Defence Force Journal

Contributions of any length will be considered but, as a guide, 3000 words is the ideal length. Articles should be typed double spaced, on one side of the paper, and submitted in duplicate.

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Photography
D.P.R. Stills Photo Section

Published by the Australian Government Publishing Service, Canberra, for the Department of Defence.

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ISSN 0314-1039
RM 82/1097(14) Cat. No. 85 1452 X
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Printed by Ruskin Press, North Melbourne
A new day begins
By Squadron Leader P. J. Brindle, RAF

'Peace, commerce and honest friendship with all nations — entangling alliances with none.'
President Thomas Jefferson
1787

**PROLOGUE**

By the end of the Korean War the USA was deeply enmeshed in many 'entangling alliances', in the main intentionally. Seemingly, Jefferson's prophetic and cautionary words were discounted as irrelevant in the modern world. America, seeking an expansive world role, accepted responsibility for rebuilding the war-shattered economies of the West, an acceptance underpinned by ideological desires to resist Communism world-wide. Alliances became essential to establish a 'ring around the communist world'.

The USSR's stance was unconditional: 'There has not been, there is not and there cannot be a class peace between socialism and capitalism or peaceful coexistence between the communist and bourgeois ideologies'. Faced with such threats the other Western nations welcomed America's involvement; the USA's move away from an assiduously maintained policy of 'isolationism' began.

The past 30 years have seen many calls for a return to isolation, especially after the reverses of Vietnam. Successive governments have resisted these pressures, but support is rising afresh for policies in vogue prior to World War II.

To assess the effects of these proposals, several aspects of America and its alliance relationships need to be examined. The general character of the alliances will be outlined. The nature of the USA's traditional 'isolationism', its origins and directions, will be sketched out. Two representative alliances, NATO and ANZUS, will be considered in some detail. Naturally, alliances are subject to outside, regional influences and examples will be highlighted. Finally, a glance into the crystal ball will be attempted before providing a postscript. This article will discuss the nature of resurgent isolationism in America and its implications for the security of current allies.

**The Character of Alliances**

'I don't want to be ignored.'

Alain

Alliances have many facets. Why was the alliance created? What positive and negative effects does it have? What are the expectations of its members? What problems are generated by membership or exclusion?

'Security is the single purpose around which alliances are invariably built'. The need arises from the 'security dilemma'. Your neighbour appears to be a threat, so you arm to ensure your security. Your neighbour sees you arming and becomes agitated; to ensure his security he expands his armaments: a vicious spiral results. Eventually, small states cannot maintain momentum in the spiral so they seek an alliance. Where they look for help depends on their politics; but, wherever they find help, they also find 'strings'.
Allies join together to pursue common interests and contribute to a common cause. A nation seeking one-sided assistance needs aid — not an alliance. Alliances give the benefits of security, stability and status; those benefits imply responsibilities for mutual support and, perhaps, joint risk-taking. Allies need mutual respect for each other and a similar view of a common threat. But all these ingredients still cannot guarantee success. As Glen Barclay has noted, 'The most natural alliance in the world is not necessarily one of the most intrinsically durable'.

Australia has practical experience. On 15 February 1947 in Parliament, the Prime Minister, Robert Menzies, backed the Dutch reoccupation of Indonesia (Dutch East Indies) unequivocally. But, 14 short years later, the threat of Soviet involvement in the area compelled him to demand Dutch withdrawal! Alliances, then, pose problems as often as they solve them.

Normal foreign relations provoke the changes; as viewpoints change so do states' needs and requirements. A relationship with a superpower, especially, has complex, ever-changing and sometimes insecure foundations. The Anglo-Japanese alliance in World War I secured Britain’s possessions in the Pacific. However, improving relationships with the USA dictated the end of the alliance. If Britain had maintained that alliance, World War II might have been very different. The change of emphasis can be very rapid, even where treaties have been sacrosanct for decades as in the case of Taiwan.

'Realism in alliance affairs requires recognition that no alliance is permanent': a modern-day version of Palmerston's dictum on 'permanent friends'. Alliances strive for balance, not always aggressively. Simply denying the use of areas or resources to others can create balance. Within alliances, partners try to balance benefits and responsibilities. Allies expect to be treated as equals, even when they are patently unequal. Harlan Cleveland pinpointed the basis, and often the most neglected part, of an alliance: '... allies ... expect to be consulted'. The major cost is loss of flexibility and independence in national decision-making. Suez was an example. The European allies failed to consult the USA, producing the outcome with which everyone is familiar.

Conversely, the American involvement in Europe helped eradicate the continuous inter-cne struggles and fears which hallmarked European life for centuries. Moving difficult decisions about national relationships to a supranational authority meant the distrust moved as well. That the fears were real is demonstrated in a not-totally humorous joke current in France at the time of German rearmament: 'The new German army must be strong enough to impress the Soviet Union and weak enough not to threaten Luxembourg!' The popular vision of a cohesive Europe if America withdrew is not historically logical. Weaker states rarely ally with each other in the face of danger. Brandt’s Ostpolitik was born mainly in fear of Congressional attempts to force massive US troop reductions in Europe.

A successful alliance, then, is characterized by a need for security, prompted by feelings of common danger, expectations of equal benefits and not too many onerous problems. However well those factors are fulfilled, no alliance can survive beyond that expedient point where its members' interests begin to diverge.

The USA, from Independence until quite recently, had no need for alliances; it did not need Liska's 'security, stability and status'. Indeed, young, weak states often avoid war by refusing 'entangling alliances'. For 150 years the USA moved with international independence. Moral justification of such policies was achieved by stressing America’s uniqueness. 'These justifications (produced) the rhetoric and ideology of isolationism'.

American 'Isolationism': Origins and Directions 'Im übrigen ist es zuletzt die grösste Kunst, sich zu beschränken und zu isolieren.' (For the rest of it, the last and greatest art is to limit and isolate oneself.)

Von Goethe 1825

Origins

Americans have long been presented as the 'isolationists', but the origin of their independent style is found in a shared British inheritance. Britain, for hundreds of years, sought 'splendid isolation', only weaker states needing alliances.

'Isolationism' is depicted as a short-sighted policy, showing a nation lacking in responsibility. Its opposite, 'intervention', can be equally undesirable however. Actually, both policies are usually described too absolutely; specific definitions seldom make allowances for the inev-
table shades of grey affecting international relations. Similarly, taking ‘isolationism’ to mean ‘no military alliances’ is really a narrow and incorrect view.

America, in fact, was never ‘isolationist’ in any accepted sense. Until halfway through this century, its foreign policies simply followed an independent line. America’s prime aim for most of this period was to avoid an association with Europe: ‘The American policy of non-alliance in the nineteenth century was designed to keep European conflicts European’15, culminating in the Monroe Doctrine of 1853. Prompted by Russian expansion into Alaska, the Doctrine laid down clear precepts disassociating Europe and the Americas. The USA was developing its own identity: becoming non-aligned was essential for a newly independent, ex-colonial country. Thus America interpreted isolationism in its broadest sense: unilateralism and independence.

The 20th Century

The USA has become psychologically and materially vital to the Western democracies. America did not seek dominance actively, at least not until the middle of this century, but rather was caught in an economic net. US foreign policy in the 20th Century has four milestones: World Wars I and II, Korea and Vietnam, all alliance wars, the very traps that American administrations had tried to avoid since 1776.

Until World War I, the USA had pursued a self-interested foreign policy while influencing other countries towards the ‘American way-of-life’. Woodrow Wilson, expecting only a short, sharp war, vociferously defended neutrals’ rights: as the War dragged on, his active neutrality steadily reduced his options until, in 1917, Germany’s unrestricted submarine warfare eventually forced him to declare war, although he pointedly avoided becoming one of the ‘Allies’. However, he was converted towards alliances and, post-war, avidly supported the collective security proposals of the League of Nations; these proposals were defeated by isolationists in the Senate. ‘Ideology and globalism . . . had drawn America into the War. They also left the USA without adequate reasons to help shore up the peace’16.

The inter-war years saw American economic involvement in foreign countries, but active resistance to alliances. The strength of domestic isolationist feelings prevented America from joining the World Court and made the 1927 Kellog-Briand Pact — a French security initiative — no more than a general condemnation of war. In 1935, the Neutrality Acts were passed denying Americans all those neutral rights that had finally compelled military involvement in World War I.

Thus the fall of France in 1940 was a crisis point for America. Roosevelt had to face the legacy of neutralism: one small Pacific fleet — with the threat from the Atlantic — and an obsolescent army. Pearl Harbor, in 1941, ended all thoughts of neutrality. Arthur Vandenberg, the Senate leader and formerly a staunch isolationist, said, ‘Pearl Harbor ended isolationism for any realist’17.

After World War II, Roosevelt intended America’s political and military presence in Europe, ‘as a fleeting commitment only — to last no longer than one or two years.’18 Britain and Russia were to control the European peace, while the USA controlled the Western Hemisphere and the Pacific; the parlous state of the European economies, though, threatened total collapse. So began the Marshall Plan and, as Britain could no longer fulfil its role of ‘world policeman’, the USA had to assume that mantle too. Saving the European economies and ‘containing’ the expanding strength of the USSR carved a revolution in US foreign policy. NATO was created, at first only as a loose multilateral grouping. Fears of a Soviet second front during Korea forced the USA to raise its NATO commitment to six divisions and form the integrated command structure. So 1950 formed the pivot for the US swing from isolationism to internationalism.

Today and Tomorrow

The European commitment has been increasingly questioned in America since the end of the Vietnam War. Isolationism, dormant for years, has been re-awakened by a proliferating American dissatisfaction with allies’ attitudes and performances. ‘American attitudes are always tinged with the suspicion that somehow Americans are being exploited by Machiavellian (foreign) statesmen’19.

Both sides of the political spectrum see the allied nations as parasites, allies in defence of their own interests only. One side believes that all the allied nations are receiving something for nothing and that withdrawal would bring
the reminder of the responsibilities and costs of security. The other side views pessimistically America's ability to influence the world and suggests that, whereas little can hurt the USA materially, membership of any questionable alliance could bring great difficulties.

Surprisingly, these isolationists have recently found their goals echoed in the views and slogans of anti-American or anti-alliance 'peace' movements in other countries. These organizations present, meretriciously, an alliance with the USA as a constant threat to peace and safety.20

Deeply ingrained attitudes among most allies cannot countenance the USA just 'upping and leaving'; Dulles' threat of an 'agonizing reappraisal' of alliances was shown as a bluff. Nevertheless, it is possible to overestimate the importance of any ally to the USA. One Dutch politician's opinion is, 'You (America) need Rotterdam as badly as we do, so you'll help if we need it, cruise missiles or not'.21 This cynical desire for security without liabilities is deeply offensive to many Americans. The attitude has been christened 'Hollanditis' by the American media — an epithet increasingly applied to New Zealand in the last few months.

With many hundreds of thousands of American 'hostages' scattered throughout allied countries, the USA currently could not be reticent in defending their allies. However, many eminent Americans are seriously advocating withdrawals, including Henry Kissinger and the architect of modern isolationism, Senator Mike Mansfield.22 McGeorge Bundy explained it quite dispassionately: '. . . the American commitment anywhere is only as deep as the continued conviction of Americans that their interests require it.'

Many arguments support continued US involvement in alliances; but if Americans are constantly told that they are not wanted, then who could blame them if they decide eventually to believe the words they hear? The current Supreme Allied Commander, Europe has seen the stormclouds and cautioned, 'faced with . . . complex concerns about Europe, the United States must not succumb to its historical isolationist tendencies'.

Both NATO and ANZUS have been in existence for over 30 years and can be said to have achieved a prime function: preventing global war. Yet, because neither have prevented some or all of their signatories from becoming embroiled in lesser conflicts, people have begun to question their validity. The strident calls for review, changes or dissolution of the treaties are rarely met with well-marshalled arguments for the rationality of retaining such treaties. Some of the popular opinions for and against will now be examined.

NATO

There is rising US domestic pressure for reductions in all alliances, but particularly NATO.23 An active lobby suggests that US security has been undermined by building up the Army — for service in Europe — at the expense of the Navy and Air Force on which the main defence of the USA would fall. After all, they argue, Soviet troops are unlikely to be storming American beaches!24 This struggle between the 'Atlanticists' and the 'Hemispherists' continues unabated, underscored by a shift in emphasis away from the traditional East Coast Administration viewpoint towards the West Coast of America.25 The shift is complemented by an inward-looking change in foreign policy. This has raised the importance of the (Monroe Doctrine) interests in the Pacific, Mexico, Central and Latin America and the Caribbean to the same or a higher level of concern than Europe.26 Senator Sam Nunn put it this way: 'in this century, Americans have died in large numbers on European battlefields. We are prepared to do so again if necessary, but only for a Europe that is dedicated to its own defence'.

Lately, the USA has been experiencing a strong desire for more national assertiveness. European commentators feel that the current Administration's foreign policy is designed more to satisfy those raw emotions than the more usual NATO approach to foreign policy of deterrence and defence coupled with dialogue and negotiations.27 More importantly, powerful Americans are beginning to say that European defence is increasingly irrelevant and that the chances of a Soviet attack in Central Europe are increasingly remote.28 Professor Irving Kristol outlined prevalent American feelings as, ' . . . the governments of Western Europe . . . asking the US to run the risk of a nuclear
holocaust so they don’t have to cut their social welfare budgets.\textsuperscript{32}

In contrast, there are still many positive attitudes towards the Alliance. Britain still considers it the ‘lynchpin of the Defence Policy’. The British Defence Secretary has explained in an Annual Statement to Parliament that, ‘... it is politically important that all allies should share the risks and burdens of providing for deterrence and defence\textsuperscript{33}. The Alliance needs to re-establish common ground quickly; otherwise, the trivial irritations on both sides may well, in present circumstances, push America towards cutting its losses and consolidating elsewhere.

**ANZUS**

Early in the 1980s, ANZUS gained from NATO’s losses. The transfer of interest from Atlantic to Pacific, evidenced by the cancellation of the ‘swing strategy’, served to strengthen many peoples’, perhaps ambivalent, notions about the Alliance. However, much of that positive action has been sharply diluted by New Zealand’s questioning of Alliance responsibilities. In July 1983, a full-scale review initiated by the Australian Labor Government resulted in a strong validation of the Treaty by all three countries. Despite that, the pronouncements of the new Labour Government in New Zealand have raised not only specific questions about interpretation, but also about the total value of the Treaty.

One of the major problems for ANZUS compared, say, with NATO is the supposed absence of an immediate threat. Despite that, Paul Wolfowitz, in the light of the massive build-up of the Soviet Pacific Fleet, has said, ‘... ANZUS, seen through Washington’s eyes, is more significant than it has ever been’. That statement, of course, could be interpreted two ways. Firstly, the meaning at face value — that America needs Alliance support in the area because of Soviet expansion. A differing meaning could be that the Americans are assessing Australian and New Zealand efforts to confront the area’s expanding security problems. Significantly, George Schulz, speaking three weeks after Wolfowitz’s speech, following the ANZUS Council Meeting held in Wellington on 17 July 1984, was uncompromising: ‘No access for nuclear ships means no ANZUS’, he said, ‘The purpose of ANZUS is to deter. What kind of alliance would it be with no contact between forces?’\textsuperscript{35}

Previously, America has found ANZUS trouble-free. The danger, to American eyes, from the New Zealand problem is the snowball effect on other Western alliances. Currently, the US-backed alliances are seen as the ‘fabric of democracy’; if that fabric starts to unravel in one place then it could unravel in others: Greece, the Netherlands, Denmark, even Australia — the list could become endless\textsuperscript{36}. As with NATO, it could be easy to overestimate the value of Australia and New Zealand to America. They are vulnerably isolated with long lines of communication for trade, large percentages of GDP reliant on exports and surrounded by Third World countries, some with fragile governments. Their present importance to America could be rapidly undermined. Soon, most of the military functions carried out in these countries could be operated satisfactorily from the USA. Other ports, though less ideal, are available now around the Indian Ocean\textsuperscript{37}. Moreover, Professor T. B. Millar has said that Australia could remain important to the USA only as long as they need Middle East oil and are willing to fight for it; that may not be forever. Professor Millar has concluded Australia needs better defences than ANZUS which, ‘offer no permanent protection’.\textsuperscript{38} Malcolm Fraser said, ‘... the only power that can balance the might of the Soviet Union is the US’.\textsuperscript{39} But modern American attitudes and regional pressures suggest that, more and more, the balance will have to be achieved in ways other than ANZUS.

**Regional Influences**

‘... to understand the future, you must understand the Pacific.’

George Schulz

The major influences fall easily into four areas: Europe, the Indian Ocean, South East Asia (SE Asia) and the Pacific Ocean.

So far, the most disruptive regional effects have been on NATO and, particularly, the European allies. The US views about their NATO partners, the increased threats in other US areas of interest and the European emphasis on detente rather than confrontation have led to a marked divergence between Europe and the USA. Europe is very reliant too on overseas suppliers for essential raw materials. Economics now play a fundamental role in any nation’s security as the USSR has been quick to grasp:
'One important condition for the normal functioning of a military industry and of the entire economy . . . is the availability of supplies of strategic raw and other materials'. For Europe, vital trade lines of communication grow daily more vulnerable to interdiction. The NATO Europeans are now forcibly involved in considering what 'out-of-area' threats mean for NATO. Sudden crises, like Afghanistan or the Iran-Iraq War, leave them unsure of how they should react.

This is aggravated by the possibility of intruding into other nations’ areas of interest. For example, Japan might have a legitimate interest in an Indian Ocean dispute if, say, oil was involved.

The USA has taken a strong and independent stand over access to oil; President Carter threatened ‘use of armed force’ to the disquiet of many allies. However, the USA must not start to appear as a bully dictating terms. If America gains that reputation, then smaller, non-aligned countries could well turn towards the siren song of Moscow. American alliances and allies could then feel tarnished too, bringing more internal dissent. The Soviet cause is enhanced as much by disruption and confusion of purpose in Western alliances, as by direct or surrogate intervention.

Other pressures in this area include India itself, internally divided and growing daily closer to and more dependent on the USSR, and Pakistan, threatened by India, and soon possibly able to deploy a nuclear weapon. B. W. Cloughley has fleshed out this daunting scenario: ‘Pakistan would use nuclear weapons only as an absolute last resort . . . and would be indubitably countered, swiftly and ferociously, by India. The likely sequence of events is appalling to contemplate . . .’. India also seems ready to apply influence more regionally: ‘It is evident that the Indian stance, on land, at sea and in the air, is one of power projection rather than self-defence’.

Another area of unrest is SE Asia. While ‘Australia’s security prospects have been enhanced by the success of the ASEAN and of the South Pacific Forum in developing regional economic and political cohesion’, there are still many potential powder-kegs. The major problems, Vietnam, Kampuchea and major border disputes, would require several articles in their own right. It is questionable anyway whether problems on this scale, because of the attention they receive, could lead to multinational conflict. Wars often begin with small-scale, trivial incidents. As examples, the Paracel and Spratley Islands, though physically insignificant, command a militarily and possibly economically strategic position. China and several ASEAN members have both claims, and in some cases troops, on these islands. Indonesia faces problems in Timor and West Irian. The USA is interested mainly in retaining rights of sea passage through these areas so their full-time presence is negligible; however, Lee Kuan Yew pointed out, ‘As long as the US is seen clearly to be a force in the region, these residual, token forces are not irrelevant as tokens’.

The USSR exerts global influence. Doctor Dora Alves describes their aim in the Pacific bluntly: ‘In the long term, the Soviet Union doubtless desires to control the dynamic Pacific economic development and the mineral wealth of Australia’. The USSR’s intentions are demonstrated by their tremendous naval expansion in the Pacific. Already quantitatively superior in critical areas, the USSR has its eyes on the long term. Prior to their exploitation of the facilities at Cam Ranh Bay, the limiting factor for the Soviet Pacific Fleet was support facilities. They moved rapidly to redress the problem. To offset the support difficulties they developed 85 logistic support ships to the Americans’ 40. If New Zealand refuses US ship visits then the difficulties for the USA are clear, especially if an Australian government follows suit and, for instance, the embattled Philippines government gives way to a Left-oriented successor. Suddenly, the USA would have the inadequate area support, but without the offsetting logistic ships. Another example is in submarine forces; the US/USSR ratios for strategic and attack submarines deployed in the Pacific are 3:31 and 40:91 respectively. The inherent dangers to sea lines of communications are glaringly obvious.

The final area of regional unrest is the South West Pacific (SW Pacific) islands, primarily New Caledonia. In New Caledonia, the Kanaks are desperately seeking independence from France. It is unlikely to be a peaceful transition and, as Western nations will not supply arms, they have only one way to turn. Stuart Inder has reported that, ‘The Kanaks are embittered by the (South Pacific) Forum’s lack of support, especially Australia’s part in it, and are looking for support from any bloc willing to give it’.
The Cubans already have representatives in some SW Pacific nations. The Kanak leaders have visited Libya seeking aid and have some men there receiving 'security training'. At the Forum meeting in Tuvalu, Father Walter Lini, the Prime Minister of Vanuatu, stressed there was, '... an imminent danger of violence, of development of a scenario ideal for intervention by (unfriendly) foreign powers and, thus, regional instability'. If through renascent isolationism and material difficulties the US presence in the region fades away and if the Kanaks gain independence with Eastern bloc support, then a real threat could suddenly materialize — in the short term — on Australia and New Zealand's collective doorstep.

Futurology

'If you want a picture of the Future, imagine a boot stamping on a human face — for ever.'

George Orwell

'1984' Pt III Chap. 3.

The spectre of US isolationism raises many questions. What could be the trigger? When could it happen? What would former allies do to repair their gaping defences? What indeed would the USA do in its own defence?

It is probable that the trigger is already being pressed. The latent isolationism in America's national psyche, reactivated by constant rebuffs, carping criticism and what they see as disloyalty and disinterest from their allies, means US views are now being formulated in an unnatural 'hot-house' environment. The allies should question some decisions and opinions and the way they were reached; but a nation searching for new ways of fulfilling its historical role as a leader of the Western democracies has become very sensitive to what it sees as unjustified criticism. This is especially true when the USA believes that these same critics are not prepared to provide the money, men or material to carry out the task themselves. It seems quite probable that the trigger is already on 'first pressure'.

That being so, the timeframe for a unilateral withdrawal could be quite short. My impressions gained from individuals, literature and the domestic and international press suggests that, unless some radical reforms occur relatively quickly in alliance attitudes, the USA could disengage militarily — from all but what it sees as its most critical commitments — within the next decade. On analysis, then, the question must be do you feel that your alliance is critical to the USA? Remembering that it is very simple to overestimate one's own importance and that alliances and their needs are dynamic for a whole host of reasons, both NATO and ANZUS are vulnerable. Senator Nunn, a NATO protagonist, moved an amendment last year to withdraw American troops gradually from Europe unless the other NATO partners began pulling their weight more effectively.

Problematically, the Allied governments feel they are paying what they can afford and that the increased tension, generating larger defence needs, has been caused by American bellicosity. True or false, the more the other nations pay, the more those nations will expect to participate in any decisions and the more American views could be questioned and opposed. That in itself could cause US antagonism towards the alliances to increase.

The basic task for former allies would be to spend money on defence. There are problems with that premise, even if sufficient funds were available. From where would the defence equipment be bought? The USA might continue to sell military hardware, albeit of an inferior quality, whereupon money would become the limiting factor. However, the USA might decide to limit the amount of high-technology weaponry available for export; then former allies would find their options greatly reduced. Optimistically, such a reduction in imports could press governments to invest in their own defence industries to try to bypass the restrictions.

New alliances would have to be considered. In Europe many countries, interwoven now only by NATO, would become non-aligned or formal neutrals. Britain, Germany and France might well decide to try to form another collective defence treaty; but the difficulties experienced in attempts to form a European Defence Community and the Multilateral Force in the 1950s and 60s would hang over their efforts. Australia could either look towards regional alliances or perhaps attempt to establish itself as an armed neutral as advocated recently by David Martin, Andrew Mack and others. Alliances could be bilateral — New Zealand, Singapore, or even Indonesia or Japan although the last two would require some additional changes by some in the population — or they
could be multilateral, say with ASEAN; that would only be possible, of course, if ASEAN moved towards a formal defence grouping in the face of an American withdrawal and presently this seems unlikely. Judicious pooling of effort and resources, and maybe some form of joint command structure, could produce a realistic deterrent capability: sufficient to make any overt action against the allies a costly business.

Armed neutrality seems a less realistic option, despite the vigorous championing of Martin et al. Besides Australia’s having limited defence industries, the most telling argument against the concept comes from Sir James Cable. He is decrying the idea of a neutral Britain:

‘... the ... view (is) that Britain would be immune from all risk of destruction or coercion if she adopted the neutrality preferred by Austria, Finland, Sweden or Switzerland. The British people lack the disciplined self-effacement needed for genuine neutrality ...’

The argument is equally applicable to Australia; more so if the words of Bill Hayden at the 1984 ALP Conference are considered; he felt the policies being advocated by sections of the Party were in danger of giving the ALP — and Australia — ‘belligerent foreign policies and a pacifist defence policy’.

Any of the options, for Europe or Australia, are second-best security. To avoid such ‘futures’, the allies have to convince the American people and Congress — not just the Administration — that they have a common threat perception, that the allies are pulling their weight within their economic abilities and that America is not always considered the guilty party in an incident, hot or cold. Failure will mean that the USA will withdraw its military protection, I believe, and that will mean massive expenditure on defence and major reductions in our standards of living or enforced moves towards an ‘accommodation’ with the Eastern bloc nations.

We would be foolish though to think that the USA would limit the use of its overwhelming economic strength. That strength, perhaps enhanced by internal lines of communication and reduced military spending, would influence the world almost as effectively as before — the rest of the world would have far less influence or opportunities for changing US policies.

EPILOGUE

‘You cannot help man permanently by doing for them what they could and should do for themselves.’

Abraham Lincoln

Alliances are created to serve the ends of each nation; but minor changes in national viewpoints can provoke major questions about an alliance’s continuing utility. A swing in allied opinion away from the fear that the USA would not commit itself in a war and towards the fear that it will — and that it will commit its allies as well — has led to confusion in America.

There are still advantages for America in their treaties, although material costs are high. President Truman expounded the economics over a generation ago: ‘Which is better for the country, to spend 20 or 30 billion dollars ... to keep the peace, or to do as we did in the 1920s and then have to spend 100 billion dollars ... to fight a war?’52. But the point is that there are some Americans today who would question Truman’s logic, arguing it is better not to spend money at all by not being involved. Those influential isolationists, reinforced by an upswell of neutralism and anti-Americanism, could precipitate the dissolution of America’s alliances.

The 1981 report by the Shipton Committee said, ‘... the ANZUS Treaty ... for Australia, provides an umbrella for our broad bilateral defence relationships with the United States’53. It was prophetic that the Committee thought of bilateral relations; the re-evaluation of the Treaty by New Zealand could lead to the USA furling the ANZUS umbrella in the not-too-distant future. The same may be more true of the umbrella protecting Europe.

Perhaps America is starting to believe Lincoln’s words above. Certainly, the debate and the isolationist feelings cut completely across traditional party lines. Senator Howard Baker, recently retired as the Republican Senate majority leader, says,

‘I’ve thought about taking up the cudgels of the Mansfield Amendment, but the situation is too serious for that. When Mansfield was doing it, there was virtually no support for that position in the Senate. Were I to do it, I’m afraid I would start a fire I couldn’t put out’54.

America’s current allies should be dismayed at the implications in that statement.
NOTES
15. Ibid, loc cit.
17. Tompkins, C. D. Senator Arthur H. Vandenberg: The Evolution of a Modern Republican, 1884-1945, Lansing Press, East Lansing, 1970, p 191. Tompkins points out, however, that Vandenberg’s change of heart was in fact much slower than this remark would suggest.
18. Joffe, op cit, p 177.
22. At the end of the 1960s/beginning of the 1970s, Senator Mansfield was the driving force behind an amendment designed to pull American troops out of Europe. Mansfield was against NATO but was poorly supported in his attempts in the Senate.
27. Thompson, loc cit.
32. Address by Professor H. Gelber, ‘ANZUS’ Barton, Canberra, 9 October 1984.
34. Warner, op cit, p 21.
36. Ibid, Admiral Noel Gayler, USN (Retd), a former CINCPAC, spoke of the ‘fabric of democracy’ on the same programme.
42. Ibid, p 53; quoting Captain John Moore of Jane’s.
43. Australia’s Strategic Outlook and Defence Policy, Minister’s Speech for Conference at Pennsylvania State University, 24 June 1984, p 3.
44. Albinski, op cit, p 201.
49. ‘Satisfying a Nunn’, The Economist, The Economist Newspaper Ltd, London, Vol. 293, No. 7369, 24 November 1984, p 46. There is a story that Senator Nunn, when asked what he would have done if the amendment had passed, said that he would demand a recount! Clearly, he is using the amendment as a political lever.
52. Joffe, op cit, p 180.
53. Martin, op cit, p 59.
54. Kober, op cit, p 347.
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An important issue for the US Navy will be whether the attraction of near perfect surveillance will be so great as to justify the cost.


Strategic Missile Warning System Being Upgraded. Judge, John F. Defense Electronics; May 85: 86+(4p) The US Air Force is replacing the DEW (Distant Early Warning) system with the North Warning System program of 13 long-range minimally manned radars and 39 short-range gap filling radars. BMEWS (Ballistic Missile Early Warning System) will be replaced by a phased array system.

ELF Lets Subs Stay Deep and Out of Sight. Defense Electronics; Jan 85: 95-98 Extremely low frequency communication will enable submarines to receive information while preserving their covert status.

Commanding and Controlling C3I. Judge, John F. Defense Electronics; Jan 85: 78+(7p) C3I is a critical part of every element of the entire US and NATO defence structure. US Deputy Undersecretary of Defense, Donald C. Latham outlines his strategy for managing this area of national security.

Falklands War Pressured British EW Development. Defense Electronics; Jan 85: 56+(5p) A self-protection radar jammer was hastily produced for British Harrier aircraft during the Falklands war. Called "Blue Eric", the active ECM system used components from Marconi's Sky Shadow pad.


Making the Right Connections. Thompson, Jim: Osburn, Tom. Defense Electronics; Mar 85: 118+(4p) Selecting the right connector for missiles and other military systems requires an early examination of the operating environment.
A Comment By Robert Hyslop

THIS is a comment on the article by B. McAlary "The Role of the Australian Army in New Guinea in 1944-45" in the Defence Force Journal No. 45, March/April 1984, pp. 43-51. I contend that in its present form the article should not have been published. My comments relate both to substance and expression.

Let me deal first with expression. One can concede that the author has not been well served by the editor. It is not the first time that the proof-reading of the Journal has failed. Here are some examples: commas appear arbitrarily; a 'the' is incorrectly inserted in a quotation; Australian, aggressive, perception, beleaguered, affected, are all mis-spelt; out becomes our; and so on. However, the editor cannot be blamed for the sloppy syntax and grammar. For example: "This is only a statement of general principle, it should have and still remains open to challenge" (p. 47). Another example: "By aggressive (sic) patrolling the anticipated gaining information of enemy strengths and dispositions and by systematically driving him from his garden areas and supply bases to force him into starvation and destroy him where he was found" (pp. 47, 48). Again on page 44 the author wrote the nonsense that 'Blarney was asking General Morshead for America to request the Australians to take over . . .'. McAlary is misreading Hasluck who had written " . . . Blarney had told General Morshead, then commanding in New Guinea, that he expected an American request . . .".

These lapses in expression are bad enough; in matters of substance the article is even worse. It has many faults. The article's most serious deficiency is that it fails to prove its introductory statement that "The mopping-up campaigns in New Guinea 1944-45 throw the worst possible light on Australian politics and military logistics" (p. 43). Let me develop my reasons for this charge.

The Government had itself sought the help of the Americans and had put the Australian forces under American control. The overall strategy and direction of the war in the Pacific were in American hands and it was vital that the Government should work in harmony with MacArthur. Nothing of this justifies the author reaching the conclusion that "the Government blindly conceded (sic) to MacArthur's demands and passively accepted changes to war policy decided solely by General Blamey" (p. 43). That the Department of Defence and the War Cabinet were assiduous in examining plans is well documented in the Official Histories, and indeed is evidenced throughout the article.

The author seems to be troubled that the Australian role was secondary to that of the Americans; this is deplored three times on page 44. It is not clear how the Australian role could have been otherwise given the massive difference between respective military contributions. McAlary complains of Australia being "relegated" to a secondary role and then contradicts this by pointing out that there were not sufficient troops to meet even the "secondary" role agreed with MacArthur (pp. 44, 45). With what forces could Australia have assumed a leading role?

The author seems to misunderstand the particular responsibilities of parliament and government. On page 43 McAlary writes "In panic,
the country's leaders subjugated the Parliament's autonomy and power to direct its own affairs in war." There is no evidence to support the accusation of panic. (And I think the author probably means *subordinated* rather than *subjugated.* It is of course for the parliament to debate issues and make laws, not to direct affairs, that is the task of the government. There is no substance in the author's claim.

Furthermore I can see no warrant for the author's taunt that 'Australia went headlong into the New Guinea campaigns . . . automatically as a matter of principle with no thought to stipulating her own war aims and objectives' (p. 43). It has always seemed clear to me that Australia was quite reasonably and properly defending herself against aggression and throwing enemy forces out of her territory. It was self-evident, no-one at the time would have thought it warranted spelling out.

The article states that 'The government simply let the offensives proceed without questioning their political or strategic purpose' (p. 43). This is extraordinary as the author quotes the Prime Minister, Mr. Curtin, as pointing out in Parliament that 'Australia had a major political issue nearer home: 'to clear out the enemy still in occupation of territories for which the Australian Government was politically responsible' ' (p. 46). However the author who sneeringly claims that the Government was "naive" (p. 46) fails to examine Australia's special position vis-a-vis New Guinea. There is no discussion of Australia's long-felt desire for sovereignty beginning with Queensland's thwarted attempt at annexation in 1883; Australia's continuing unease at the presence of Germany as a colonising power; the achievement of the mandate after the War of 1914-1918; and the recent significance of New Guinea in the war both as a geographical bulwark and on the tactical level with "Fuzzy Wuzzy Angels" tending wounded Australian soldiers. A case that the Government was naive could only be made by ignoring vital issues such as these. The article does not consider Australia's need to honour the debt to the inhabitants of New Guinea by dealing with a large force of enemy troops.

In writing history we can interpret situations with the benefit of later knowledge, but our assessments and judgments of the wisdom or otherwise of individuals must not ignore the limitations imposed by what could have been known at the time. The actors in the real drama had to provide for puzzling contingencies. Forty years on, the author can write that "By mid-1944 the Japanese were all but defeated—it was only a matter of time" (p. 43). It is true that by mid-1944 there was confidence in ultimate victory, but an examination I have made of the Melbourne Age from September 1943 to June 1944 reveals no thinking that the end of the war was "only a matter of time". On the contrary there was widespread understanding of the hard slog ahead, with the war in Europe still taking first priority in Allied strategy. Great work yet remained to be done, much strategic planning, massive air, naval and military operations, the advent in 1945 of the British Pacific Fleet and eventually the atomic bombing of Japan.

The author claims that "Many contemporary Australians, at that time, contended that the New Guinea War was unnecessary both on political and military grounds. These people included prominent public figures, the general public and the troops themselves" (pp. 43, 44). The author does not give us dates here. In fact the criticisms arose in 1945 rather than in 1944. The Leader of the Opposition, Mr. Menzies, speaking on 21 February 1945 said that mopping-up operations "cannot be regarded any longer as of prime military moment". It is true that the prime reason for the operations in New Guinea was the political necessity to liberate the people of New Guinea. The military reason—the containment of the Japanese forces—although not of prime importance, was still necessary. Keogh, whom the author quotes repeatedly, wrote that the Japanese under General Adachi "conducted a prolonged, stubborn and skilful defence" (Keogh, p. 407). The story of this criticism of operations in 1945 which was indeed widespread and prolonged, is told comprehensively in the Official History. There was however opposing evidence which did not discount the military operations. Mr. Percy Spender, MP, while critical of the policy being followed, nevertheless spoke of "Japanese who were supposed to have been left there to wither and famish, but are in fact firmly entrenched, well disciplined and adequately equipped". General Blamey, in a broadcast on 15 April 1945 remarked "It is not mopping-up to those Australians who have to fight it." The author's statement that "The Government panicked and decided to mobilise the full strength of the
nation to wage mopping-up campaigns in New Guinea” (p. 44) is a gross untruth. The reality at the time was that the Government was moving to demobilise large numbers of men—a fact known to the author (p. 45).

The author writes (p. 45) that MacArthur’s failure in some communiques to mention Australian troops “gave MacArthur increased kudos in America which could be reckoned good politics for him”. It is foolish to suggest that MacArthur would have given thought to any advantages or disadvantages for him in mentioning or not mentioning Australian activities. The subject simply had no significance in America. I find similarly questionable the unsupported comment on page 44 of this author turned magistrate, that MacArthur’s “change of policy (in the Philippines) was based on political rather than military grounds”. MacArthur may well have had ‘ambition for acclaim back in America’, but a claim that he based his policy on that should not be made without supporting evidence. MacArthur did not “change his policy”. He always saw the Philippines as a prime U.S. responsibility with special connotations for him. New Guinea he was content to leave to the Australians.

The author is at pains to try to demonstrate a schism between General Blarney and his commanders, claiming that Blarney’s intentions were not fairly reflected in operational orders. It seems to me that there is no validity in this argument. Blarney would have simply relied on the low numbers of troops on the ground to ensure that the operations did not reach major proportions. On this subject the author quotes General Sturdee’s Operation Instruction of 18 October as vitally different from General Blarney’s instruction of 11 August in that Blarney had made no mention of destroying enemy forces. Blarney’s instruction of 11 August is not quoted in the article and the author fails to explain why that instruction should itself have differed from Blarney’s submission to War Cabinet of 22 May which did look to operations for “destroying the enemy”. The author makes the extraordinary statement that “… a void of precise intelligence … (meant) … there was no firm military rationale” (p. 48). Few military commanders would ever believe their intelligence to be “precise”, it is usually simply the best they can achieve in the circumstances. But its imprecision does not ipso facto mean that operations based on it lack military rationale.

The author contends that “the offensives … achieved nothing that could not have been achieved at far less cost”, but fails to suggest how this could have been done. (p. 51). The author has quoted from a limited base of sources; apart from one reference from Younger’s Australia and the Australians only two works are quoted, Hasluck and Keogh, and they are quoted only narrowly. No primary sources are quoted. And here too error piles on error—no publication dates are given; footnote 9 omits “p. 567”; and footnote 12, a reference from Hasluck is incorrectly ascribed to Keogh.

The author emphasised “military logistics” in the opening sentence but failed to discuss logistics in the article—indeed one must doubt whether the author understands the term logistics. It is extraordinary that in an article dealing with military affairs in wartime the author does not tell us what the official military histories said even if the findings were to be attacked. In fact, these histories—afford no support to the arguments in this really poor article. In the article there is much else that is unacceptable, for example the author’s confusion over the use of air power (p. 45). The article certainly did not merit publication in the Defence Force Journal.

Notes
2. op cit, p. 56
3. ibid, p. 57

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IN SUPPORT OF THE PAPUA NEW GUINEAN STUDENT IN AUSTRALIA

TRAINING FOREIGN SERVICE STUDENTS IS AN IMPORTANT PART OF AUSTRALIAN FOREIGN POLICY

By Major Bruce Copeland, BA, BEdSt, RAAEC

Introduction

FOR many years, Service personnel from Papua New Guinea have attended courses in Australia. Many have attended technical courses in the schools of the Royal Australian Navy, Australian Army and Royal Australian Air Force. Australian instructors have conducted these courses. Students have worked to gain skills appropriate to the Papua New Guinea Defence Force (PNGDF).

In this article, it will be suggested that many such students find difficulty with these courses. The problem may be with the individual students from cultural, linguistic and technical stand-points.

At the same time, it will be shown that problems may also lie in certain deficiencies within the Training Systems involved.

Not the least of these is the skill of the instructor. Often, through no fault of his/her own, the instructor may be unable to communicate effectively with people of different ethnic and cultural backgrounds.

Aim

The aim of this article is to:

• identify the problems that may face Australian instructors and PNG students involved with courses in Australia; and

• suggest strategies that might be used to lessen the problems that arise.

Background

This article has been prepared in conjunction with eight (8) articles that have appeared in the Defence Force Journal. In these articles the following aspects are relevant to the present article:

• the importance of categorized sequences of activities for students;
• the role of diagrams at required levels of generality to illustrate systems, sub-systems and processes for the benefit of students;
• the use of modules in Decision-Making that might be integrated with existing courses; and
• the need for Training Systems to maximize support for the instructor.

The present paper has been prepared in conjunction with the following article:

• 'In Support of our Friends, the Foreign Instructor and Student' — DFJ No. 50 Jan/Feb 1985.

The list of previous articles can be put together so that a reader may be aware that each successive article develops from all previous articles and depends upon these for continuity. Each article focusses upon a facet of the ‘whole’ as perceived by the writer.
The focus is the importance of Mastery Learning, as a means of reducing further those variables that will hamper the effectiveness of Training. In this context, the crucial variable is the competence of the instructor who may be poorly prepared for the task of translating objectives into student skills.

In the training of PNG students there is added, a linguistic and cultural component. Ignorance of these will greatly limit the effectiveness of the Australian instructor.

**Skill of the Instructor**

The Australian instructor should exhibit a special interest in training foreign students. He/she needs to be able to relate to and communicate with Service personnel from all parts of Papua New Guinea.

The instructor needs to be able to recognise and appreciate the culture based values of PNG citizens and to apply these to understanding the PNG student. There needs to be an understanding that Australian and Papua New Guinea citizens may differ in outlook in very many ways.

**Culture Based Values**

Most personnel of the PNGDF will hold values based on a village society. Many will have come from a village and clan. Some will not.

Upon retirement/resignation from the PNGDF, some will seek employment elsewhere in the public or private sector. Many will plan to return to village life, perhaps to take up land holdings and their rightful place in the clan.

The clan (wantok) links will often be the dominant feature in the life of the PNG person. Many people of PNG have the benefit at all times, of an ‘alternative life-style’ to which they can return at any time. This life-style is supportive of the individual and his/her immediate family.

Many Australians value excellence — the desire of the individual to surpass others in any area of effort. Competition exists also in PNG. However, there is also the attitude in PNG that competition is less important than conformity to the norms of the group. Competition is often clan based.

One could conclude that the Western sense of competition is a striving for excellence/advantage more by individuals than groups.

Some Australians place emphasis on the extended family obligations as do many citizens of Papua New Guinea. Some use the extended family as a means of acquiring and increasing group solidarity and wealth. This is reflected in the commercial enterprise of the Chinese, Italian and Greek communities in Australia.

Other groups operate through the nuclear family structure. The husband and wife tend to look mainly to the welfare of the children and do not experience the mutual obligations that exist in a Chinese, Italian, Greek or Papua New Guinean clan.

Unlike the other groups, the clan in Papua New Guinea does not place emphasis on the acquisition and maintenance of commercial empires to maintain clan prosperity. Wealth is used within a clan as a means of promoting status and clan obligations. Wealth is for distribution.

The Australian instructor who returns home each night to a nuclear family, whose parents may be living in a nursing home, who may acquire wealth for the benefit of the immediate family only, who may wait for the day of retirement to a home that will be bought with a pension commutation, is a very different person from many of the PNG students. Many Australians in the Defence Force will fit this general mould.

**Skill Areas**

Personnel of the PNGDF will attend a range of technical courses in Australia. The degrees of difficulty will vary, and with this, the problems of the instructors and students will increase.

Some courses will involve higher mathematics and physics. These will be applied to mechanical, electrical and electronic systems.

The mechanical and administrative skill areas will at least involve a concrete rather than abstract approach because the processes are more visible.

Electrical circuitry is more abstract and will involve the student in absorbing and applying a wide range of abstract technical terms that he had never experienced before.

To a PNG student, technical English is another language. Added to this is the immense difficulty that confronts the PNG student who does not have a background of technical culture.

A number of years ago, a reporter asked a PNG pilot at Point Cook to explain the prob-
lems he faced in learning to fly. The pilot made the point that he learned to fly before he was able to drive a car.

Australians do not understand the enormous achievement of a PNG student in overcoming the obstacles that have confronted him from early childhood. He had to attend primary school, pass the examination at the end of grade 6 and graduate from secondary school. His success meant that he was able to overcome shortage of textbooks and study facilities, and pursue his ambition in harmony with the obligations of the clan.

A PNG student may pass a course in car mechanics even though he had never before applied a spanner to an engine. He will not have had the experiences that are common to most young people in Australia. Village culture does not include toy trucks, trains, computers, meccano sets, motor mowers, and bicycles.

There is not the experience with technical Decision-Making that accompanies a technical culture. The student from childhood, may not have experienced the following:
- fault-finding,
- identifying cause and effect,
- establishing conclusions from evidence, and
- checking and double-checking.

At the same time, many Australian students can have had limited experience in a technical culture and, as a result, experience similar difficulties to those of many PNG students.

Textbooks

Australian instructors need to be aware that textbooks written in technical English may appear to be abstract 'gobbledygook' to many foreign students for whom English is a second language.

The Australian Service member could ponder the problems that he/she would encounter if sent on course to France, after a period of tuition in the French language. The student was to study 'aeronautics'.

The Australian in France would in effect, be involved with two courses in one. First, would be the language component that would set him/her apart from the French students. Then there would be the actual course in 'aeronautics' that even the French students may find problems with. The Australian student would have the same basic problems in comprehending the 'concepts' as would the French students. However, there is an added problem of understanding the explanations provided by the instructor and set down in the textbooks.

A similar problem will exist for many Service students of the PNGDF who attend courses in Australia. Even though many of these students will have studied English in schools, they may still face difficulties in comprehension of technical English as spoken by Australians.

There are texts that may provide many problems for the foreign student. The following have been taken from Service training manuals:

- 'A transistor is a non-vacuum semi-conducting combination of chemical elements used in electrical circuits in place of vacuum tubes. As far as automotive application is concerned, the transistor provides the means of furnishing greater current to the ignition coil, with the accompanying greater secondary voltage for firing the spark plugs, while at the same time, requiring less current through the breaker points'.
- 'Loose fitting bearing inserts are subject to overheating due to impeded heat transfer between the bearing and the bearing seat'.
- 'Electricity is characterized especially by the fact that it gives rise to a field or force possessing potential energy, and that, when moving in a stream (an electric current) it gives rise to a magnetic field of force with which kinetic energy is associated'.

Such texts must provide extreme difficulties for foreign students. The problem is enlarged on those courses in which the instructor explains the concept and then requires the students to read the text for homework.

It is a basic axiom of instruction that students should be given only that homework which the instructor knows will be completed successfully. Divergence from this can seldom be justified particularly in relation to students who experience difficulties on course.

Nothing will dampen student morale more than to be unable to complete homework successfully in the isolation of his/her study room.

It has been partly for this reason that the writer has always opted for practical mastery exercises to be completed for homework rather than theory from textbooks that the student may be unable to use effectively. At the same time, students should be given the skills of effective study in technical subjects involving the following:
- extracting information,
• recognizing cause and effect as the basis for interpreting technical statements and recognizing the appropriate ‘cause-effect’ cue words, and
• classifying data.

Use of Pidgin

Instruction of PNG students in Australia is conducted in English. This is accepted policy and the writer does not recommend that this be changed.

At the same time, we should be aware that the Pidgin language can be readily used in the explanation of technical processes.

In Pidgin, there is a minimum of abstract terms. It is possible for the Pidgin speaker to make all descriptions in concrete, logical and sequential language patterns. As a result, descriptions become more explanatory than those in English.

For the Australian instructor to learn and use Pidgin, he/she may have the experience of making all descriptions more explanatory. This may have the effect of inspiring the instructor to monitor his/her own technical descriptions in English. The instructor may become more vigilant in identifying the following in relation to technical descriptions:
• sentences containing technical jargon which will prevent understanding;
• long sentences with connecting phrases such as ‘are subject to’, ‘characterized by the fact’, ‘give rise to’ and ‘with an accompanying; and
• abstract terms explained by means of other abstract terms.

Glossary of Terms

On a recent familiarization visit to Papua New Guinea, the writer discovered a textbook for use at the Wau Ecology Institute and the Papua New Guinea Institute of Technology. Over 900 biological terms were explained in Pidgin for the benefit of students.

The following have been selected:
• ‘Germination’ — Nem bilong taim pikinini diwai i kamap diwai. (— the term given to the time that the seed becomes a plant).
• ‘Gestation’ — Nem bilong taim pikinini i stat (fertilization) na i kamap. (— the term given to the time the foetus starts and grows).

• ‘Gill’ — Nem bilong sampela samting i stap insait long enimel bilong wara na sol­­­­­­­­­­­­­­­­war. Gill em i olsem wanpela kain mit (organ) i save pulim win.宇宙 (—the term given to a part that is found inside freshwater and marine animals. The gill is the organ that breathes).

It should be possible for such a glossary to be applied to any technical course in the Australian Defence Force. The instructor need not be skilled in the language. The glossary could be prepared by a team of language experts and made available to the students as a reference text.

Even if the glossary above were translated back to English, we might be surprised that a range of less complex technical terms would emerge.

A Check-List of Terms

An instructor must be aware of the need to teach the technical language to PNG students at the same time that the skill area is developed.

It is unrealistic to expect that the technical terms could be taught to students prior to the course. Some basic terms could be developed prior to the course in Australia. However, many of the technical terms could not be taught except on the course by the subject specialist.

However, the terms must be taught on course. Every technical course involving foreign students must have a language teaching component.

The instructor needs to develop the ability to explain a technical concept in simple English. The students need to be shown how to explain technical concepts in simple English. From this point, the instructor should be able to introduce the technical terms against the background of the explanation in simple English.

The instructor needs to set up a means of teaching and systematically revising, the technical terms.

Some terms will provide difficulty for PNG students and some will not. Some words will have to be revised more often than others. The instructor will have to set up a means of identifying difficult words and revising these more often.

A suggested approach is to prepare lists of technical terms to be passed to students and revised at the start of each lesson.
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The instructor holds a master copy of all terms. The following technique is suggested:

- Revise selected words at the start of each lesson — five minutes.
- Place a dot next to the word when generally known.
- At the next revision, change the dots to strokes if generally known.
- If not, leave the dot as it is.
- At the next revision, change the dots to strokes and the ticks to crosses . . . and so on.

Description will be understood if the student is able to use the term in context, to explain the term in his/her own words. Revision should take place daily and extend throughout the course. The responsibility for revision lies with the instructor not the student. It is important to point out that the language skill of PNG students must not be ‘watered down’. After graduation they will still have to read maintenance manuals, all of which will be printed overseas.

However, this highlights the fact that the language component of any course is of crucial importance.

**Student Activity**

The instructor will promote interest and participation of PNG students if the basic components of leadership are applied to courses. This will involve the instructor in considering the range of needs of the student. These will include task needs, individual needs and group maintenance needs. As well, there should be a balance between passive listening and active doing by the student. This can be achieved by the instructor by:

- breaking the period into smaller parts for revision of vocabulary, marking of homework and the lesson together with practical activities based on the lessons;
- balancing theory with practical even in a theory lesson;
- starting and ending a lesson with a mechanical activity such as recalling of terms or labelling of diagrams provided by the instructor;
- having a small amusing surprise slip into a lesson such as a PNG joke, a cartoon or an overhead projector slide or photocopy of an interesting item from a PNG newspaper;
- giving only mechanical rather than theoretical homework to students that will enable accurate completion; and
- providing a series of mastery exercises to be used as the basis of student learning and revision.

**Mastery Exercises**

In the teaching of the function of a technical component to any student, there is a range of mastery tasks upon which to base an extended series of mastery exercises. With foreign students, there is also the need to promote language skills. The following exercises are suggested:

- Spell words correctly.
- Use words in context.
- Select appropriate words.
- Memorize information.
- Classify information.
• Interpret information.
• Label schematic diagrams with appropriate terms.
• Label given components with appropriate terms.
• Draw and label schematic diagrams.
• Relate a diagram to a component.
• Relate a description to a component.
• Carry out a series of tasks from a checklist.
• Disassemble a component.
• Assemble a component.
• Explain the working of a component.
• Maintain a component.
• Locate a fault in a component.
• Repair a component.
• Conduct a controlled experiment.
• Make a computation.

Each of these tasks would be the basis of forward work and revision. The skill of the Training Manager will depend upon his/her ability to plan these activities so that students master the skills from simple to complex in small incremental jumps. Revision is planned over the period of training by the same process.

Influences on the PNG Student

All people will find some difficulty if sent on course to a foreign country for an extended period. PNG students will find difficulty on Australian courses from a combination of the following:

• lack of experience in the appropriate technical English and background technical concepts;
• attitudes of competitiveness different from those of many Australians;
• a sense of reserve in the face of a more direct approach of many Australians;
• lack of familiarity with Australian culture; and
• concern for problems at home.

Questionnaire for Instructors

In the teaching of PNG students, the course developer and instructor need to consider a number of questions. The following are suggested:

• How many practical lessons do you conduct on your course?
• What activities are carried out in these lessons?
• How many theory lessons do you conduct?

• How do you conduct a theory lesson?
• How much time do you spend in a lesson on revision?
• What do you revise?
• What methods do you use to revise?
• Do you spend time teaching the technical terms?
• Do you have a strategy for usage of words?
• What do you know about the student’s level of background knowledge at the start of the course?
• Do you make an effort to introduce new concepts in terms of what the PNG student is already familiar with?
• Does time place limitations on you as an effective instructor of PNG students?
• In what way are you limited?
• Are you able to use Pidgin in social situations?

Retention of Skills

All students forget what they have learned. PNG students are no exception. Forgetting will be increased if students are expected to recall information in English terms with which they are not comfortable, through no fault of their own. PNG students will ‘forget’ under the following conditions:

• after a leave break;
• if what was learned was not properly understood;
• if what was to be learned was expressed too much in abstract technical terms;
• if the theory was not applied to practical situations;
• if knowledge/skills were not consolidated systematically in class;
• if revision was left to the student alone; and
• if knowledge/skills were not supported by diagrams and related equipment.

Instructors can make difficulties for students if they have the approach that courses should not be made too easy for the students. These instructors would maintain that courses should be designed to sort out the ‘sheep’ from the ‘goats’.

The most efficient and effective course is the one that minimizes error by students and maximizes the elimination of student errors.

Fenstermacher points out that ‘tasks which produce low error rates provide situations where students can rapidly improve their performance
and continue to learn as tasks with small increases in difficulty are encountered. This is a basic prerequisite for effective Mastery Learning of skills by all students on this planet.

This can only be achieved if a Mastery Learning mechanism is set up and progressively improved by incoming instructors. Mastery Learning exercises train both the instructors and students.

Models of Spoken English
In the past, the teachers in the Papua New Guinea Education system were drawn largely from Australia. Thus PNG school children were used to Australian idiom.

In recent years, the teachers in Papua New Guinea have come from Papua New Guinea, Britain, India and Sri Lanka. Thus other models of spoken English now confront the PNG school children and the lack of familiarity with Australian idiom would be carried by young soldiers into the PNGDF.

These young soldiers would then attend courses in Australia and be quite unused to the Australian native speaker.

Instructor as Friend
Australian instructors need to be able to relate to PNG students for whom they are responsible. An understanding of Pidgin and PNG culture would be of advantage.

One of the over-riding problems facing people who study overseas, is loneliness and homesickness. Personal problems at home are magnified many times.

Skill in Pidgin and understanding of PNG culture is an indication of willingness of the Australian instructor to relate to the PNG student.

Recognition of the Need
It is important that the three Services of the Defence Force acknowledge that special consideration should be given to techniques of training of foreign students.

Effort has been made by the Royal Australian Air Force in the training of PNG students at the RAAF School of Technical Training at Wagga Wagga.

An incorrect assumption would be that the training of foreign students is already covered by the ‘broad sweep’ of the Training System already in place. Present Training Systems do not take account of special training requirements, despite the assumption by some that the Training System is all inclusive.

Conclusion
Difficulties that PNG students may experience on course in Australia may be lessened by the skill of the instructor.

Support for the instructors can only be achieved if there is specific focus on training of foreign students within the respective training systems.

Such support can only be achieved if there is an overall recognition by those involved in management of Training that extra resources must be made available to maximize effectiveness in training foreign students.

Recommendations
The following recommendations are made in support of the PNG student in Australia. It is recommended that:

- Recognition be given to the need of PNG students on course to acquire both task skills and language appropriate to the task area;
- Australian instructors become familiar with all aspects appropriate to training PNG students;
• Resources be made available to maximize the effectiveness of those involved in training foreign students; and
• Mastery Learning be regarded as basic to training foreign students.

NOTES

References
5. Evans, R. M. ‘Military Curriculum Development. With Instructional Systems Development, the Marines are combining mastery learning with variable time strategy in a curriculum that trains marginal students for high technology jobs’ in Educational Leadership No. 81.

Footnote: In recent years, there has been discussion in the Royal Australian Air Force of aspects of training students from PNG. A pilot course had been conducted at the RAAF School of Languages in March 1985 to provide Australian instructors with understanding of language, culture and aspects of course design and instruction appropriate to training students from a foreign country. The paper ‘In Support of the Papua New Guinean Student in Australia’ was prepared to summarize aspects of the course. The first scheduled course will be conducted at the RAAF School of Languages in January 1986. Personnel from all Services will be able to attend.

Major Copeland has contributed several articles to the Defence Force Journal on aspects of Training. He is presently posted to the RAAF School of Languages. Over a six year period, he has conducted 35 courses to prepare government personnel for posting to PNG. Courses involve language, culture, living conditions and aspects of Training appropriate to Papua New Guinea. Australian Service Personnel involved in training PNG students in Australia have also attended the course.
"If we could First know where we are, and whither we are Tending, we could better Judge what to do and how to do it".

Abraham Lincoln

To many of its supporters of 1945 the United Nations (UN) has failed in its primary task of ameliorating conflict. Those who saw it as a precursor to world government have been similarly disappointed. It must be acknowledged that the UN has failed to prevent those upheavals it was charged to eliminate, but it has nevertheless evolved to be a major participant in the pursuit of international peace and harmony.

The UN's evolution has been accompanied by fundamental development and change, and despite its disappointments, shows no sign of collapse. Inia Claude observes that the UN has a character of "changeability" and "changingness", and can be expected to continue to adapt to future challenges. Nevertheless, the UN has evolved to be "government by the Great Powers" and is capable of doing no more than the major powers permit. While changes to its authority, structure and operation can be formulated to improve its capabilities as a "peace-keeper" in the future, such efforts are largely unrealistic and impractical in the absence of broader international moral and political consensus. To appreciate this dilemma we must understand its threads of continuity and its "changingness".

The UN was the logical successor to the League of Nations, and lacked many of the latter's weaknesses. It was established primarily to prevent the recurrence of war, with its guiding principles enshrined in the Charter. The Charter detailed the peacekeeping machinery to be used in times of conflict. It provided (Articles 39-50) that members must attempt to resolve conflict between themselves by traditional diplomacy, conciliation and arbitration or through regional organisations. Should resolution remain elusive, the Security Council may recommend a solution to the parties in dispute. Furthermore, if the Security Council decides that peace is threatened or violated, it may require the belligerents to desist, invoke non-military sanctions or create an international police force to end hostilities. The General Assembly may additionally recommend a solution and/or military sanctions (Articles 11-14 and the Uniting for Peace Resolution, 1950). The Secretary General may also activate the Security Council at any stage (Article 99). Primary responsibility for peace-keeping was thus entrusted to the Security Council, with the General Assembly in a supportive role. The Charter also acknowledged that conflict prevention goes hand in hand with international law, improved international harmony, standards of living, employment and social and economic progress and development.

The Charter reflected the priorities and aspirations of the major Powers in 1945. It was concerned largely with conflict resolution (41 articles) rather than prevention (10 articles) and permitted wars of self-determination and self-defence. It provided for "world government" by the Great Powers in the composition of the
Security Council, the right of veto by the permanent members and the restriction on the General Assembly from making political decisions. This distribution of functions thus contradicted the Charter's "sovereign equality". National sovereignty was further limited because the UN could decide when members were to employ armed force and commit forces against another sovereign state. Above all, the Charter was predicated on continued unity among the Great Powers. This was not to be the case.

Despite the Charters prescriptions, the UN "peace-keeping" function has evolved largely in response to three phenomena. The first was the Cold War which split the UN into opposing East-West blocs, undermined its principle of unanimity, deadlocked the Security Council and politicised the UN generally. The organisation subsequently acted to keep the major Powers peacefully apart or to limit any conflict between them ("preventative diplomacy").

Secondly, the thermonuclear revolution and its attendant risks of global annihilation altered the nature of war, the nature of politics and thus the nature of the UN. This was manifested in the rise of disarmament and pacificist issues ("prudential pacifism") and the demise of collective security.

Thirdly, the decolonisation process saw the UN functioning to confer and revoke legitimacy. After 1955 the number of former colonies swelled UN membership. These new arrivals were united in ideological consensus, and increasingly represented a formidable neutralist non aligned voting bloc in the General Assembly. Their priorities were the end of colonialism and racism, the New International Economic Order and freedom from political interference. The US was henceforth no longer guaranteed parliamentary victory in the General Assembly, and the USSR no longer the guarantor of General Assembly criticism. However, the General Assembly was soon paralysed by the delinquency of these new states and, in turn, witnessed the rise of the Secretary General and reemergence of the Security Council as the UN's major "peace-keepers".

Despite the above, and the deadlocked Security Council, the peace-keeping potential of the General Assembly is not bankrupt. Increasingly it has reflected public opinion and checked the actions of predatory states who wished to avoid Assembly censure. Furthermore, its "recommendations" are increasingly heeded — "obedience (to recommendations) is a growing tradition which makes disobedience increasingly difficult".

It is impossible to determine how much conflict the UN has prevented and how much security it has provided. It has certainly proven useful in the application of third party techniques which have prevented or shortened conflicts. It was particularly successful in assisting with the peaceful decolonisation process. It also provides a unique speech-making forum which is increasingly viewed as a substitute for armed conflict. Yet the UN's successes are clouded by its failures. In recent years it has failed to resolve Middle East conflicts despite a UN presence and the focus of world attention, and conflict in the sub-continent, South Atlantic, Cambodia, Africa and South America. It has failed to achieve the reduction of arms called for in the Charter. What then are the shortfalls of the UN as a "peace-keeper"?

As already noted, the Charter provides the UN with its structure, boundaries and framework. It recognises the reality that not all disputes will be settled. Yet it does not fit in well with the contemporary environment. It fails to define what is meant by "threat to peace", "act of aggression" (Article 39) or "self defence" (Article 51). The requirement for members to provide forces for disposal by the Security Council and obligatory military sanctions (Articles 42 and 43) are today dead letters. The Military Staff Committee is as far as the UN has gone in implementing military enforcement provisions. Furthermore, the Charter failed to provide for the shifting emphasis on security matters between the Secretary General, the Security Council and the General Assembly.

The major functional weakness of the UN is the lack of commitment to its ideals and principles by its members, particularly the major Powers. The UN can do only what its members will it to do. It is today a political organisation in which members are locked in continual power and legitimacy struggles. Increasingly members are using the UN as a foreign policy tool, and increasingly they seek to avoid compromise. Efforts to adequately define "aggression" and "self determination" have founded on this political confrontation. Voting patterns change as selfish interests change. Furthermore, members are increasingly working outside the UN (as required by the Charter) to resolve their differences. Thus, only when compromise is
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doomed do members turn to the UN, rendering it virtually impotent at resolving conflicts before they reach crisis stage. Without the members confidence in the UN as a "peace-keeper", and without their responsible conduct as members of the global community, the UN is doomed to the role of peripheral crisis manager, of limited effect.

Those who saw the UN as a collective security organisation have been disappointed at its total failure in this regard. The General Assembly Uniting for Peace Resolution (1950) and the participation of sixteen members in Korea is the closest the organisation has moved towards collective security. The Security Council deadlock, the continuing adherence to balance of power and status quo politics by the major Powers, the lack of definition in contentious areas (such as "aggression"), the requirement for states to participate in action which may be injurious to their interests and the UN’s slow enforcement reactions have frustrated all collective security efforts. This failure prompted the development of "preventative diplomacy" as a third party technique which today is a major component in the UN peacekeeping inventory. This is the interposition of UN forces between belligerents after an armed conflict with a view to preventing surprise attacks and keeping the major powers apart. Forces for these duties are routinely drawn from neutral small-middle-range powers but cannot be stationed on territory without the states continued consent. This form of peacekeeping is rendered unpredictable because, despite the Charter provisions, there is no assurance that nations will contribute the necessary forces or finance the operations(s) both aspects reflecting the ongoing power political contest within the UN.

How then can the UN be fashioned into a more effective "peace-keeper"? Fundamentally the members, and the major Powers in particular, must wish the organisation to play a more effective peace-keeping role. They must work for broader political and moral consensus and agree to seek to avoid war. Dr. Evatt observed in 1948 that there could be "no substantial improvement in the work of the organisation so long as there is suspicion and lack of good will and understanding among members". Claude observed that the UN has "uses, not purposes". Its members have purposes which are often not conducive to peace and order.

Such a turn-about in the attitudes of the major Powers is improbable. It is unrealistic to expect that Marxists will embrace Capitalists or that major Powers will consign their interests into the care of the majority vote in the UN, or renounce the use of force. Furthermore, it is a "great delusion" to expect to transform the UN into a "synthetic artificially created great Power, powerful in its own right presiding over enforcing world peace and orderly conduct". Yet the UN can still act as a prime mover for peace. It needs to develop embryonic perceptions of common interest in the economic, scientific and disarmament spheres. The Major Powers need to agree on rules of peaceful coexistence and arms control. Such cooperation will reduce global insecurity and promote a sense of common interest which may spill-over into the political arena.

Despite its weaknesses, the Charter is not the decisive determinant of UN behaviour. It is the "runway" from which the UN "takes off". It has proven sufficiently flexible to permit the UN’s changeability and will continue to do so. As its flexibility ensures that it reflects the fluctuating contradictions and realities of the international environment, it is doubtful if amendment would be beneficial. If it was amended, it should define more clearly the concepts of "aggression" and "self-defence", increase emphasis on conflict prevention and provide for earlier referral of potential conflict to the organisation. Nevertheless, as already noted, amendment would require unprecedented political consensus such that amendment would no longer be necessary.

Membership of the UN must be open to all. Should it be possible to agree on the necessary Charter amendment, Security Council membership should be extended to more accurately reflect contemporary power relationships. There is justification to add Japan as a permanent member, drop Britain and France from permanent status and introduce more middle ranking powers without right to veto. The veto should be retained as a "safety valve" (should it be abolished it is quite unrealistic to expect that the Powers will not vote or act in any way inimical to their interests).

The General Assembly needs to be increasingly linked to the Security Council’s security function. Its membership should be broadened, or a Security Committee established to perform its security function. It should not be given
authority other than to recommend because of disparities of power and influence (2/3 of the Assembly vote could represent a mere 10% of mankind). A weighted voting system could make its resolutions more representative, but it is unlikely that the principle upon which weighting could be based would be agreed upon.

The Secretary General and Secretariat must play a more active third party role in “peacekeeping”. The Military Planning Staff and Field Service Organisation needs reinforcement so that military planning and field support capabilities are in place at all times. It is unrealistic, however, to expect a UN standing police force, as envisaged in the Charter, to be established. Such a concept is tantamount to that of world government. It is unwise to expect nations to relinquish operational control of their contingents under UN authority for possible use against a major power (or smaller power backed by a major power).

The UN has evolved since 1945 as a major actor in international peacekeeping. It has, however, failed in its primary task of eliminating war and the promotion of order and security. It has failed because its membership, and great Powers in particular, has not wished it to succeed. Yet the UN has produced some successes. It has provided an array of third party functions, an arena in which nations develop relationships, a forum bestowing political legitimacy and fostering non-political common interests and in which the Great Powers increasingly demonstrate restraint, circumspection and communication. Rather than criticize the UN for failure in a turbulent political climate we should explore and develop its successes. It should continue to seek peace through justice redistribution and international law, together with its third party and neutralist functions, reinforcing traditional diplomacy and continuing the trends towards universality and procedural adjustment. It is the best equipped international organisation to perform this role. Although not a panacea for peace, the UN is “a set of rules and a set of tools”\(^\text{13}\). These tools need to be fashioned and adapted to meet each challenge.

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**NOTES**

2. 15 members since 1965 — 5 permanent and the remainder on a two year term.
4. Signalling increasing US disinterest towards the UN.
6. The belligerents must also respect their roles and limitations.
7. Most powerfully demonstrated in the mounting of the Congo operation.
10. Ibid, page 121.
11. Ibid, page 120.

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Major McCausland graduated from the Royal Military College in 1970 into the Royal Australian Infantry Corps. He attended the Indian Defence Services Staff College in 1981, and is presently a Staff Officer on the Headquarters of Field Force Command. This article was prepared as part of the “Conflict Management” course conducted by Deakin University.
The Royal Australian Navy’s Hydrographic Service was founded in 1920. In 1946, Cabinet directed that the Department of Defence was to be the Government Department responsible for surveying and charting of Australian and certain adjacent waters. This responsibility has since been reaffirmed by government on a number of occasions. The Hydrographic Service has developed along the lines of the Royal Navy’s Hydrographic Department which was established in 1795. Close liaison between the two authorities has been maintained.

The Hydrographic Service is headed by the Hydrographer RAN located, with a small staff, in Canberra. Captain J. A. L. Myres, Royal Navy, turned over the position of Hydrographer to Captain J. S. Compton RAN in June 1985. Major functions are exercised by the Hydrographic Office in Sydney. This office, under the overall direction of the Hydrographer, co-ordinates the survey efforts of RAN assets; collates data received from other surveying authorities; produces and updates charts from original survey data; and distributes charts and publications to commercial and Naval users.

Requirements for Hydrographic Surveys

Hydrographic knowledge is required for:
- Marine transportation;
- Surveillance and exertion of sovereignty;
- Maritime defence;
- Offshore boundary delimitation;
- Coastal zone management;
- Environmental concerns; and
- Fulfilling national responsibilities conferred by the Law of the Sea.

Of all these requirements, the first is probably the most pressing. Navigational charts are essential for ships to transit the waters of coastal states and to enter and leave their harbours.

Over 90% of the world’s trade is carried by sea and there is little likelihood that this proportion will change significantly. Increasing costs of fuel and labour have made smaller ships uneconomic and modern ships are larger and fewer. A maritime nation like Australia is heavily dependent on sea transportation and with this dependence comes the onus of providing adequate hydrographic surveys and charting coverage. Vessels of 150,000 dwt, unheard of 20 years ago, are now regular visitors to Australian ports. These Very Large Crude Carriers (VLCC) with draughts of 15 metres or more are forced to accept lesser under keel clearances than their smaller predecessors. It is normal practice for VLCCs to navigate with less than 10% of their draught below their keels. This implies that 20 metre draught vessels will have 2 metres or less below their keels and ship masters must be confident that the charts they use are based on modern surveys which are capable of detecting objects rising 2 metres above the sea bed.

The groundings of the Oceanix Grandeur in Torres Strait in 1971 and the Bravenes in Bass Strait in 1983 are evidence of the imperfections which exist in well-known seaways which were thought to be either thoroughly surveyed or proven safe by continuous use.
The Survey Task

The state of hydrographic surveys on the Australian continental shelf at first glance is disappointing. Only 20 per cent of the shelf has been surveyed to acceptable standards which allow modern ships to navigate with complete safety. A further 16 per cent has been surveyed to less than acceptable standards such that further surveys will be required at a later date. The remaining 64 per cent is incompletely surveyed, the only guide to water depth being small scale reconnaissance surveys or early lead line surveys. To put these seemingly disappointing figures into perspective, it must be remembered that about half the area of the continental shelf is less than 50 metres deep and about a quarter is less than 30 metres deep. Also, these percentages do not take into account either the differing rates of effort required to survey in different water depths or the number of areas rarely used by commercial or naval shipping. Figure 1 depicts RAN surveys in Australian waters conducted between 1945 and 1984.

Ideally, the continental shelf should be fully surveyed to modern standards so that ships of any size could proceed anywhere within their
own draught limitations. Limited resources are unlikely to allow this ideal to be achieved for many decades so the Hydrographer aims to work to the following intermediate targets:

- provide a safe direct route round the continent with safe approaches to ports and safe routes through Australian waters to overseas ports;
- provide less detailed information in other areas to allow later development of new ports and shipping channels; and
- provide sufficient information to seaward of the continental shelf to ensure safe navigation.

Provision of safe coastal routes require surveys to be progressed along the west and north coasts, in the Gulf of Carpentaria and in passages through the Great Barrier Reef. Other areas require to be regularly resurveyed to meet the needs of deeper draught shipping. These areas include the approaches to the iron ore ports in Western Australia and the Inner Route of the Great Barrier Reef including Torres Strait.

The best example of gathering less detailed information for future development was the discovery in 1982 of Hydrographer's Passage through the Barrier Reef, east of Mackay. This was a significant achievement for the Hydrographic Service. The passage has the potential to save commercial shippers millions of dollars in freight rates between Hay Point and Japan by shortening the round trip by 500 nautical miles. The new chart (AUS 821) of the passage was released in December 1984 in time for the opening of the passage for daytime transit. Installation of four new lights has since allowed the passage to open for night transits. The response by ship owners has been less than expected due to the cost of pilotage fees and the navigational challenge of piloting VLCCs through reef strewn waters. But the passage is new and as regular users gain pilotage exemptions, the savings available from using this shorter route will become more attractive.

Whilst the intermediate targets above will satisfy commercial and naval vessels alike, there is a requirement for surveys specifically for defence purposes, the results of which may not necessarily benefit commercial vessels. Surveys of exercise areas for varying purposes have been identified but the progression of these surveys must be balanced against commercial needs and the resources available to meet the task.

The Charting Task

Hydrographic surveying is the first step in the provision of an adequate charting coverage. Thereafter comes the compilation, publication and constant updating of nautical charts. Under a tripartite agreement with UK and New Zealand, Australia is responsible for providing chart coverage for an area stretching from the southern shores of Indonesia to the Antarctic, from west of the Cocos Islands to east of Norfolk Island and including PNG waters (See Figure 2).

Some 650 charts of differing scales are required to fully cover the Australian charting area. 400 charts already exist but 240 of these are published in imperial units. 490 charts therefore, require to be either compiled from original surveys or converted to metric units. Imperial charts require navigators to convert from one system of units to another which is a potentially dangerous practice. The effort required to metricate a chart is as much as is required to compile a new chart. As well as new charts, new editions of existing charts are produced when a recent survey has a significant effect on that chart.

Over the last five years, the Hydrographic Service has produced on average, 10 new charts and 15 new editions per annum. Recent organisational changes should allow this rate of production to almost double over the next few years but considering the magnitude of the task, it will still take at least 25 years to complete the current estimate of the chart series and even then, some charts will still depend on inadequate data.

Charts are based on surveys and information from a wide variety of sources. In addition to hydrographic surveys done by RAN ships, data is received from mapping authorities, port and marine authorities, research institutions, watchful mariners and private individuals with an interest in the sea. Charts are corrected by weekly editions of Notices to Mariners which inform users of new dangers or changes to charted information. Some of these are issued as radio navigation warnings by the Federal Sea Safety and Surveillance Centre as soon as they come to hand. Other alterations which do not require immediate action or are too compre-
FIGURE 2

Area of Australian Charting Responsibility

Australian Charting Responsibility

New Zealand Charting Responsibility

AUSTRALIAN ANTARCTIC TERRITORY

Ross Dep.
hensive for Notices to Mariners are incorporated in a reprint or a new edition of the chart.

Australian charts are produced to standards laid down by the International Hydrographic Organisation based at Monaco, and a copy of all Australian charts is lodged with the IHO as part of a free international exchange of charting information.

Apart from supplying charts to the RAN and other government departments, the Hydrographer is also responsible for administering the sale of charts to commercial users and the public. Sales are made, by agreement, through 70 Australian and 12 overseas chart agents. Sales over the last few years have approached $750,000 per annum. The current price of about $10 for an Australian chart does not reflect the full cost of surveys and production so that price still represents a good bargain.

**Resources**

The Hydrographic Service has survey ships and the Hydrographic Office in North Sydney as its major assets. Some 100 naval staff and 80 civilian staff are employed full time in surveying and charting while 150 naval personnel of other categories are employed as crews in the survey ships. Two dedicated survey ships HMAS Moresby, based in Perth, and HMAS Flinders, based in Cairns, undertake the majority of survey work. An oceanographic research ship HMAS Cook, based in Sydney, contributes some data. Two heavy landing craft HMA Ships Betano and Brunei, based in Brisbane, are being fitted out during 1985 as inshore survey craft until dedicated ships are constructed. The RAN School of Hydrographic Surveying in Sydney provides basic training for naval personnel at all levels.
New Directions

The Hydrographic Service has taken the lead in a number of areas in a bid to overcome the shortage of resources. The most significant technological advance is the Laser Airborne Depth Sounder (LADS) which is being developed by the Defence Science and Technology Organisation. The LADS system operates within an aircraft which flies at 500 metres emitting two vertically stabilised laser beams. A red laser references the sea surface and a green laser references the sea bed enabling the depth to be computed. This high speed measuring technique enables a 250 metre wide swath of soundings to be collected to a depth of 30 metres by day and 50 metres at night. LADS is not expected to be operating until later this decade but its use for 10 years will provide extensive reconnaissance as well as detailed surveys and will significantly decrease the time required to complete the surveying task.

A major initiative in the charting area has been the acquisition in 1979, of a computerised chart production system, Autochart. This system will eventually allow the charting data base to be digitally stored and will greatly simplify the chart production process. In the early years, data has to be manually digitised which is a laborious process so it will be some time before the real advantages of Autochart are apparent. Current expansion of the system centres on the development of a high density data base which will be able to accept digital survey data from LADS and the ships’ data processing systems. This system is in the forefront of world development and has the potential to significantly reduce the charting backlog as the digital data base is gradually expanded.

The floating surveying resources are to be expanded by the acquisition of inshore survey vessels during the next five years. New shipborne data logging and processing systems and
a range of new and replacement minor equipments are being considered for purchase in the near future.

A notable change in direction for the Hydrographic Service is the extension of its interests beyond the immediate vicinity of Australian waters. Australia is taking the lead in the South West Pacific to ensure the hydrographic knowledge keeps pace with development of coastal states, and the responsibilities thrust upon them by the Law of the Sea Convention. Australia has had an adviser attached to the Solomon Islands Hydrographic Unit since 1981. The adviser has established the unit and has progressed inshore surveys with modest resources. In 1982, the RAN supplied a survey party onboard the Department of Transport ship MV Cape Pillar whilst the ship conducted a deep water survey in Solomon Islands waters. Similar surveys of four months duration, funded by the Australian Development Assistance Bureau, were conducted in Vanuatu during 1984 and Western Samoa in 1985. Further surveys are planned for future years.

The RAN School of Hydrographic Surveying has provided places on all its courses for foreign students. Increased interest by regional countries led to the first course conducted solely for foreign students being established in 1984. Students from PNG, Solomon Islands, Vanuatu, Fiji, Thailand, Malaysia and Indonesia as well as other African and Asian countries have been trained at the School.

Australia has had a Memorandum of Understanding with PNG for the conduct of surveys and the production of charts since 1978. Shortage of resources and a preoccupation with charting deficiencies closer to home have pre-
vented any RAN effort being made in PNG since 1976. A more outward looking view by the Hydrographic Service and a more positive approach by PNG led to discussions in 1985 for future surveys and charting programmes. HMAS Flinders is planned to conduct surveys of PNG waters during 1986 in areas which are of commercial and strategic importance.

The paucity of charting information in the Antarctic has been of some concern to Australia. In February 1985, a Hydrographic Service team undertook a reconnaissance of the approaches to the Australian bases at Mawson and Davis with a view to conducting surveys in subsequent summers. Negotiations are proceeding with the Department of Science and Technology, Antarctic Division, for a programme of surveys. The waters in the Antarctic are hazardous and uninviting and surveys there will present a completely different challenge for the Hydrographic Service. Surveys of waters surrounding Cocos and Christmas Islands were conducted in 1983 and 1984 for navigational safety but the conduct of this work is a natural adjunct to Australian sovereignty over these island territories.

Conclusion

This article has attempted to present an outline of the RAN Hydrographic Service and the work it undertakes. The magnitude of the surveying and charting tasks and deficiencies in chart coverage have been outlined — these are factors of which every chart user should be aware. But the picture is not meant to be too gloomy: routes used by the bulk of commercial shipping have been adequately surveyed or proven safe by continuous usage. Modern charts now contain a Reliability Diagram which shows the quality of source data used in compiling the chart thus allowing a prudent mariner to interpret where on the chart he can proceed and the level of risk attached. Finally, the paper outlines new initiatives being taken both in equipment and international co-operation. The Hydrographic Service is at the forefront of hydrographic technology in a bid to overcome the shortage of resources to meet the enormous task ahead. The LADS Project leads the world in laser hydrography and overseas sales of the system may be possible after it has been proven in service by the RAN. Australia is making a substantial contribution in the field of hydrography to developing coastal states. Assistance with establishing hydrographic units, deep water surveys and hydrographic training are positive signs of Australia’s interest in the South West Pacific. Surveys by RAN ships in the waters of Australia’s Indian Ocean territories in the last few years are supportive of Australia’s sovereignty over these territories. Surveys in Antarctica will support Australia’s sovereignty claim to the territory in addition to ensuring safe navigation in its waters.

The Hydrographic Service is a vital element of Australia’s maritime identity. New directions taken by the Service will ensure that the Australian maritime industry will be able to navigate its way safely into the twenty-first century.

Acknowledgement


Note: This article first appeared in Maritime Studies No 23 May/June 1985.

Lieutenant Commander Bob Willis graduated from the Royal Australian Naval College in 1971. He is a graduate in surveying from the University of New South Wales and is a specialist in hydrographic surveying. His most recent sea posting was as Executive Officer of HMAS MORESBY prior to attending Naval Staff College in 1983. LCDR Willis is currently serving as Staff Officer Hydrography in Navy Office, Canberra.
SOME COMMENTS on the ROYAL MILITARY COLLEGE OF SCIENCE, SHRIVENHAM and the AUSTRALIAN DEFENCE FORCE ACADEMY

By Brigadier M. H. MacKenzie-Orr, OBE, GM

Introduction

OVER recent years considerable effort has been devoted to identifying appointments for which Technical Staff training is considered essential. A further list of appointments for which such training is considered desirable has also been identified. In the Navy and Air Force considerable attention has recently been devoted to the need for and means of achieving post-graduate education in applied science and technology at about mid-career. In most cases the need is for directed post-graduate study in the sciences and technologies relevant to particular services and not merely for a post-graduate degree in any general area of science or technology.

During and since WWII, the Australian Army has sent an increasing number of suitably qualified students to the Royal Military College of Science in the U.K. The students, at senior Captain/Major level, undertake a year of academic and military study, including projects selected by academic and military staff in conjunction with research and development establishments and commercial organisations involved in the research, design and development of military systems and material. In the evolution of the courses conducted at RMCS selected graduates are encouraged to submit original work for consideration for an award of an M.Sc. degree. Further post-graduate courses at M.Sc. standard are available for graduates with more specialised requirements in the fields of management of information systems, guided weapons, vehicles and guns technology. In addition to this post-graduate activity, young Army and Air Force officers attend 3-year courses leading to the awards of BSc. or B.Eng. degrees. The college is self-contained in the Wiltshire countryside with a broad spectrum of students from first-year undergraduates to senior officers attending seminars or short application and appreciation courses.

Comparison of RMCoFS and ADFA

The charters and comparative notes on RMCoFS and ADFA are attached to this article. The major points of similarity are:

- The size and composition of military, academic and support staffs;
- The aim of training a significant proportion of the services requirement for graduate officers in a service environment; and
- The facilities, country location and staff to student ratios.
The major points of difference are:
- The ratio of post-graduate to undergraduate students;
- The amount of research into military science and technology undertaken; and
- The degree of influence and direction of syllabi for first degree and post-graduate studies exercised by the Defence Force.

RAF Experience
Following the cessation of RAF graduate training for engineers and armament officers at Cranwell in 1974 and the recruiting of direct entry graduates from civilian universities into these branches, the RAF found increasing difficulty in meeting its requirements for officers trained in these disciplines. To quote the Frodsham report (The Provision of Engineer Officers in the Armed Forces, by A. E. Frodsham, CBE, December 1983), "There is a great shortage of engineer officers in the RAF and the deficiencies have been made up by recruiting many whose professional backgrounds are inadequate for the tasks required of them." With effect from 1985 the RAF will send some 30-40 under-graduates annually to the RMCofS for first degree studies in engineering and science.

RMCofS
During a recent visit to RMCofS (August 1984) a number of important points were made regarding the future development of the college. The college contributes to the Army (and increasingly to the other services) in three main teaching areas:
- a. It meets the major part of the Army's requirement for graduates in engineering and applied science;
- b. It provides education in military technology for Army Staff Courses and at second degree level for weapons and general staff officers; and
- c. It conducts a range of specialised short courses.

To provide the basic requirement of a competent and up-to-date academic staff and a relevant military input to the course content, integrated academic staff provided by the Cranfield Institute of Technology, and Military Staff provided by the MOD, both contribute to the teaching of all courses and to the management and conduct of a significant amount of research. The need for a considerable research programme in RMCofS was continually stressed as of major importance in ensuring the development of the teaching function in parallel with the rate of technological advance with which college graduates would be required to contend.

Despite an increase in the number of first degrees awarded in the U.K., from 13,700 in 1950 to 90,000 in 1981, Frodsham suggested that without Shrivenham and Manadon (RN College) the Services need for engineering graduates could be as high as 7% of the total output of civilian tertiary institutions. (By reverse calculation the two service institutions produce 4% of the national output of engineering graduates). With current demographic trends and without some control of the share of resource available to the nation, Army believes that they will be fishing in a smaller pool for engineering and applied science graduates when the demand for such fish will produce many other anglers casting fatter baited hooks.

A final quote from Frodsham: "I believe that the choice of degree and university for those sponsored by the MOD should be far more controlled. There is little advantage in paying people to read for degrees which are irrelevant sometimes at universities whose reputation in the sector is limited. The thinking seems to be that any degree and any learning, however inappropriate, are better than none, and similarly that all training is good however long it may take. I do not think that is true and I am worried by the effect that such policies may have on some young officers who see their training stretching out interminably over the years."

The RMCofS, which had its origin in the 18th Century, continues to evolve at a pace which reflects that of technological change. It feels that a balance must be struck between the need for academic freedom and a degree of direction into the areas of applied science and engineering appropriate to Defence needs. It also believes that a significant amount of research into Military science and technology is an essential part of the ambience in which its Military students are taught. These are considered to be great advantages in a community which houses and teaches young men at the start of their service careers and, as fellow students and researchers, those who have progressed some considerable distance in both their military and technological experience.
ADFA

ADFA is newly minted albeit with an academic tradition based on RMC Duntroon. Australia does not have the technologically advanced industrial base possessed by the UK nor the same scale of military technology. It has been stated as a national aim that Australia must strive to attain a greater degree of self-sufficiency in technology in general and in military technology in particular. The cost of procuring high technology overseas and of providing overseas training for the users, managers and supporters of such technology is escalating at a rate which far exceeds conceivable increases in the Defence Budget. A necessary prerequisite to increasing self-sufficiency in technology must surely be to increase both the quality and the quantity of the personnel who will be its practitioners,利用izers and managers. ADFA has a charter which makes no mention of science or technology yet its graduates will be increasingly constrained by the limits to which their own and enemy forces are supported by military technology. Whilst it is unlikely that Australia could become self-sufficient in the education of service officers in science and technology, it would seem both desirable and possible for an institution such as ADFA to make a significant contribution to the full spectrum of the educational needs of the uniformed and civilian components of the Defence Force.

Among the problems posed by the rate of technological advance are:

- The proliferation of technological options of military significance;
- The military requirement seeking solutions at the frontiers of the technologies concerned;
- The varying rate of advance between technologies being very rapid in some; and
- The interrelation of traditionally different technologies in single military equipments or systems.

The ADFA graduates will doubtless develop a loyalty to the academy which will be a source of inspiration and pride throughout their service careers. They may well consider that time spent on their initial graduate and military education will equip them for the rest of their careers — at graduation. As they progress through their service training, specialist training and staff training they will rapidly realize that ADFA was indeed only a beginning. The services recognise the need for continuation in education. Training is rightly placed in service schools and establishments where the best practitioners of desirable skills impart their knowledge. Education implies the full development of the individual in all intellectual respects and is a continuous process more readily pursued by the intellectually curious than the coupon collector. Such a process of education is obviously facilitated by an ambience which combines both academic and military opportunities — such as ADFA.

Conclusions

The RMCoS has had considerable experience of providing an appropriate education in science and technology for service officers. It has identified a mix of graduate, post-graduate and specialist courses which meet the requirements of the British Army and which may meet the requirements of the RAF. It conducts research into Military science and technology and provides an ambience in which servicemen at every stage of their careers can undertake study at appropriate levels. It considers direction of the nature of study undertaken to be essential.

ADFA seems to be primarily concerned with the provision of a straightforward university education in a military environment at the beginning of a service officer’s career. The development of post-graduate studies and specialist courses in military technology and of a significant defence research capacity could possibly enhance its contribution to advancing military technology and promoting greater military self-sufficiency within Australia.

A Suggestion

As ADFA will be the only service tertiary institution and as it will have the facilities and potential to provide a centre for the study of Military science and technology, it is suggested that it could appropriately add to its charter “and to provide a national centre for the education of the services and research into science and technology”. Such a centre could provide a significant contribution to the long-term development of the Australian Defence Force which ADFA is designed to serve.
COMPARATIVE NOTES ON RMCoFS AND ADFA

The College is to be the centre of education and study for the Army in Science and the Technologies.

The intention is that the College should be held in high esteem throughout the nation as a seat of higher education in those disciplines and a source of knowledge and reference in science and technology as applied to war.

<table>
<thead>
<tr>
<th>Type</th>
<th>Total Students</th>
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<tr>
<td>a. First Degree Applied Science</td>
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<td>b. First Degree Engineering</td>
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<td>c. M.Sc. GW Systems</td>
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<td>d. M.Sc. Mil Veh Technology</td>
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<td>1 yr</td>
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<tr>
<td>e. M.Sc. Information System Design</td>
<td>12</td>
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<td>f. M.Sc. Gun Systems Design</td>
<td>8</td>
<td>1 yr</td>
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<tr>
<td>g. Ph.D. Various Approx. 20</td>
<td>20</td>
<td>1-2 yrs</td>
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<td>h. Army Staff Course Div 1</td>
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<td>i. Army Staff Course Div 2</td>
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<td>j. Army Staff Course Div 3</td>
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<td>8 wks</td>
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<tr>
<td>k. Ordnance Quality Assurance</td>
<td>20</td>
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<tr>
<td>l. Ammunition Technical Officers</td>
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<tr>
<td>m. Mil Operational Analysis/Research</td>
<td>4 x 100</td>
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<td>n. Junior Command and Staff</td>
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<td>o. Equip Procurement Management</td>
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<td>p. Ammunition Technicians</td>
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<td>q. International Mil Operational Research</td>
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<td>r. Officers Petroleum</td>
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<tr>
<td>s. Mil Operational Analysis Operation</td>
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<td>t. Real Time Systems Design Pts 1 &amp; 2</td>
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<tr>
<td>u. Ballistics</td>
<td>2 x 20</td>
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<td>w. Radiological Protecton</td>
<td>24</td>
<td>1 wk</td>
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<td>x. Mascot Computing Course</td>
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<td>2 wks</td>
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<tr>
<td>y. Introduction of Trials Management</td>
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<td>z. Nuclear Weapons Effects</td>
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<td>aa. Nuclear Hardening</td>
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<td>bb. Real Time Systems Design Preliminary</td>
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<td>cc. Senior Officers Appreciation Course Computers and Microprocessors</td>
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<td>ff. Long Armour Infantry (Chem &amp; Met)</td>
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<td>gg. Expl/Ammo for PE (Senior Staff)</td>
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<td>ii. RAEC Summer School</td>
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<td>jj. Mechanics of Materials</td>
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<td>1 wk</td>
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<tr>
<td>kk. Numerical Methods</td>
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<td>1 wk</td>
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<tr>
<td>ll. Reliability Theory &amp; Practice</td>
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<td>1 wk</td>
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<tr>
<td>mn. RCT Adv Tpt ADP Phase</td>
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<td>2 wks</td>
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<tr>
<td>nn. R Sigs Senior Officers</td>
<td>20</td>
<td>.6 wk</td>
</tr>
<tr>
<td>oo. Laser Safety</td>
<td>20</td>
<td>.4 wk</td>
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</table>

Council for National Academic Awards with Cranfield Institute of Technology and Commandant RMCoFS.

Cranfield Institute of Technology.

- **Undergraduates**
  * From Royal Military Academy Sandhurst after Basic Officer training, from Service Units having obtained academic entrance requirements, from Defence Industry or Cadet Scholarships.

- **Post-graduates**
  1. **For Specialist Courses.** From a wide variety of service and civilian backgrounds. A number of Defence Industries sponsor civilian candidates. Overseas students form a considerable fraction of many of the College's post-graduate specialist courses. Specialist courses for non-commissioned personnel are increasing.
  2. **For Research.** The College attracts Defence contracts for which appropriate graduates can be recruited to work under the direction of particular departments. All higher degrees contain an original work or research element.
ADFA

1. Charter To provide a balanced and liberal university education to officer cadets of the three Services within a military environment.

2. Courses

<table>
<thead>
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<th>Type</th>
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<td>a. First Degree/Aust.</td>
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<td>3-4 yrs</td>
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<tr>
<td>b. First Degree/Foreign</td>
<td>50</td>
<td>3-4 yrs</td>
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<tr>
<td>c. Post-graduate/Degree</td>
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<td>1-2 yrs</td>
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3. Departments

a. Civil
b. Mechanical
  Engineering
c. Electrical & Electronic
d. Physics
e. Chemistry
f. Maths
  Science
g. Computer Science & Operations Research
h. Geography
i. History
j. Politics
  Social Sciences
k. English
  & Humanities
l. Economics

4. Staff (Approx)

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<th>Service</th>
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<td>Defence Civilian</td>
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<td>Academic</td>
<td>150</td>
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<tr>
<td>Technical</td>
<td>130</td>
</tr>
<tr>
<td>Administrative</td>
<td>100</td>
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</table>

5. Degree Management

University of N.S.W.

6. Academic Staff Management

University of N.S.W.

7. Student Sources

a. Undergraduates
   From school by Individual Service Selection. Basic Military training at ADFA. To Service Training establishments on completion of academic training.

b. Postgraduates
   From services and civilian schools for academic higher degrees.

1987 Churchill Fellowships for overseas study

The Churchill Trust invites applications from Australians, of 18 years and over from all walks of life who wish to be considered for a Churchill Fellowship to undertake, during 1987, an overseas study project that will enhance their usefulness to the Australian community.

No prescribed qualifications are required, merit being the primary test whether based on past achievements or demonstrated ability for future achievement.

Fellowships are awarded annually to those who have already established themselves in their calling. They are not awarded to students or for basic study, nor for the purpose of obtaining higher academic or formal qualifications.

Details may be obtained by sending a self-addressed stamped envelope to:

The Winston Churchill Memorial Trust
GPO Box 478, ACT 2601

Completed application forms and reports from three referees must be submitted by Friday 28 February 1986.
The hazard international terrorism poses to conventional military forces was clearly demonstrated by the bombing last year of the Marine headquarters in Beirut. That incident highlights the need for changes in thinking about doctrine, the principles of war and the strategic, operational and tactical levels of war.

ON SUNDAY morning, 23 October 1983, a large, yellow Mercedes Benz stakebed truck approached the Beirut International Airport. The truck, driven by a young Caucasian male with black hair and a mustache, penetrated the perimeter and interior defenses of the Marine battalion landing team headquarters at the Marine amphibious unit compound. The driver accomplished this feat without challenge from the Marine sentries. Because of rules of engagement restrictions, the sentries' weapons were not loaded.

The truck, travelling at a speed of more than 35 miles per hour, was driven into the lobby of the building where it exploded. The force of the explosion turned the reinforced concrete structure into rubble, killed 241 military personnel and wounded more than 100 others. The truck was laden with the equivalent of more than 12,000 pounds of TNT.

The Federal Bureau of Investigation Forensic Laboratory described the bomb as the largest conventional blast ever seen by the explosive experts community... the device was of such magnitude that major damage to the BLT [battalion landing team] Headquarters building and significant casualties would probably have resulted even if the terrorist truck had not penetrated the USMNF [US multinational force] defensive perimeter, but had detonated in the roadway, some 330 feet from the building.

The Report of the DOD Commission on Beirut International Airport Terrorist Act, October 23, 1983, provides findings and lessons that are of equal or greater importance to the Army than those from the 1983 Urgent Fury operations in Grenada. In Grenada, the United States engaged a conventional enemy force using predictable tactics and weapons. In Beirut, the Marine Corps suffered a terrorist act of unprecedented lethality. Our forces were prepared for what was found in Grenada; they were unprepared for what happened in Beirut.

The Department of Defense (DOD) Commission on the Beirut International Airport Terrorist Act of 23 October 1983 was established by the Secretary of Defense. Its purpose was to conduct a "thorough and independent inquiry into all of the facts and circumstances surrounding" the terrorist bombing and to examine the...
security measures and the rules of engagement at the time of the attack. The commission's report was issued on 20 December 1983. It is commonly known as the Long Commission Report after the commission's chairman, Admiral Robert L. J. Long, US Navy, Retired. Providing extraordinary insight into the importance of terrorism as a strategic weapon, the well-written and frank report should spur changes within the DOD as did lessons learned from the kidnapping of Brigadier General James L. Dozier. The Long Commission Report finds:

The 23 October catastrophe underscores the fact that terrorist warfare can have a significant political impact and demonstrates that the United States, and specifically the Department of Defense is inadequately prepared to deal with this threat. Much needs to be done on an urgent basis, to prepare U.S. military forces to defend against and counter terrorist warfare.

It is arguably the single most important unclassified document on terrorism available today within the DOD. The Long Commission Report is an instructive document for military officers of all ranks and assignments.

The attack inflicted a stunning blow to the US Marine force in Beirut as well as to the nation's policy and prestige. The blow sapped the will of the US Congress and people to continue a military role in the Lebanese conflict. History will probably judge the bombing as both a tactical and a strategic defeat for the United States. The terrorists sent the United States a strong political message. The first and most far-reaching observation of the Long Commission was that the bombing:

...was tantamount to an act of war using the medium of terrorism. Terrorist warfare, sponsored by sovereign states or organized political entities to achieve political objectives, is a threat to the United States, and is increasing at an alarming rate.

The report concludes that there has been a "three to four fold increase in terrorist incidents since 1968." During the past decade, more than half of the recorded terrorist activities were against facilities and personnel of the United States. As evidenced by more than 666 deaths in 1983, terrorism is increasing in lethality.

Even excluding the massive carnage of the 23 October 1983 bombing of the BLT Headquarters building in Beirut, terrorism has already killed more people in 1983 than in any other year in recent history.

State-sponsored terrorism is also increasing, particularly in the Middle East. Between 1972 and 1982, 140 terrorist incidents were perpetrated by sovereign governments. "Of this total, 90 per cent occurred in the three year period between 1980 and 1983. . . . 85 per cent of the total involved Middle Eastern Terrorists." With the Beirut bombing, terrorism is fully established as a mode of warfare.

The systematic, carefully orchestrated terrorism which we see in the Middle East represents a new dimension of warfare. These international terrorists, unlike their traditional counterparts, are not seeking to make a random political statement or to commit the occasional act of intimidation on behalf of some ill-defined, long-term vision of the future. For them, terrorism is an integrated part of strategy in which there are well-defined political and military objectives.

A terrorist bombing overcame the theoretical military advantage of a Marine amphibious unit, supported by aircraft carriers, a battleship and the nation's combined intelligence capability, to gain a major political victory of strategic importance to the terrorists and their sponsors. The commission concludes that the act was committed by a revolutionary organization with indirect, if not the direct, involvement of Syria and Iran.

The bombing was politically motivated and directed against US policy in Lebanon in the sense that no attempt was made to seize Marine positions or to drive the Marines from the airport.

While there were other important military targets in Beirut, the defeat of a US element, particularly a military element, had the greatest symbolic and strategic importance. The terrorists correctly guessed that such a blow would have a tremendous effect on congressional and public opinion and might cause the removal of US elements from the multinational force. The attack achieved total surprise and total destruction of the target but, most importantly, the objective of defeating strategy was achieved.

This national undertaking of Syria and/or Iran exhibits a new dimension of the strategic and operational levels of war.

US Army concepts, doctrine and tactics, although addressing terrorism, do not adequately address the spectrum of state-sponsored terrorism revealed in the Long Commission Report. Revisions are needed in these areas to
incorporate consideration of the threat posed by sophisticated state-sponsored terrorism. This is particularly true of Field Manual (FM) 100-1, The Army, and FM 100-5, Operations. The Beirut attack also brings into question the definition of the strategic and the operational levels of war as described in FM 100-5:

**STRATEGIC:** Military strategy employs the armed forces of a nation to secure the objectives of national policy by applying force or the threat of force. Military strategy sets the fundamental conditions for operations . . . **OPERATIONAL:** The operational level of war uses available military resources to attain strategic goals within a theater of war. Most simply, it is the theory of larger unit operations.

Both of these definitions have been made obsolete by the Beirut attack. They should be refined to incorporate state-sponsored terrorism that is executed by small units to secure national policy objectives and attain strategic and operational goals within a theater of war.

Army thinking concerning the role of campaigns as the centerpiece of the operational level of war requires modification. State-sponsored terrorism has added a new dimension to our concept of campaigns as "sustained operations designed to defeat an enemy force in a specified space and time with simultaneous and sequential battles." **Terrorists simultaneously attacked elements of the multi-national peacekeeping force—the US headquarters and the French compound—with truck bombs. Then, 13 days later, they penetrated the Israeli military compound in Tyre, Lebanon, with another truck bomb, killing 60 people.** In less than two weeks, state-sponsored terrorists killed 338 members of the military forces of three of the world's great military powers: Israel, France and the United States.

Terrorism has fully emerged as the definitive weapon that can enable nations with inferior military forces to gain a degree of strategic equality with the world's major industrial powers. Terrorism is an alternative to the acquisition of nuclear weapons. It is also an alternative to developing large conventional forces. The key, and in some cases only, strategic weapon for these nations is terrorism. Terrorism, with its associated violence, offers the small and less powerful nations an option for influencing the policies and behavior of larger and more powerful nations.

... violence plays a crucial role in altering an opponent's political situation. Therefore, the solutions are political ones in which the losers are not defeated, but maneuvered into a politically untenable position. Terrorism is crucial to this process because it is not easily deterred by responsive firepower or the threat of escalation. Terrorism, therefore, provides an expedient form of violence capable of pressuring changes in the political situation with minimum risk and cost.

Terrorism is a particularly potent means of influencing public opinion and legislative action in the democracies. It sharply focuses political and governmental attention on the strategic objective of the terrorists and toward modifying the strategy and policies of the democracies. Underdeveloped nations, revolutionary groups and radical states will be quick to grasp the significance of the deaths of the 241 Marines and the later change in US policy.

For a growing number of states terrorism has become an alternative means of conducting state business and the terrorists themselves are agents whose association the state can easily deny. Terrorism impacts on the hearts and minds of free nations. A similar incident perpetrated against the Soviet Union's military forces in Afghanistan would not have the same effect, as the Soviets do not have to answer to public opinion or to the press. Unfortunately, the success of the 23 October massacre will encourage groups and states to refine and further the use of terrorist acts against the military forces of the Western democracies.

An examination of the Beirut bombing, using the principles of war contained in FM 100-1, shows the attractiveness of terrorism as a means to defeat an enemy's strategic objectives. It also shows why terrorism is an attractive instrument of national power to a growing number of nations. The Beirut bombing was unquestionably an outstanding application of the principles of war. States willing to use terror as an instrument of national policy will come to the same conclusion.

**Objective:** "Every military operation should be directed toward a clearly defined, decisive, and obtainable objective." The terrorists' major objective was to get the multinational peacekeeping force out of Lebanon — this being the strategic objective of the groups and states behind the attack. They wanted to send a political and ideological message to the United States
that would cause a major reconsideration of this country’s role in the peacekeeping force and policy in the Middle East.

To achieve these objectives, the terrorists needed a symbolic target of US presence. The heavily defended Marine battalion landing team headquarters was the largest concentration of US military forces in Lebanon. A large number of Marines in one prominent building gave the terrorists a target that would allow them to achieve their strategic objective.

- **Offensive:** “Seize, retain, and exploit the initiative.” This group of terrorists was the same group that bombed the US Embassy in Beirut in April 1983. The bombs used in both attacks employed a “gas enhancement technique” to magnify their explosive power. On the morning of 23 October, the French force’s compound was also attacked.

Attacks and numerous threats of terrorist attack forced the multinational peace-keeping force to react rather than act. The terrorists were able to impose their will on the United States, set the terms for their chosen form of warfare and select the place of confrontation or battle. Patience and planning allowed the terrorists to take decisive offensive action against weaknesses in security. The Marines’ ill-defined mission, concentration and static defenses allowed the terrorists freedom of action in deciding when and where they would strike.

- **Mass:** “Concentrate combat power at the decisive place and time.” The 12,000-pound bomb that was driven into the lobby of the headquarters building achieved the necessary mass. The massing of forces, together with the proper application of the other principles of war, may enable numerically inferior forces to achieve decisive battle outcome. In this instance, the terrorists achieved both strategic and tactical results.

- **Economy of force:** “Allocate minimum essential combat power to secondary efforts.” The attack by surrogates or unconventional warfare elements allowed Iran and/or Syria to achieve strategic ends without using their conventional forces, expending major resources or putting their population or territory at risk. Symbolically, the terrorists defeated the military force of a superpower at the cost of the driver of the yellow Mercedes Benz stakebed truck.

- **Maneuver:** “Place the enemy in a position of disadvantage through the flexible application of combat power.” At first glance, this principle of war was not a significant factor in the Beirut bombing. More detailed study shows that it is applicable.

In the strategic sense, the terrorists showed that they could maneuver within the theater of operation and strike at the weakest point of our defenses to gain a strategic advantage. If this was state-sponsored terrorism, which the Long Commission believes that it was, the agents of Iran and Syria were able to move across considerable distances and political boundaries to strike at their preselected target. In essence, terrorism provides strategic mobility and maneuver “on the cheap” to attack targets of strategic, political or symbolic importance.

At the tactical level, they were also able to strike at multiple locations after traversing some distance from their staging areas. Conventional air, ground or naval units would undoubtedly have been detected moving toward the Beirut Airport, but the terrorists were able to move undetected. By using terrorism rather than conventional forces, the enemy was able to maneuver against the US forces.

- **Unity of command:** “For every objective, there should be unity of effort under one responsible commander.” The terrorist actions were clearly under the command of a single leader commanding a disciplined and dedicated force. The compartmented nature of terrorism limits the number of individuals involved in an operation. State-sponsored terrorism provides the terrorist leader with high-level planning, resource, logistic and operational support that are beyond the means of “conventional” — that is, nonstate-sponsored — groups. This support allows the designated terrorists to concentrate on execution of the mission by focusing all efforts on the common goal of a successful attack.

- **Security:** “Never permit the enemy to acquire an unexpected advantage.” At both the tactical and strategic level, the terrorists protected themselves from surveillance, observation, detection and interference, thus allowing freedom of action during the planning and execution stages of the bombing. The terrorists and the states supporting them exhibited keen knowledge of Marine dispositions, US security measures and the capability of allied intelligence services to detect them. They were able to reduce their vulnerability to US tactical and strategic intelligence units and systems sup-
porting the US Marine force. The Long Commission points out that:

The USMNF commander did not have effective U.S. Human Intelligence (HUMINT) support. The paucity of U.S. controlled HUMINT is partly due to U.S. policy decisions to reduce HUMINT collection worldwide.

It can be surmised that the terrorists knew of this weakness and took advantage of it. The movements of terrorists are not easily detected by technical intelligence systems such as satellites and radars. Terrorism successfully challenges the weakest aspect of our national and tactical intelligence operations: our paucity of HUMINT. An amalgamation of many nations, factions, religions, ethnic groups and language groups, the Middle East's complexities compound US problems with HUMINT and provide terrorists a degree of security.

- Surprise: "Strike the enemy at a time and/or place and in a manner for which he is unprepared." The attack achieved surprise. "The true genius of this attack is that the objective and the means of attack were beyond the imagination of those responsible for Marine security." They were also beyond the imagination of the chain of command supporting the US elements of the multinational peacekeeping force and our national leadership. Although the US forces had general information about terrorist activities and the likelihood of a car bomb, they lacked the specific information that would have provided the necessary warning. Terrorists count on surprise as the key element of their plans. In Beirut, total tactical and strategic surprise was achieved.

- Simplicity: "Prepare clear, uncomplicated plans and clear, concise orders to insure thorough understanding." The plan was simple in both the planning and the execution phase. Minimal forces were needed throughout. The plan did not require extensive command and control or synchronization of forces. The material and capability needed to build the massive truck bomb were readily available in Lebanon. A driver for the suicide mission was also available.

The DOD definition of terrorism is:

. . . the unlawful use or threatened use of force or violence by a revolutionary organization against individuals or property with the intention of coercing or intimidating governments or societies, often for ideological purposes.

The Long Commission finds that the DOD definition needs to incorporate the reality that sovereign states may use terrorism directly or through surrogates. Definitions of terrorism found in Army regulations, FMs and training circulars, such as Training Circular 19-16, Countering Terrorism on U.S. Army Installations, need similar revisions. With the Beirut bombing, definitions of terrorism have entered the gray area between an unlawful criminal act and an unlawful act of war. It is my judgment that, if terrorism is state-sponsored, it should be defined as an act of war.

Since the end of World War II, modern Western military forces have been involved more frequently in protecting urban areas, key population centers and territory than in maneuvering against a conventional force on a multidimensional battlefield. Army forces can count on continuing to be employed on foreign soil in security, peacekeeping and defensive roles. Just as the Marines were tied to static defensive positions in Beirut, the Army will be assigned missions that limit the execution of AirLand Battle doctrine and place the force at risk to terrorist attacks.

US Central Command and US European Command geographic areas of responsibility are the principal battle ground for state-sponsored terrorists. If the Iran-Iraq War spreads, the US Central Command may be called upon to protect the many key port facilities, refineries, oil fields, religious shrines and urban areas of the region. Such a mission is primarily defensive in nature and may place our soldiers in fixed positions and installations making them vulnerable to state-sponsored terrorism.

We must recognize that the US Army is more likely to be attacked by a terrorist group fomented and/or controlled by Iran than by a Soviet motorized rifle regiment in the Fulda Gap. The Fulda Gap threat is one of greater magnitude, but the terrorist threat is of greater certainty. The Long Commission Report concludes that:

. . . international terrorist acts endemic to the Middle East are indicative of an alarming world wide phenomenon that poses an increasing threat to U.S. personnel and facilities.

We are naive if we believe that state-sponsored terrorism against US military forces and activities will be limited to areas outside of the North American continent. It is inevitable that some state-sponsored terrorist group will
attempt to send a message to the American people by striking a blow within the Continental United States or the Americas. It is not hard to imagine state-sponsored terrorism targeting US forces conducting exercises in Honduras. Significant US military casualties in Central America would be the catalyst for strong and swift public and congressional action to change US foreign policy in the region.

The symbolic importance and vulnerability of many military installations make them targets for terrorists. A bomb was exploded at the National War College at Fort Lesley J. McNair, Virginia, on 26 April 1983. The Officers’ Club at the Washington Navy Yard are used by military officers and senior DOD officials.

Other bases and prominent facilities that are of historical and symbolic importance are the US Military Academy, West Point, New York; Fort Benning, Georgia; Fort Bragg, North Carolina; the Boston Navy Yard, Massachusetts; Andrews Air Force Base, Maryland; and Fort Leavenworth, Kansas. Such places have a significant number of senior military officers and visitors present at any given time. Our facilities and institutions will unfortunately continue to be the targets of terrorists and probably even state-sponsored terrorists.

The various schools of the military services have trained thousands of foreign officers from countries such as Israel and Iraq that are bitter enemies of each other and of the terrorist states, Iran and Syria. We have also trained during the past quarter-century numerous officers of countries which are no longer our allies and, in many cases, are adversaries.

For example, since 1960, several hundred officers from countries whose governments are now hostile to the United States have graduated from the US Army Command and General Staff College (USACGSC). Many of these graduates have been purged, killed or are no longer employed by their governments. But it is not unreasonable to assume that some of these individuals are loyal members of their nation’s government and involved in determining national strategy and targets for state-sponsored terrorism. During the past 25 years, two Cuban, 149 Iranian, 14 Iraqi, six Libyan, 23 Nicaraguan and three Syrian officers have graduated from the USACGSC.

The principal recommendation on terrorism in the commission’s report is:

...that the Secretary of Defense direct the Joint Chiefs of Staff to develop a broad range of appropriate military responses to terrorism for review, along with political and diplomatic actions, by the National Security Council.

The Long Commission correctly points out that “much needs to be done, on an urgent basis, to prepare U.S. military forces to defend against and counter terrorism.” The significance of state-sponsored terrorism, particularly from nations of the Middle East, poses a serious threat to our forces worldwide. The Army must take immediate action to improve training, security and support to commanders that will limit the effectiveness of terrorism. The Long Commission Report should be used to aid these efforts.

The Beirut bombing was a watershed event for terrorism. We must learn from this symbolic defeat of our military forces and rapidly take measures that will prevent future terrorist triumphs. We have already paid for these lessons with the blood of 241 Marines. We must learn the many lessons offered in the Long Commission Report because we cannot afford to underestimate our adversaries again.

From a terrorist perspective, the true genius of this attack is that the objective and the means of attack were beyond the imagination of those responsible for Marine security.

We must understand that terrorism is a fully established mode of warfare. We must place as much emphasis on its study, and prevention, as we do on other forms of warfare.

NOTES

2. Ibid., p 7.
3. Ibid., pp 84-86.
4. Ibid., p 93.
5. Ibid., p 86.
9. Ibid., p 112.
10. Ibid., p 4.
11. Ibid., p 114.
12. Ibid., p 114.
13. Ibid.
14. Ibid.
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This article first appeared in the October 1984 issue of Military Review, the Professional Journal of the US Army.
FALKLANDS FIGHTER PILOT

By Lieutenant Colonel A Pope, RAAOC

I SLIPPED into the cockpit, adjusted the strap on my helmet and plugged it in. As I hit the seat, the Head-Up Display (HUD) instantly came alive as a green glow on the plexiglass. The klaxons rent the air with their ugly nerve-jangling warning as I fastened my harness. Simultaneously I tried to read the HUD, carry out pre-flight checks and listen to the three radio channels which gave me vital information and my orders. In seconds I was ready.

My aircraft was ready as its engine had been idling the whole time it was ‘on call’ but now, in addition to the rise and fall of the carrier’s deck I could feel a greater force as my Harrier strained against its arresting wire as the engine began to run up to full power. At all times two Harrier aircraft were manned and ready on deck to provide protection against just such a threat. Those defences were now to be tested. Suddenly my earphones screamed ‘GO’ and the plane lurched forward and up the ski-jump. I have been through this experience a hundred times but still my stomach seemed to stay ten feet behind until at last the plane gained its own momentum and together we began a smooth accelerated climb to our operational height of 25,000 feet.

I had a brief moment to reflect on the exhilaration one has as man and machine come together in a unity of purpose. Automatically the instruments search out vital information on weather, obstacles, threats and targets and provide it to me, the pilot, for evaluation and decision; a symbiotic relationship like worker bees feeding their queen? We are an unnatural but inseparable pair each relying on the other to perform perfectly so that we may carry out our lethal purpose and — survive! The instruments perform unthinkingly; the pilot provides the intelligence and the decisions on which survival depends.

Now my short reverie was over and I scanned by instruments for information and concentrated on absorbing the fact on my HUD. Weather — light fog to 1000 feet, intermittent light cloud at 10-15,000 feet then clear with some heavy cloud at 30,000 feet. Air temperature +8°C but -22°C at 25,000 feet, Sea temperature 5°C. Wind speed 80 knots at operational height and 20 knots at sea level with moderate seas. From my point of view, good fighting weather but with little chance of the loser surviving for very long in the sea. This instantly brought images of my family to mind and a cold, cloying sweat oozed over my skin as I thought . . . quickly I cleared my mind; it was not the time or the place for such thoughts and the doubts and hesitation born of them.

The HUD flashed with the reason for this scramble — three A4 Skyhawks protecting a fourth aircraft (possibly a Super Etendard) 180 miles due West approaching directly towards the carrier force at 20,000 feet. With this knowledge of my enemy imprinted on my mind it was time to position my wingman and request orders. I banked to my right and looked over my shoulder. I was mildly surprised to find that the second Harrier was not there. When I banked to the left and still could not see him my sense of unease increased sharply. I was about to ask carrier command for information when the operations radio channel told me two things I would have preferred not to hear; my wingman had a failed undercarriage and would not be joining me and it would be 4-5 minutes before another two Harriers would be airborne with me.

In modern air combat a 1:4 ratio for four minutes is a death sentence! ‘What are my orders?’ I asked with a dry throat. ‘Destroy the Super Etendard — at all costs. Good Luck! Out!’
I did not hesitate. Over a thousand men relied on me and I could not save myself without failing them. Anyway, without them and the carrier where would I go? With that eternal optimism called ‘good morale’ I turned and flew north, all the time receiving a constant flow of information updating me on the position of my enemy. After one minute I turned West to join battle and, like a cat stalking mice I moved from cloud to cloud, all the time searching the horizon for my quarry. My heart leapt as I saw four dots appear straight ahead. With surprise on my side perhaps I had a chance!

At three miles the leading Skyhawk saw me and turned violently in a half circle toward me. He did not warn his wingman who flew straight ahead and directly into my sights. I did not need a missile but destroyed him with a long single burst of cannon fire. As I banked sharply to the right to avoid his leader’s attack I could see my victim clearly as flames engulfed his cockpit and his plane broke up. But I had no time for celebrations or regrets. One Skyhawk was coming directly at me and the other was dangerously out of sight.

We closed at a thousand miles-per-hour yet everything happened in slow motion as adrenaline speeded up my senses to unbelievable sharpness. One mile at a thousand miles-per-hour yet it seemed like a lifetime — and very nearly was! I fired a burst of cannon to distract his aim then released a sidewinder missile at minimum range. He was brave. He never flinched or deviated until the missile destroyed him head on. As I passed by a hundred feet on the starboard side of the exploding aircraft I thought I saw a smile — or was it simply his lips drawn back in a mask of terror and death?

This time I had not been so lucky. My plane had taken several hits and there was an acrid smell in my oxygen mask. My eyes watered as I scanned the instruments and noted that I had lost some power. I could not see the third Skyhawk but I now had my primary target, the Super Etendard, in sight. With my reduced power it took all I had, to chase him in straight flight. I could not manoeuvre as I doggedly pursued him to try to come within missile range, all the while fearfully searching for the third Skyhawk. In ten seconds I would have him! Eight, five, three seconds; I was ready to fire when suddenly the cockpit shook violently as cannon shells ripped through my Harrier destroying vital components, starting a fuel fire and tearing off pieces of the port wing. The Skyhawk was below me! As my engine lost power I could see the Super Etendard was drawing away and escaping! I dived steeply to gain whatever speed I could. The Skyhawk flashed past as I did so. My effort was not in vain; I closed the gap on the Super Etendard to within missile range and watched with a sense of abstract unreality as my third kill in five minutes disintegrated before my eyes.

But it was too late for me. I had dropped to 2000 feet and my plane did not have the power to stay airborne. The Skyhawk closed in. I did not try to avoid his fire; better a quick fighter pilot’s death than ejection and a slow death by freezing in the icy seas. There were no ships on the horizon which could provide rescue. But no cannon shells or missiles came, instead the Skyhawk came along side and, like a knight of chivalry or a Richthofen he saluted me before turning for home. Perhaps in the futility of war there is a bond between adversaries?

The acrid smell grew unbearable and I choked from its fumes. Airspeed was now so low it was difficult to keep the plane level. Flames began to burn through the floor and scorch my feet and legs; the cockpit filled with fumes and the plane began to dive then suddenly all was black.

I climbed out of the cockpit on shaky legs and walked unsteadily out the door. I blinked as my eyes adjusted to the glare of bright sunshine. As I turned down George St. I reflected on just how damned good these latest video games are.

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THE SOVIET MILITARY PRESENCE IN VIETNAM:
WHAT IMPLICATIONS FOR SOUTHEAST ASIA?

By Staff Cadet D. V. Smith, RMC

What is the nature and extent of the Soviet military presence in Vietnam? What have been the implications of the existence of those forces for the US, China and the ASEAN states since the onset of the Third Indochina war?

THE Soviet global perspective has traditionally regarded Southeast Asia as being of secondary importance. Development of political, strategic and economic interests in the region have in the past been constrained by a complex interaction of factors. Such factors included: the region’s remoteness and consequent logistic problems; sizeable deployment of US forces (and US allies). However the Soviets see their concerns as global, and Moscow’s claims of interest in affairs worldwide are clear. In following with those claims of interests the Soviets, since the mid-1970s, have acquired a strategic stake in Southeast Asia, as well as opportunities to expand their influence and power within that region. For the first time, Moscow has secured an exclusive regional ally—the Socialist Republic of Vietnam (SRV).

The Vietnamese military bases the Soviets have secured to “fulfill their commitment” to the Soviet-Vietnamese Treaty of Friendship and Co-operation allow them not only to monitor Chinese and US naval and air operations in the region, but also extends Moscow military reach from home bases in the Soviet Far East through SE Asia to the Indian Ocean and the Persian Gulf. And while such military conveniences as these are definite gains for the Soviets no exercise in ‘bean-counting’—comparing Soviet military forces of other nations in the region—will reveal the true, total impact of that presence. In this article I will, first of all, detail the nature and extent of the Soviet military presence in Vietnam. I will then detail the Soviet objectives for the region and the implications of those objectives for the US, China, and the ASEAN (Association of Southeast Asian Nations) states. By indicating the role the Soviet military bases in Vietnam play in Moscow’s attempt to secure their objectives, it will become clear that it is those bases’ political utility that is of greatest benefit for the USSR, not their tactical capabilities and advantages.

In June, 1978, the SRV was granted full membership of the Soviet-bloc economic group, COMECON, and on 3 November, 1978, Vietnam and the USSR entered into a Treaty of Friendship and Co-operation. The treaty signalled a steady expansion of all facets of Soviet support for Hanoi. Apart from its massive economic assistance plan—which is said to have been approximately US $3 million per day—Moscow supplied Hanoi with the arms for its invasion of Kampuchea and supported it against Beijing during the Sino-Vietnamese border war.

In return for their support the Soviets secured use of several Vietnamese coastal military facilities. This was not the first time the USSR had sought such facilities. After the 1975 Communist victory, Moscow approached Hanoi, but was rejected. Hanoi was clearly trying to avoid becoming exclusively reliant upon one major power. However while the regular use of those facilities by the Soviets had come in the wake
of the Chinese military incursion into Vietnam (in March, 1979), Moscow had already indicated its intentions in January, of that year, by activating a ‘picket’ patrol of one ‘Petya’ frigate and one ‘Natya’ minesweeper in the Gulf on Tonkin'. By mid-March, (after hostilities had begun) the Soviet Pacific Fleet (SOVPACFLT) had reinforced the area with a 14-17 ship task force which was fully capable of engaging against the Chinese. The ‘task force’ consisted of at least four surface combatants, four submarines, two landing ships (with Naval Infantry and vehicles), some six-eight support and ships and two-four intelligence gathering vessels. Thus, it appears that the first visit to a Vietnamese military facility was made largely out of convenience because it was three vessels from this task force that first called at Cam Ranh Bay in March 1979'. It is unlikely that such a large force was dispatched to the Gulf of Tonkin purely to create a precedent for Soviet use of Vietnamese military bases.

Following that first visit in March 1979 to Cam Ranh Bay, the Soviets began to utilise the other large ports of Danang and Haiphong, as well as the smaller facilities at Nha Trang, Ban Xoun and Than Son Nhu. And since no formal agreement had been made on the establishment of permanent Soviet bases, Hanoi was able to deny that the presence of such bases constituted an infringement upon its sovereignty.

In the weeks following the first visit to Cam Ranh Bay, six Soviet naval vessels called at Danang. Then in November 1979, a show-of-force tour was made under the command of the first Deputy Commander-in-Chief of the Pacific Fleet, Vice-Admiral Yasakov. Accompanying the Admirals’ Flagship, ‘Admiral Senyavin’ (a 16,000 tonnes Cruiser) were three destroyers and a guided-missile cruiser.

1980 saw several rotations of task forces operating ‘in-and-around’ Tonkin Gulf'9. These task forces were not operating from Vietnamese bases, however. In 1980, while only seven ships used Cam Ranh Bay on a continual basis, approximately 30 vessels used the facilities of that base. They called into Cam Ranh Bay for minor repairs and re-supply. The fact that they were being rotated tends to indicate the Soviets intention of familiarising the SOVPACFLT with the facilities and the region without committing a force so large that it would overcommit itself (at the expense of other, strategically more important regions), or stretch its logistic capabilities. The anti-submarine warfare (ASW) emphasis placed on these South China Sea task forces provides a clue for the Soviets primary concern: a Chinese submarine blockade of the SRV coast and access to Haiphong harbour'.

Since the first stationing of a naval vessel in Vietnam by the Soviets in 1979, reports—both official and unsubstantiated—have stated that the number of vessels based at Cam Ranh Bay, Danang and Haiphong is increasing. In mid-1982, US Navy officials reported the presence of 10-15 vessels at Cam Ranh Bay. This number included a cruise-missile armed submarine, one major and two minor combatants, an intelligence ship, various supply and repair vessels and a buoy tender'.

Unofficial reports from US Navy officers in March, 1983 stated that on a ‘recent' day 20 Soviet ships had been spotted in Cam Ranh Bay (this was the largest number to date). Approximately half the vessels were combatants, including the “Minsk', several cruisers and destroyers, two submarines, supply ships, fleet oilers, and repair tenders'. By December 1983, according to Thai and Western officials, up to 22 warships were based at Cam Ranh Bay. Speaking on the subject, the Commander-in-Chief of US forces in the Pacific (CINCPAC), Admiral William Crowe said that this number included two-four submarines, four-six combatants, and ten-twelve support vessels. Further Thai sources reported that submarines were now being serviced by five Soviet-built floating piers and a floating dock'. Other improvements included: Nuclear submarine shelter, refuelling installations, underground batteries for coastal and surface-air defences.

The acquisition of bases in Vietnam has greatly facilitated Soviet intelligence gathering capabilities in the region. Since 1979, when a dish-antenna radio signal monitoring station was constructed by Moscow near Cam Ranh Bay', and following the commencement of reconnaissance flights from Danang in September, 1979, electronic information and naval communication facilities and on air traffic control centre have been established in Vietnam'. According to Paul Dibb, the intelligence facilities in Vietnam are used to monitor Chinese military movements, to carry out surveillance on US 7th Fleet operations and on naval and air activities at the US bases of Subic Bay and Clark Field in the Philippines, and to communicate with headquarters at Vladivostok'.

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The use of Vietnamese airfields was gained the day after hostilities broke out between China and the SRV, in February, 1979. Since that day, the Soviet Union has been operating Tupolev Tu-95D (Nato report name: Bear) reconnaissance and Tu-142F(Bear) anti-submarine aircraft from the Danang air base. The 10,000 foot runway at Cam Ranh Bay has also been utilised by the ‘Bears’. Late in December 1983, Michael Richardson reported there were two Tu-142’s and two Tu-95’s present at Cam Ranh Bay. The Tu-142’s accompanied by Tu 11-38’s (May) are effective in ASW. The Tu-95D has an extremely important function in the support of operations involving surface-to-surface missiles and air-to-surface missiles. These aircraft are clearly designed for ASW, and since the ASEAN states possess no submarines, it must almost exclusively be directed at the Chinese South Sea Fleet.

The shore facilities now open to the Soviet Union in the SRV have enhanced its peacetime military posture in SE Asia and improved the wide operational capabilities of the SOVPACFLT in the South China Sea, the Strait of Malacca and the eastern Indian Ocean.

The Soviet Union has also established the following capabilities in the region: improved naval communications; greatly enhanced intelligence gathering capacity; a growing anti-surface shipping and a limited ASW; of a very limited amphibious role. Thus, it can be seen that access to the SRV naval and air facilities is of considerable peacetime strategic value to the Soviets.

However, such access would be of little utility in time of war when those facilities could be rapidly destroyed by US forces based in Guam or the Philippines. A US carrier battle group could, for example, with a high probability of success, detect and destroy Soviet air and naval forces operating from Vietnam. The fact that out of a total 720 ships, (SOVPACFLT consists of more than 120 submarines, 83 cruiser destroyers and frigates, and over 300 amphibious ships/craft, mine warfare ships and patrol boats) SOVPACFLT has only based a diminutive 20 vessels in Vietnam. Further, in spite of the alleged increasing importance of the Vietnamese bases in the Soviet East Asian strategy there are still no Soviet fighter aircraft in Indochina.

Indeed, although the USSR’s land-based facilities in Vietnam have improved its peacetime operational flexibility in the SE Asian region (as well as adjacent areas), Soviet naval power, especially outside the SE Asian region, remains very limited. The modesty of the SOVPACFLT are reflected in its major roles. The main mission of Soviet surface ships is the support for, and protection of, the submarine force around home bases and the defence of sea lanes in the Soviet, Far East. Further, the SOVPACFLT’s capabilities appear insignificant when compared with those of the US Seventh Fleet. The Philippines enable the US to maintain: continuous air and naval presence in the West Pacific; air and naval capability to meet contingencies in the Persian Gulf, East African waters etc, one of the best departure harbours in SE Asia; the largest, most efficient ship repair facilities in the Pacific, land and sea based tactical assets, comprehensive logistic support for all operating forces, and major war reserve material.

Thus, it would be an exaggeration to suggest— as some US officials have previously—that the Soviet presence in Vietnam “may be developed into counters to our facilities in the Philippines”. It would also be inaccurate to ascribe to the USSR a capability from its facilities in Vietnam, to control vital sea lanes and cut off Japan’s oil supplies passing through the Strait of Malacca. What, therefore, is the significance of the Soviet military presence in the SRV that would cause the ASEAN governments to effect in 1981, a 170% increase in military spending over the 1975 bill? What is it that forces the US to take steps to modernise and improve naval and air force units to match the Soviet strength in the region? Why does China continue to improve relations with its previous ‘arch-enemies’, Japan and the US while its relations with its ‘Communist brother’ the Soviet Union and Vietnam remain poor? The answer to these questions is that the Soviet military presence in SE Asia is significant when compared with its regional capabilities of less than ten years ago.

The regional powers are greatly concerned by the USSR’s use of Vietnamese facilities to project its political influence—through the presence of its military power—into the region.

To be able to explain the implications of the Soviet Union’s development of Cam Ranh Bay (and elsewhere), Soviet objectives need first be detailed. Looking at the situation through the
eyes of the Soviet reporter Y. Lugovskoi, the general impression received is that the course of the present tensions in SE Asia lies... in the negative role played in this region by the US and China.

Bearing this in mind, one could say that Soviet goals in SE Asia are: to contain Chinese power and influence in the region; to weaken American power and to separate the US from its friends and allies as part of a continuing effort to shift the global balance of power more in the Soviet’s favour; to prevent ASEAN from developing into a pro-Western bloc with the security ties to the West and/or China; to help consolidate a group of pro-Soviet communist states in Vietnam; Laos, and Kampuchea and to draw together those states into the Soviet orbit, and; to gain increased and regular access to air and naval facilities in Vietnam and elsewhere in the region in order to facilitate the further projection of Soviet power.

Historically the US has never shown a major direct interest in SE Asia but has intervened in the region as a consequence of its government’s perceptions of the place of the region in a global framework. For both Washington and Moscow, SE Asia has become another region in the contest contributing to the overall struggle for global primacy. The US has had to accept the fact that anything that will hinder its position in a region will be undertaken.

By 1980, the Soviet Union had established itself as an indigenous SE Asian power. The realisation of this long-sought goal, achieved by making good of the American “mistake” in Vietnam, has indicated to the rest of the region, the Soviet’s ability to participate in any future realignment of power in SE Asia. In 1960, with a few important exceptions, most of Asia was under American leadership. The US had constructed a series of alliances ranging from South Korea and Japan in NE Asia right around the continent to Pakistan in S Asia. And the Soviets were still able to locate holes in the Dulles-built containment system and ‘capitalise’ on them, despite the Kremlin’s physical distance from the area. Thus, bearing this in mind, the implications of the Soviet presence in Vietnam becomes painfully obvious to the Americans.

To ensure that the Soviets get no further in their ‘conquest’ of SE Asia, they must reduce the Soviets’ ability to employ their presence in Vietnam as a vehicle for mounting political pressures against all the ASEAN countries. The method the Americans appear to be using to accomplish this is to build up their own forces in the region to indicate that any move made by the Soviets on a US ally will be quickly and successfully dealt with. By stepping up their naval activity in SE Asian waters, combined with their foothold in Vietnam, the Soviets have, for example, brought pressure to bear on ASEAN nations to allow port calls to Soviet naval combatants (ie the same privileges that the US 7th fleet currently enjoys), without continued US presence in the region, one, some, or all of the ASEAN states might eventually succumb to continued Soviet entreaties.

The long-term goal of the Soviets is to change the existing pro-Western balance of power in offshore SE Asia. The continued application of politico-military pressure will eventually gain for them this goal unless the US maintains its present military superiority. But in doing this, what are the Americans doing?—They are diverting valuable resources away from other regions (such as NE Asia and the NW Pacific) that the Soviets might regard as more strategically important, (What is SOVPACFLT’s major role?—the protection of the NE Asian facilities). The Soviets must realise the virtual impossibility of their achieving their goal in SE Asia and yet they continue to seek it. However, the financial cost of those attempts (that is, the relatively minor cost of maintaining its ‘preventative measures’. Anything that hinders the US in Asia, will therefore, be undertaken.

By 1980, most of the direction and variance in the Soviet Union’s Asian policy and position was traceable directly to the felt need for a combination of offensive and defensive motives, to counteract Chinese influence everywhere in Asia. However, in spite of the pursuit of this policy, the Soviet use of military bases in the SRV has had limited impact on China. For although the Soviet-Vietnamese alliance has potentially grave implications for China it is doubtful whether Soviet presence adds much danger to the hostility of the relationship between the SRV and China. Thus, what could be said to be China’s reaction to the Soviet acquisition of military bases in Vietnam could also be regarded as its reaction to an increasingly hostile Soviet surrogate, moving to implement Moscow’s policy of surrounding its adversary. Consequently, there are no direct implications for the Chinese stemming from the Soviet military presence in the SRV.
The ASEAN elites are able to view the USSR with suspicion, but little open concern. The Soviet goals in the non-communist part of SE Asia are, by necessity, limited in scope. The ASEAN countries are all quasi-authoritarian, capitalist, anti-communist states, and so, the Soviets immediately start with a great handicap.

A combination of factors can be listed which indicate that the implications of the Soviet military presence in Vietnam are not particularly detrimental to the well being and continued existence of ASEAN. The ASEAN state re-establishment of the US to a position of eminence in the region has largely prevented any political, military or economic forays by the Soviets.

Thus, in those terms, the Soviet objective of preventing a stronger alliance from being created between ASEAN and the West has been made at least for the moment, unobtainable by the Soviet military presence. Further, despite the expansion of the SOVPACFLT, the Soviets possess virtually no capability to project their power ashore. Thus, even without US backing, the ASEAN countries could possibly withstand Soviet probings. However, such probings are extremely unlikely. Moscow's relatively sophisticated view of the complexities of Asian politics underlines its obvious reticence in directly applying military force. The Soviets are opportunists—they wait for the 'right' situation to occur. But since the ASEAN states are staunchly anti-communist, supported by the world's largest anti-communist state, such a situation is not likely to occur.

Possibly the least desirable implication of the Soviet presence in Vietnam for ASEAN could develop if the US was to assign China the role of 'restraining' the USSR in E Asia and developing it into a kind of regional policeman. Following a meeting with US Ambassador to the UN, Jeane Kirkpatrick on 22 May 1984, the Malaysian Foreign Minister Tan Sri Ghazali Shafie told the press that the US should view China in the context of its historical record of supporting subversive activities in SE Asia. At present, the members of ASEAN are divided over what the effects of Soviet military presence are beneficial—in that that presence keeps the Chinese "honest"—or detrimental to the point that the tension and uncertainty outweighs any possible benefits. Thus by assigning China the job of regional policeman, the US could be widening the one major gap that divides the two ASEAN camps.

Southeast Asia can generally be considered of secondary strategic concern to the USSR, except as it contributes to the containment of China and the US (and allows the unimpeded passage of Soviet warships from NE Asia to Europe, etc). In seeking these objectives, the Soviets have secured military bases in Vietnam, and while these bases are fairly unimportant in pure tactical terms, it seems inconceivable that such a small force (such as only 20 vessels out of a SOCPACFLT total of 720) could have had such a remarkable impact upon the region. This impact "owes" its success to the fact that less than ten years ago, the USSR's regional authority was non-existent. Now, following its assistance of, and presence in Vietnam, the Soviet Union is able to regard itself as a regional power.

The fact is that other regional powers in SE Asia are concerned by the Soviet build-up confirms this. For the US, the Soviet presence in Vietnam has drawn them back into SE Asia to protect its interests there. Thus, a major Soviet objective—the hindrance of US policy anywhere in the world—is being achieved in SE Asia. With minimal cost the Soviets are forcing the US to maintain a vigilant guard over a region the Soviets themselves, must realise to be a 'lost cause'. (This last fact is reinforced by the counter-productivity that Soviet activities in Vietnam have created for Soviet desires to establish good relations with ASEAN). As for China, the Soviet presence is of minor consequence. With its hostile surrogate, Vietnam locked in conflict with China, the presence of a small Soviet force in Vietnam does little more than reinforce Soviet support for its client. While Soviet military presence has had the opposite desired effect on ASEAN, one potentially destructive (as far as ASEAN members are concerned) implication of that presence is that it has caused the US recently to begin developing the image of China as the regional policeman. The balance existing between the ASEAN states is fragile—the mixed feelings towards China combined with this current US activity could pose such a major problem in SE Asia, that ASEAN would fall apart. Were this to happen, a major realignment of power would occur, and that would be a whole new "ball-game".
NOTES

6. Ibid, p 44.

22. F. Mediansky & D. Court, op. cit., p 29.
27. Ibid, p 30.
34. Ibid, p 16.
40. Ibid, loc. cit.

Staff Cadet D.V. Smith is in his last year at RMC, Duntroon. He completed an Arts degree with a double major in Government and History. On graduation from RMC he hopes to be assigned to the RAAC.

BOOKS IN REVIEW


The Empire Strikes Back: A review of some recent books on The Falklands War.
MICRO-COMPUTER BASED PSYCHOLOGICAL TESTING AND RECORD-KEEPING

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Introduction

CONCURRENT research and development has produced two fully-automated, microcomputer based, psychological testing and recording systems — on different sides of the Atlantic. From the U.K. comes the Micropat, originally developed by Bartdale Ltd., for helicopter pilot selection. Its predictive validity has been the focus of studies undertaken by the Ergonomics Research Group at the University of Hull.

The Porta-bat was developed as a result of the 1983 decision of the U.S. Air Force Human Resources Laboratory to replace its laboratory-based Basic Attributes Test (BAT) with transportable units. Illiana Aviation Systems and Technical Solutions Inc. (New Mexico) developed the testing station to meet the Air Force's specifications. Whilst Australian associations with the names of these two testing systems may bring to mind tiny cows and cricketing equipment, such testing and recording equipment has much to offer.

The Porta-bat has high speed graphics, single and two-axis joysticks, data entry keypad, fixed and removable hard disks, and a cabinet designed to reduce distractions to test candidates and to provide a shipping container for transporting the unit. It is thought that the first Porta-bat may be shipped to Australia towards the end of 1985.

The central feature of the Porta-bat is a powerful super-microcomputer with very high speed, high resolution graphics and communications capabilities. Networking or on-line data transfer can occur during testing. Additional software to perform in-house testing and training can be developed and incorporated. The Porta-bat can be linked to serial or parallel printers and additional terminals for concurrent programme development, general purpose computing, or analysis of test results.

The Porta-bat Tests

The battery of tests is designed to measure a range of information processing abilities and personality characteristics considered important in the selection of candidates for flight training. These abilities and characteristics are covered by the following fifteen factors:

* Information input efficiency
* Compulsiveness vs. Decisiveness
* High Order Tracking Ability
* Learning Rate and Tracking Ability
* Verbal Classification at Several Cognitive Levels
* Mental-Spatial Transformation & Classification
* Short Term Memory Store, search and compare
* Continuous Short Term Memory Storage and Retrieval
* Simple Choice Reaction Time
* Low-Level Cognitive, High Level Sensory-Perceptual.

Motor Response
* Effects of Uncertainty on Decision Making
* Field Dependence/Independence
* Self Assessment Ability/Self Confidence
* Survival attitudes
* Personality factors.

After an introduction which collects identity, age, sex, and other personal data (including personal history and attitudes related to flying), fourteen tests are provided to cover the factors listed above.

1. Perceptual Speed
The candidate simultaneously sees a sequence of four digits in random order, and is required to press keys in the same order. Accuracy, response time and perceptual speed (indicated through a special “enabling key” which activates the response buttons on each trial) are recorded.

2. Dot Estimation
Two boxes containing a number of dots are presented, one of the two boxes having one more dot. The candidate’s task is to determine as quickly as possible which of the two boxes has the greater number of dots.

3. Time Sharing
After learning a compensatory tracking task involving anticipation of the movement of a marker and keeping it aligned with a fixed central point by use of a control stick, the candidate has to also cancel digits which appear at random locations and intervals on the screen. A time limit is imposed.

4. Encoding Speed
Subjects are presented simultaneously with two letters and required to make a judgement about their similarity or difference. This judgement may be based on physical identity (AA/Aa) or name identity (AA/AH). The encoding judgement gives a measure of the speed of the encoding process, and perception differences indicate the speed of recording.

5. Mental Rotation
A pair of letters is presented sequentially to candidates who are asked to make a quick same-different judgement. The letter pair may be either identical, mirror-images in the same orientation, or rotated. The candidate has to retain an image of the first letter and compare it with the second on the display. When the letters are rotated, the candidate must mentally rotate the mental image to enable a comparison.

6. Item Recognition
A series of one to six digits is displayed in a row, followed after a brief delay by single digit. The candidate has to remember the initial series of digits and decide if the single digit is one of those previously presented.
7. **Immediate/Delayed Memory**

The candidate is presented with a sequence of digits and required to push a button corresponding to the item which occurred one or two digits before. In the first part of the task (dealing with immediate memory) digits are presented for 0.5 second followed by a 2 second interval. In the second part (dealing with delayed memory) the inter-stimulus interval is 5 seconds.

8. **Decision Speed**

One of a number of alternative signals is presented, with the candidate being required to provide the matching response as quickly as possible. This task examines the amount of uncertainty that must be resolved so as to make the decision. The more the alternative signals presented, the greater the uncertainty and the delay. In the first task the candidate knows both where and when a signal is to occur; in the second, where but not when; in the third, when but not where; and, finally, in the fourth, the candidate knows neither where nor when.

9. **Risk Taking**

The candidate is presented with a matrix of 10 boxes and is told that 9 of the boxes contain a reward whereas one box contains a penalty. The subject selects the boxes, one at a time. If that selected contains a payoff, it is added to the candidate's total. If it is a penalty, the total is lost.

10. **Embedded Figures**

A simple geometric figure is presented within geometric figures. The task is to decide which of the two complex figures has the simpler figure embedded within it. The choice is indicated by pressing the button corresponding to that figure. Speed and accuracy of response measures are recorded.

11. **Self Crediting Word Knowledge**

This is a vocabulary test in which the subject is presented with a "target" word and five others from which a synonym has to be selected. There are three blocks of ten questions each, with the target words becoming increasingly difficult. Informed of the increasing difficulty, the candidate is required to estimate the expected degree of success.

12. **Activities Interest**

This Questionnaire samples interest in various activities by asking the candidate to choose between 81 pairs of possible pursuits. The candidate is instructed to assume the necessary ability, and is forced to make a choice between alternatives of varying risk.

13. **Aircrew Personality Profile**

This is a personality questionnaire, specially compiled for aircrew work, examining attitudes and interests. The 200 items require a choice between two alternatives.

14. **Psychomotor Tests**

There are two psychomotor device tests. The first is the two-hand co-ordination task: a rotary pursuit task in which a target box follows a circular path at 20 cycles a minute. The candidate controls the position of a small cross by using a left (vertical) and right (horizontal) joystick.

The second test is of complete co-ordination, involving the use of a dual axis joystick to control the horizontal and vertical movement of a small cross. The left-hand joystick controls the left-right movement of a vertical bar at the bottom of the display. The task is to maintain a small cross centred on a large cross in the centre of the display, while simultaneously centering the bar.

As is to be expected, the Micropat and Portabat have a number of common features in both rationale and test battery.

### The Micropat

The range of psychological attributes tested by the Micropat include:

- sensory-motor co-ordination
- decision making
- multiple task performance
- planning and scheduling
- memory
- personality

The Micropat designers point out that there are important differences which render World War II pilot selection criteria inappropriate for contemporary flying. Missions are currently more complex; the environment more hostile; avionics have multiplied and frequently the pilot is in sole command of them. The cognitive demands on the pilot for simultaneous processing have increased.

The availability of the additional information requires ongoing review of plans while lower flight altitudes mean additional landscape and turbulence factors to be considered. Thus the
Micropat places an emphasis on dynamic decision making as well as on the traditional flying skills.

As with the Portabat, the battery of tests can be augmented to incorporate additional user needs such as personality testing. The sequence of tests can also be manipulated from a menu. Also in common with the Portabat is the exploitation of the power of a computer to adapt the level of difficulty of tasks while the test is in progress. This adaptative quality is one of the major advantages of this new breed of electromechanical test devices.

The Micropat battery includes tests of explicit (in which odds, costs and pay-offs are apparent) and implicit decisions (involving interpretation, as when an approaching aircraft can be friend or foe).

Other tests focus on planning and scheduling: the ability to maintain an overview of options which take into account possible future needs. The ability to time-share (coping with multi-tasks) is also tested.

Long-term memory is not tested in the Micropat. Although it has importance for such matters as aircraft performance figures, related theory, rules and regulations, the authors argue that scholastic achievement is an adequate indicator.

In sum, the Micropat controls enable testing of eye-hand, eye-foot, hand-hand, and hand-foot co-ordination. A four-dimensional co-ordination task, at a level of complexity comparable to that required to control a helicopter, can be provided.

**Micropat Tests**

1. **Landing**
   A two-axis joystick and sliding throttle control and “aircraft” flying away from the user. Height, speed and fuel quantity are indicated. The aircraft has to be landed at a specified point and speed, within the constraints of available fuel.

2. **Adtrack 1**
   This is a series of three speed-adaptive tests (each of two minutes) of pursuit tracking in one dimension. Control is by the joystick, and level of performance (recalculated every 5 seconds) is indicated by a digit on the display.

3. **Adtrack 2**
   This is also one-dimensional pursuit tracking. As performance improves the control law is increased. Performance is evaluated every five seconds. Starting at Level 7 (moderately fast),
high aptitude candidates move in 5 second steps to a peak of Level 17.

4. Adtrack 3
The subject controls the adaption by the use of keys. R+ increases the difficulty; R− makes it easier. If errors are committed the control law is automatically lowered and a penalty recorded. The candidate is guided by displays of achieved level of performance and error rate per second.

5. Risk
This is a gambling task involving eight keys of which one is a "killer". Scores are gained by each key depressed, unless it is a killer which deletes the score. A variation is introduced in which the killer is present for only 50% of the trials, the candidate being given the opportunity to adjust strategy.

6. Signal
Initially, two rectangles are displayed, one (the signal) being smaller than the other. When the signal rectangle is subsequently presented, the candidate has to respond with the "yes" key. Signal frequency, costs and payoff are given for each block of trials, with measures of accuracy, decision speed and response bias being recorded.

7. Schedule
This dynamic task assesses scheduling ability by means of five displayed columns. There are five corresponding keys which, when depressed, enable a line to extend down from the corresponding column. If it grows to reach a numbered box, the candidate scores the number of points displayed in that box. There are complications, of course: only one line can be extended at one time; the boxes have a limited life; lines grow at different rates; some boxes produce a double score, but have only a half-life.

9. Memory Span
This is an adaptive test of digit-span in which a row of digits is briefly presented. Then the candidate has to reproduce the display by keying-in the digits in sequence. Correct responses bring longer arrays until the digit span is attained.

Discussion
The application of microcomputers to personnel selection tests is a logical move because of the advantages involved. These advantages can be seen in the capabilities of the Micropat and Portabat. It is not surprising that high levels of predictive validity have been found for the batteries of tests used by both machines.

The advantages of the computer-approach to psychological and personality testing of service personnel include:

(a) Potential savings in training costs through more thorough selection methods;
(b) Reduced attrition rates from point of entry to point of graduation (or operational status);
(c) Maintenance of a high level of confidentiality in personal data records;
(d) Uniform administration by unskilled personnel;
(e) Objective and reliable test administration;
(f) Automated record keeping;
(g) Portable systems which can be decentralised ... a cost-saving and convenience factor when recruiting over a large territory; and
(h) Cost-efficiency in the versatility of the hardware to permit other management computer applications such as word processing, spread sheet application, or use of data bases.

Whilst the primary intention of the Micropat and Portabat is related to the selection of personnel, both would appear to have a contribution to make to training. For example, consider the case of a trainee pilot whose testing indicated relative weakness in co-ordination, but above-average strengths in decisional capabilities. It would well justify a training decision to incur the costs of over-flying at the co-ordination stage to enable the individual to reach the level at which his or her decision-making qualities could make their contribution.

The portable testing laboratory has a variety of roles to play. Whilst its primary purpose is in attribute testing for the armed forces, its potential applications are limited only by vision.

REFERENCES
THE EMPIRE STRIKES BACK: A Review of some Recent Books on The Falkland Islands War

Reviewed by André Kuczewski, Mc Gill University, Montreal, Canada.


The Falkland Islands — a tranquil refuge for land and sea birds and a former haven for whalers and seal hunters — reached the front pages of newspaper headlines on April 2, 1982. The armed tug-of-war between London and Buenos Aires on a remote, wind swept archipelago situated on the far reaches of the bitterly frigid waters of the inhospitable South Atlantic caught the world completely by surprise. In an age when international tension and diplomatic hot spots include such well known areas as Eastern Europe, Central America and the Near East, the Anglo-Argentine drama over the Falklands seemed to take on all the characteristics of a freak historical accident whose origins and scenario were almost unimaginable (and inconsequential) to contemplate seriously — until, of course, when it violently erupted into a full blown confrontation.

The Falkland Islands imbroglio was also a curious oddity for another, albeit less significant, reason. The conflict’s duration — a mere 74 days — will qualify it to go down in the record book as the shortest major armed struggle in the annals of the modern world. But while The Falkland Islands crisis occupied only a small segment of time on the vast axis of mankind’s written historical experience, it nevertheless unleashed powerful forces which touched off reverberations and a chain of events that continue to influence the course of contemporary global affairs. Great commotions, as Sir Winston Churchill accurately pointed out in his majestic study The World Crisis over six decades ago, arise out of small things, but not concerning small things.

The war in The Falkland Islands is no exception to this acutely wise rule of thumb. What exactly did Argentina’s President and Commander-in-Chief (General Leopoldo Galtieri) have in mind when he ordered his troops to attack the Royal Marines in Port Stanley on April 2, 1982? The answer will probably never be fully known until a future Argentine government makes its archives accessible to the public for close scrutiny. But even then, it may prove extremely difficult to precisely ascertain the complex matrix of perceptions and motives which, when fused inextricably together, pushed Argentina’s reckless military Junta into taking its fateful move against Great Britain. For Galtieri and Argentina, the decision to pull the tail of the proudly stalwart British lion was a suicidal miscalculation that both will undoubtedly remember for a very long time.

Although it is now only slightly more than two years since that strange encounter of a naval kind in the South Atlantic, the bloody struggle has already attracted enormous attention in the form of a rich literature of published studies, while it is presently premature to document a full chronicle of the conflict’s underlying and immediate origins, a careful understanding of The Falkland Islands’ background and their historical legacy will nevertheless provide a few clues to unlocking the many sphynx like mysteries of the past. A particularly good place to begin is with Sovereignty in Dispute. This is by far the best single volume to trace the nearly five centuries of history that pertain to the rocky landscape since they were first mentioned in 1493 when a Vatican papal edict placed them under the custodial protection of Spanish rule. Long before the spectacularly tragic chain of
starring roles on the stage of world history. The legendary explorer and navigator par excellence Amerigo Vespucci sighted the barren territory as early as 1501 when he sailed on his second voyage to the New World and during the First World War, The Falklands served as the visual backdrop for a fierce naval battle between England and Imperial Germany on December 8, 1914. When the shelling had finally stopped, Sir Frederic Sturdee's naval units successfully inflicted a humiliating defeat on a large Keizerliche Marine squadron under the command of Count Maximillian von Spee.

The authors also devote several chapters to a detailed discussion and urbane analysis of the main ostensible reasons that made The Falkland Islands such an extremely painful thorn in the side of Anglo-Argentine relations for over 150 years. What is not so clear, however, is why the Hoffmanns do not follow up their indepth study of the conflict's roots with an equally penetrating appraisal of the war itself which, essentially, is superficial, if not entirely weak and wholly unsatisfactory.

The opening salvos of The Falklands debacle and the diplomatic wrangling that immediately followed receive generous attention in La Guerre du Bout du Monde by Roger Planchar and Alex Wassilieff's Batailles aux Malouines/Falkland/Malvinas. Planchar's monograph is also especially commendable for its painstakingly detailed and astute description of American mediation efforts during the crisis. This objective, as the author correctly observes, was certainly no easy task for United states policy makers who had to walk a diplomatic tightrope and steer a cautious plan as a result of Washington's NATO obligations with England and similar OAS treaty responsibilities with Argentina. American leaders found themselves in a truly uneviable position that demanded an uncomprising degree of utmost fairness and impartiality. In the end, however, it was a perplexing dilemma which was resolved when Washington openly supported its most important ally, paving the way for later diplomatic and military accords with Margaret Thatcher's government.

La Guerre du Bout du Monde and Batailles aux Malouines/Falkland/Malvinas Also contain valuable appendices which include the names of all ships which took part in the campaign and their commanders, along with lists of military losses and casualties sustained in the course of the many land, sea, and air attacks, a chart of recipients who were deservedly awarded military decorations of valour and distinction and last, but not least, a substantial bibliography for further research and reading.

Honourable mention must also go out to the London Sunday Times Insight Team's War in the Falklands: The Full Story which offers a well crafted glimpse of the Anglo-Argentine struggle and an especially interesting chapter on the role of former American Secretary of State Alexander Haig's diplomatic manoeuvrings during the affair as well as providing major profiles of the important civilian and military leaders who controlled the various nerve centres of power during the dispute.

For the strictly military aspects of The Falkland Island War, La Guerre des Malouines is definitely unsurpassed in scope and quality. Lavishly illustrated with superb line drawings and beautiful colour photographs, it is a handsome technical guide which examines the large array of sophisticated weapons that, to a very considerable extent, determined the conduct and outcome of the war, including the Harrier jump jet, Exocet missile and SeaKing helicopter. The book is also noteworthy for its brief, but very adequate, digest of the many British forces which collectively made up the Task Force, among them the Royal Navy and Air Force together with the lesser praised, but equally heroic Royal Engineers, Army Medical Corps and the famous Gurkhas.

To date, these books represent the most readable and scholarly attempts to come to grips with the Falklands conflict. While future studies will undoubtedly uncover additional information and advance new interpretations, they are likely to remain significant contributions that will continue to shed light on this pivotal event in twentieth century military affairs for a long time to come.

MUD AND BLOOD IN THE FIELD, Compiled by Dick Francke, Published by John Sissons Pty. Ltd. and the 2/23 Battalion Assn. Price $29.95.

Reviewed by J. P. Buckley, O.B.E., E.D.

This excellent publication contains a complete collection of newsletters produced by the 2/23 Battalion (Albury's Own) from Decem-
ber 1940 until the end of the War. It is a ‘follow up’ to the earlier history of the Battalion.

The unit gave outstanding service in the Middle East (besieged in Tobruk for over seven months), then in Syria and Lebanon; then again at El Alamein. Later the unit was to give meritorious service in New Guinea and finally in the invasion of Tarakan.

During these battles the Battalion was to be awarded: DSO — 3; MC — 10; DCM — 4; MM — 18; they lost count of the number of MID awards.

It is hardly necessary to mention that the unit’s first Commanding Officer was Lieutenant Colonel Bernard Evans (later Brigadier Sir Bernard Evans, DSO, ED), a legend in his own lifetime, and a most distinguished Lord Mayor of Melbourne in peacetime.

The many contributions to “Mud and Blood” are a mixture of good humour, tragic experiences, horrific incidents, but always blended with courage and fortitude of a high standard. Good humour is typical of the AIF units newsletters. The 2/23 Battalion had more than its fair share of comedy writers.

The book has been very well provided with excellent photographs and illustrations. Dick Francke deserves great credit and commendation for his expertise and diligence. So also the number of very good editors who published “Mud and Blood” under the most trying and dangerous conditions in operational theatres.

It was my good fortune to meet and talk with Dick Francke. I can now appreciate his dedication and justifiable pride in the 2/23.

I recommend this excellent book to any reader interested in the activities of a proud and elite Battalion.

Good luck to the 2/23 Association, it has a great tradition to keep alive. If you want a copy of the book, buy it now before it’s sold out.

AUSTRALIANS AT WAR 1885-1972, Photographs selected by Peter Stanley and Michael McKernan, published by William Collins Pty Ltd. Recommended Price $29.95.

Reviewed by J. P. Buckley, OBE, ED.

This book shows in pictures and some words, the deeds of Australian servicemen and servicewomen during the wars commencing in 1885 and ending in 1971.

The photographs are complemented by extracts taken from letters, diaries or personal papers held in the Australian War Memorial collections.

Stanley and McKernan have produced a very fine publication which will interest the reader from cover to cover. The photographs have been selected with taste and dignity. It is pleasing that no horrific scenes have been included — there is no use of ‘sensationalism’ to sell the product.

McKernan’s introduction is a good lead in to the presentation of the story. In the majority of items there is a good caption to indicate what the photograph is all about.

The authors (both at the War Memorial) have achieved a very good balance in their selection of the Navy, Army and Air exhibits — nor has the civilian contribution been overlooked. The steady progression of the pictorial story will appeal to the reader, it’s not just a series of unrelated incidents.

I like McKernan’s writings, I was very impressed with ‘All In’, the story of the Australian people in World War II. Strangely, I have been asked to review his earlier work on “Australian People in the Great War” which appears at first sight to be of the same high standard.

William Collins Pty Ltd has produced a first class publication at a most reasonable price.

In conclusion, the book provides an excellent photographic record of Australians at War — it should be very successful — one of the best of its type I have seen.