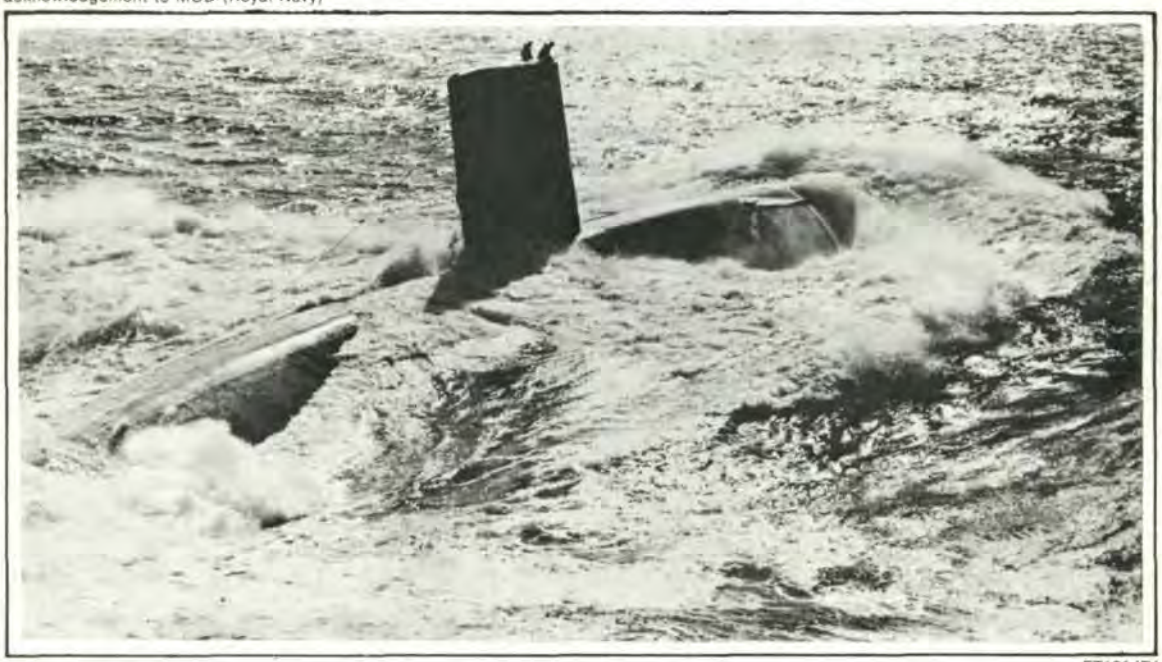

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