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Air Power Reserve

Dear Sir,

Mr Firkins, in his criticism (DFJ Mar/Apr 1991) of a Defence Force Journal article written by myself, Group Captain Schubert and Wing Commander Waters has fallen into the age-old trap that has dogged Australian air power thinking for so long. He joins the long line of defence analysts and strategists who constrain their thinking to the operational level of war. We in Australia have been good at this in the past. What we have not been good at is understanding the higher level of warfare and doctrine and applying it to our own Australian conditions. It is time we did so; the AAP 1000 and the DFJ article were attempts to that end.

I would draw to Mr Firkin's attention that the aim of the offending article (in DFJ Nov/Dec 1990) was clearly stated. It was to encapsulate the broad ideas of air power doctrine as laid out in the RAAF Manual of Air Power Doctrine — the AAP 1000. I stress that this document is strategic level doctrine, which by nature is more a philosophical thinking about employment of air forces in general, their aims and roles, rather than how they are structured. Therefore, strategic level doctrine does not delve into capabilities except in a broad sense, nor is it influenced significantly by the size of a force or whether the force is regular or reserve based. As a result, you will find in the article no reference to reserves within the RAAF Order of Battle — in fact, you will find no reference at all to the RAAF Order of Battle. These aspects are firmly within operational doctrine — a product of the higher form.

And, while I'm on operational doctrine, I don't believe that any one of we "naive 9-5 Canberra Public Servants with no operational wartime experience" (doesn't Vietnam count?) really believes the RAAF can adequately defend the country without significant expansion of our reserve forces. That however was not the issue under discussion in the article. But now that you have raised the point, the limits on reserve force numbers for each service are set by government, not by the individual service. I cannot but agree wholeheartedly with Mr Firkins that we need a substantial and well trained reserve of aircrew within the RAAF. I would argue that RAAF is working towards this and is leading the other two services with initiatives for more efficient use of the few reserves we are given.

Without doubt, the biggest, single problem facing the doctrine writer is vested interests, and their influence on the recorded doctrine. For the logistician, war, even at the strategic level, is all about logistics; for the intelligence officer, it is the intell picture; for the operator, it is high tech weaponry; and so on. For Mr Firkins, it is reserves. To a certain extent, my colleagues and I agree with all of them, but we do try to record a balanced view and we do try to keep things in perspective, even if the perspective may be new for Australia.

Brian L. Kavanagh
Group Captain

A Motorised Army

Dear Sir,

Lieutenant Colonel Camp's article on motorisation (DFJ 86) was timely and useful. For too long the mobility factor within the manoeuvre element of combat power has been equated only to expensive helicopters, APC or MICV which Australia simply cannot afford in the numbers required.

The idealists may claim that nothing short of a two-battalion (ie brigade (-)) one time lift capability in dedicated helicopters is essential for Australia's defence but even a mechanised brigade (-) is probably beyond us, as LTCOL Camp indicates.

It is instructive to look at a map of northern Australia. It is even better to go there and drive from one town to another. The distances are, by any standard, immense.

Most nations would view similar distances as a strategic transport issue. To us, they are a tactical matter.

Most of our brigade commanders will each control an area similar in size to Victoria or, if you prefer, Britain. I sometimes wonder if we have all really grasped the sheer size of the tactical problem we are giving to them.
Of course the basic principles remain as valid for low-level conflict as they ever were in earlier times. Brigades, or significant elements of them, must be able to concentrate quickly, to react rapidly to separated incidents in their AO, and to seize and retain the initiative. The difference today lies in the tactical distances over which we will expect our brigades to operate — and operate successfully.

I must add that I agree with LTCOL Camp’s discussion on protection in general and on the armoured regiment in particular. History has proven that it is a brave man, or more probably a foolish one, who would embark on a low-level campaign without considering armour. But we cannot afford 100% armoured protection so we will have to accept something less. So will the civilians who, according to current guidance, will remain living and working in the north.

Naturally enough, most of us would like both armoured protection and mobility, that is, we’d like a fully mechanized force. But if we can’t have both, which we can’t, then it is better to have protection through mobility than not to have protection at all. Anyway, I wouldn’t want to walk from Katherine to Kununurra and neither, I suspect, would the average sensible infantryman if he had an alternative.

I would take issue with LTCOL Camp on only one point. The HMMWV is not, by Australian or even American standards, inexpensive. Nor would an Australian designed and built “military special” be inexpensive, particularly if we insist on attaching the bells and whistles which users often add to a pet military project.

Why don’t we design and build a 4WD which can carry a section over most (not all) northern terrain and make it useful and attractive enough for the wider community as well? Project Perentie is a step in the right direction here. The potential market is expanded exponentially if it is done properly, unit costs fall and repair/servicing in simplified. And an export market is possible.

But let’s get industry to do the work after we give them the most basic of design briefs. You won’t see too many HMMWV on the US market competing with the Jeep Cherokee or Ford Maverick or anything else.

The real question is, how are we to cater for tactical mobility over what are really strategic distances?

Helicopters and APC certainly must provide part of the answer. Wheeled B vehicles must provide the rest. We cannot now, and probably never could, afford anything else.

W.L. Fowles
Colonel
Director of Movements and Transport — Army

More Than G’Day

Dear Sir,

Kenyon and Amrapala are to be congratulated for their efforts in compiling More Than G’day: A Guide for People Working with Overseas Students. Equally important is the review by Major Copeland of the ‘Guide’.

Publication of such a book and its subsequent review in the Australian Defence Force Journal (ADFJ) serves the purpose of bringing to notice this much needed guide for those working with overseas personnel in Australia. The book should attract the attention of those experienced in working with overseas students as well as those new to the field. Kenyon and Amrapala’s book serves as a step in the direction of opening debate and discussion on a topic seemingly until now given little attention particularly within the ADF.

Major Copeland, himself a contributor to the ADFJ on the subject of ADF training and overseas students, perceives several shortcomings within the ‘Guide’. Hopefully, a process of logical and constructive debate will ensue, possibly leading to the publication of others ideas in the field of the training of foreign students.

I look forward to a refinement of respective views and a concious effort from the ADF in developing policies and strategies to improve our performance in the field of practical defence cooperation.

Kevin Smythe
SQNLDR
Australian Embassy — Jakarta, Indonesia

Personal Recollections

Dear Sir,

In his excellent article in DFJ No. 88: Some Personal Recollections of the Syrian and Iraq campaign (1941), Colonel J.P. Buckley made the following comment:

“It may surprise some readers that several of our generals in the Middle East carried their Bibles with them.”
Given the author’s several references to Scripture in his article, I can only assume that the comment was made out of a sense of regret at the secularism pervading today’s Defence Forces, set in what the late Professor Manning Clark has called Australia’s post Christian era.

The Bible contains God’s plan for our eternal salvation and passages like the one from the Gospel of John in which Jesus says, “I am the resurrection and the life, whoever believes in me will live even though he dies,” have given comfort to countless sailors, soldiers and airmen both on and off the battlefield. It is to our eternal cost that today we largely neglect the Bible and its message.

Had he been writing about campaigns in the Middle East in the First World War, Col Buckley might have recalled General Allenby’s encouragement of Bible study among his British and Commonwealth troops, that they might also understand the spiritual and historical significances of entering the Holy Land and taking Jerusalem.

Also it would be interesting to know if Staff College students ever search the Bible for applications of the Principles of War. Examples of all ten can be found in one book alone in the Old Testament. Fortunately Bible study still thrives in the Defence Forces under the guidance of chaplains and representatives of the Military Christian Fellowship of Australia. May it always continue to do so.

R.C. Prendergast
Lieutenant Commander, RANEM

The Medium Power Air Force

Dear Sir,

In his letter in the May/June 1991 edition of DFJ, Lieutenant Commander Di Pietro opens with the statement that: “a true defence strategy must be founded upon the careful assessment of a nation’s vulnerabilities rather than threats.” Maybe vulnerabilities and threats are two sides of the same coin.

Much depends on how one defines a threat. If by threat you mean a specific threat, real or imagined, from a particular source, such as the Warsaw Pact threat to NATO, and you live in circumstances where such a threat is not evident, then, maybe, vulnerabilities are more relevant than threats. On the other hand, if, like Australia, you face no current threat, then you must base your defence strategy on future possibilities. In considering possible, future, threats, you need to take account of the nation’s vulnerabilities. Clearly, any potential enemy is going to try to attack you where you are most vulnerable, where he is strong and you are weak.

Lieutenant Commander Di Pietro goes on to point out Australia’s very evident vulnerability to (military) attacks on our seaborne trade. The way to inflict the greatest hurt to Australia for the least expenditure of effort would be to stop, in whole or in part, our seaborne trade. But we need to ask, would such action be fatal, in the same way that a successful invasion of our country would be fatal. One has only to look at the way in which various countries have overcome the impact of sanctions to appreciate that, given a reasonable degree of national resilience, a country can survive even in the face of a severe blockade.

Also, while it would be relatively easy to stop some of our overseas trade, to effect a complete blockade would be a mammoth task. To talk of the impact of isolated incidents on shipping movements is one thing, to consider the circumstances and impact of a complete blockade is another. Trade is a two way process. Hence, we must consider the likely impact of a blockade of Australia on our trading partners. How, for example would Japan react to suddenly being denied access to our iron ore and natural gas, and to a market for its cars and electronic goods?

On the vexed question of an aircraft carrier for Australia, I agree with Lieutenant Commander Di Pietro that such a capability has a definite place in our defence posture. What we ideally require is a minimum of two carrier groups, to match our concept of a “two ocean navy”. The basic carrier would need to be more than an “air capable platform” ; it would need to have the capability to operate airborne early warning aircraft as well as all weather fighter interceptors, mainly for the essential purpose of being able to keep attacking aircraft outside air-to-surface missile range. Unfortunately, such a capability is way outside our current defence budget. It may not be so if, sometime in the future, we have to expand our defence capability to meet the emerging threat, including a threat to our, vulnerable, seaborne trade.

Norman Ashworth
Air Commodore (Ret)
On Exercise
Why Defence in Depth?

By Group Captain B.J. Espeland, RAAF

Introduction

The notion that it is in our nation's vital interest to pursue a self-reliant defence posture within an alliance framework is one that has gained widespread acceptance by those involved in the Australian defence debate. That self-reliance needs to be pursued, not just within the framework of alliances, but also as part of a broader security policy that embodies economic, cultural, diplomatic, and indeed non-alliance military elements in a cohesive fashion has been similarly embraced. There are, however, many with an interest in Australian defence matters who do not (necessarily) agree with the concept of defence in depth as the most appropriate military strategy to achieve this policy of self-reliance.

It may well be the reluctance to abide this aspect of Australia's defence policy stems from the somewhat limited documentation of a rationale for defence in depth. Indeed, there are many advocates of the concept who regard the strategy as self-evident and thus in no need of substantiation. To take that line and summarily dismiss the utility of alternative concepts would be a mistake though, for there are a wide range and combination of useful military strategies that warrant examination. More to the point, it is essential to consider these options in the context of determining what broadest possible conceptual span of strategies has enough flexibility to permit Australia to cope with any conflict situation that it may face.

It is true that this span of strategies could conceivably encompass concepts that raise questions of provocation, escalation, or unconscionable action. Such issues are important, and not to be taken lightly; however, given that they are not absolute in nature, it is somewhat moot to take a stance against a strategy on the grounds of their prospective existence. The questions are more properly left to be resolved in the context of a particular situation when it arises.

Having said that though, there is a special utility in looking now at the underlying theme of those issues. Therein lies a pointer to the core strategy in the defence of Australia.

Disproportionate Response

Pivotal to any concerns of provocation and escalation is the apparent paradox of offensive operations within the framework of a defensive strategy. The real rub for those who would apply this illusion to automatically equate any offensive capability with provocation is "that the counter-stroke is the soul of defence". That verity presumes an ability to maintain or gain control of the threat environment while conducting defence — to the point where "the State which is compelled to take up arms against a superior foe (allows) that foe no breathing space ..." The key to threat control is the core strategy of disproportionate response. Causing a potential adversary to respond disproportionately in terms of the cost of materiel, casualties, or time in order to gain the advantage enhances both deterrence and defence. Specifically, this control is achieved by the following strategic approaches: first, by refusing to fight on the enemy's own terms; second, by depriving him of rapid victory; and, third, by forcing him to conduct a protracted and expensive campaign.

Continental Strategy

In any examination of strategic concepts against these criteria, it is important to keep in mind that, in general terms, there are five schools of military strategy — continental, maritime, aerospace, nuclear, and revolutionary. Of these schools, though, the latter two have little, if any, relevance to Australian defence planning, and we can thus draw upon the continental, maritime and aerospace schools to focus on strategic concepts relevant to Australia's situation.
Turning first, then, to continental defence; it is essentially concerned with the complexities of land warfare strategies, which need to take into account such diverse factors as terrain, urbanization, the level of conflict, and of course the various forms of defensive and offensive manoeuvre. These complexities are best rationalised into discrete, but often overlapping concepts, as a means of facilitating the study of land warfare.

**Mobile Defence**

The first of these concepts with relevance to Australia’s situation to be considered is mobile defence. This approach appears to have been adopted by Sweden. In the event of an attack, Swedish forces aim to delay the enemy, extend and then cut his lines of communication, weaken him, and finally destroy him. The concept lends itself to the use of large numbers of well-trained, dispersed but co-ordinated units employing advanced-technology weapons systems with heavy attrition potential. Significantly, in Sweden’s case, it requires an ability to mobilise an army of some 800,000 personnel in 72 hours.

**Guerilla Defence**

A second concept with possible relevance to Australia — the use of guerillas — is best illustrated by the Finnish example. Local forces, organised as independent battalions (more than 100 in number), have a two-fold task. In the vicinity of the border area, they carry out guerilla operations against the enemy’s rear and his lines of communication. In the rest of the country, they initially protect vital installations, but then disperse to revert to guerilla operations when the enemy reaches their area. Their activities are co-ordinated, with the overall objective of weakening the enemy prior to committing the Finnish general forces to decisive battle.

**Containment Defence**

In this, the third concept of possible relevance to Australia, containment forces are deployed rapidly to an area of enemy incursion or lodgment. If they cannot defeat the enemy, then a delaying defence based on either static or mobile operations, is used until sufficient forces can be mobilised and deployed to mount a counter-attack.

A high state of readiness and mobility on the part of the containment forces is integral to this concept. But, unlike mobile defence and perhaps guerilla defence, containment defence does not rely on the rapid mobilisation of a large segment of the population.

**Application to Australia**

In the abstract, both mobile defence and guerilla defence render the core strategy of disproportionate response signally effective. Moreover, the combination of these component concepts provides both diversity and redundancy in continental-type defence capabilities. Structuring a force around “large numbers of well-trained, dispersed, but co-ordinated small units” that possess medium-level combat power capabilities achieves an effective synergy of these two concepts in the form of territorial defence.

In essence, then, territorial defence systems combine the guerilla-type ability to survive and to strike almost continuously from any direction with the capacity to perform frontal-type defensive operations for short periods of time. Equipped with advanced technology weapons systems based on versatile platform vehicles suitable to the terrain, territorial defence units can constitute a sound deterrent and tactical defensive capability.

There are, however, several major difficulties in applying the concept of a territorial defence system to Australia — not the least of which is public acceptance of the wide involvement of civil society in war fighting within the nation’s borders. Territorial defence is not cost-free; there would invariably be great suffering at the higher levels of conflict. Nor is it likely to lead to a swift victory; implicit in the nature of territorial defence is a protracted struggle. It is therefore not surprising that territorial defence systems are more likely “to be most readily accepted and entrenched in those countries that have suffered the ravages of invasion and have a history of mounting protracted partisan resistance.”
WHY DEFENCE IN DEPTH?

There is a further obvious drawback that emerges from the experiences of such nations. Of these countries that adopted the concept of territorial defence in World War II, the three that proved to be most adept at it — Yugoslavia, Albania, and Finland — were relatively underdeveloped and not heavily urbanized. The point here is that the urbanization of societies invariably undermines the utility of territorial defence by making large portions of the population accessible and susceptible to enemy reprisals and terror campaigns. A territorial defence system in Australia would be similarly vulnerable, given the very high concentration of the nation’s population in urban areas.

Civilian Resistance

Another potential difficulty in applying the concept of territorial defence to Australia relates to the inherent lack of strategic mobility. In a country the size of Australia, territorial defence forces are unlikely to be able rapidly to mount conventional ground-force counter-offensives against an enemy lodgment or assault in the many remote areas of the country. Thus, while able to provide considerable deterrent and defensive capacity against major conflict, an Australian territorial defence system would be somewhat limited in its flexibility to be applied in any situation the nation may face.

The formidable difficulties associated with the application of territorial defence — or, for that matter, the underlying concepts of mobile and guerrilla defence — thus point to a reliance on containment as the best land warfare strategy for the defence of Australia. Is emphasis on conventional military structures promotes public acceptance; its high-visibility major equipment items enhance deterrence; and its forces are operationally flexible to respond against a wide range of enemy forces.

The foregoing should not be construed as a complete rejection of territorial, mobile, or guerrilla defence. Doctrinally, the concepts have much to offer. They point to a number of principles that should guide the ADF in exercising control in a continental-type defence. Land forces need to be highly mobile, to be capable of dispersed operations, and to have the ability to protect military installations, infrastructure, and civilian population, particularly in the north of the country. Territorial defence doctrine also points to the use of tactically mobile special forces in depth as an adjunct to more conventional operations and, in a lateral sense, to consideration of a parallel concept of non-military defence — civilian resistance.

Ranging from non-cooperation through active non-violence to, in its most extreme form, organized destruction, civilian resistance is far from pacifist in nature. It brings with it a commitment to a protracted and dangerous struggle against an adversary that is, in essence, the same type of universal national commitment sought for territorial defence. In the case of civilian resistance, though, the public is more directly and actively involved in its planning and training process — and thus even less likely to accept its employment.

Yet civilian resistance campaigns, especially in this century following the proliferation of nationalism, have contributed significantly to reducing the control of occupying powers. The non-cooperation that Norwegian teachers displayed to prevent the introduction of Nazi ideology into their schools and the problems encountered by the French during their occupation of the Ruhr in 1923 are good examples of the contribution civilian resistance can provide.

Although a substantial deterrent effect would accrue from announcing in advance that similar, perhaps more violent measures, would be taken in the event of occupation, such a stance would likely be impractical. To develop a civilian resistance structure during peacetime probably requires a public government admission that more conventional national security options may be inadequate — the type of politically unpalatable statement about which national leaders are invariably taciturn. Consistent with historical experience, civilian resistance should be reactive rather than proactive.

The Strategy Widens

So far, we have considered the defence of Australia in terms of continental-type defence of the nation. A military strategy tied to the employment of conventional forces in a containment-type defence but inclusive of elements of territorial defence doctrine has been adduced as most applicable to Australia’s situation.
"It would be the height of foolishness, if Australia were to adopt a military posture which did not give priority to holding, and preferably destroying, an invading force on the high seas or in the air before reaching Australia."12 This is the layered strategy of denial, to include a continental-type defence strategy under the umbrella of a maritime-aerospace strategy to ensure that the enemy would have substantial difficulty in crossing the sea and air gap.

A strategy of denial thus emphasises the need for sound intelligence and surveillance capabilities in support of air and naval forces capable of operating effectively in the air and sea gap approaches to Australia.13 Therein lies the key to the efficacy of a denial strategy in relation to one based only on land warfare strategies. Operations in the environment of the air and sea gap provide a significant increase in opportunities to impose unacceptable costs to enemy forces, thereby allowing the core strategy of disproportionate response to provide far better deterrence and defence.

However, the strategy of denial fails to hang together in theory when consideration is given to the wider implications it brings — to the point where, in practice, it would fall short of the task of protecting Australia. There are three major problems with it.

### Enemy Sanctuary

First, such a strategy fails to deny sanctuary to an enemy. As a result, the enemy would be able to dictate the momentum of battle, and Australia would forfeit control of her threat environment in direct contradiction of the precept that guided its military strategy formulation from the outset.

The inference that Australia thus needs to employ a far wider strategic reach should not be interpreted as an unqualified advocacy of targeting an enemy homeland. Unless denied the opportunity, an aggressor can find sanctuary elsewhere beyond the Australian approaches, whether on the high seas or on arrogated land. On the other hand, the option of targeting an enemy homeland as part of Australia’s response to an attack should not be summarily dismissed. As argued previously, such questions involving escalation, provocation, and unconscionable action are properly left to be resolved in the context of a particular situation when it arises.

The exception to deferring consideration of these issues involves an extension of the provocation question. Would not the peacetime existence of an offensive capability with strategic reach have an adverse impact on Australia’s bilateral relations with her neighbours? Perhaps the answer is best found in examining the criteria for the degree of military power needed to threaten our nation.

Any determination of such criteria is clearly scenario dependent, but in general the following prescribes the range of sea, air and logistical capabilities necessary to project and sustain conventional forces against Australia: a maritime force that can provide, without recourse to land based air, protection and support during the passage and employment of substantial initial strike and follow-on forces in the face of surface, sub-surface and air threats; an amphibious force with the doctrine, training and equipment to project significant combat power across Australian shores; force elements capable of rapid insertion from beyond the visible and missile horizons to achieve tactical surprise; mechanized follow-on forces to provide the mobility and firepower dictated by the Australian battlefield; and a sealift infrastructure with capacity for deployment and sustainment commensurate with the forces employed, but, more importantly, with the sophisticated equipment necessary for over-the-shore disembarkation.14 Moreover, it is axiomatic that the degree of military power required to project and sustain the necessary conventional forces increases disproportionately the farther the protagonist is from Australia.

An insular neighbour’s analysis of threat in terms of generic military power would probably be similar; an autarkic neighbour might reach different conclusions, but not in relation to threats from insular countries. In any case, an ADF offensive capability, provided it does not approach these force projection criteria, will not render Australia’s defence posture aggressively provocative in the eyes of others — an assessment already borne out by experience.15

### Vulnerability to Disproportionate Response

A further difficulty of employing a denial strategy concerns the concept of disproportionate-
ate response. Although not previously noted, it is axiomatic that such a concept points to the need to ensure that Australian defence policies are not themselves vulnerable to a disproportionate response strategy.

Australia would be particularly vulnerable to being forced to react disproportionately in operations within the Australian approaches. A conscious application by an enemy of the concept of disproportionate response in the face of a strategy of denial would translate into a series of feints or traps aimed at wearing down Australia's air and sea gap defences. Ultimately, Australia would be faced with the prospect of its maritime-aerospace strategy umbrella folding, and being forced to revert to the stand-alone strategy of containment, with all that strategy's limitations. The alternative, of course, is to reduce Australia's vulnerability to the mechanisms of disproportionality by incorporating the flexibility to respond with a far wider strategic reach.

Cumulative and Sequential Strategies

The third, and most important, drawback to a strategy of denial stems from the need for Australia to mix the two general operational patterns of strategy that underpin the conduct of war. When wars or campaigns are planned, like the German drive to Russia during World War II, as a "series of visible, discrete steps, each dependent on the one that preceeded it," a sequential strategy is employed. But there is another way to prosecute a war — by the accumulation of operations "piling one on top of the other until at some unknown point the mass of accumulated actions may be large enough to be critical." This approach reflects the use of a cumulative strategy, such as was employed with the submarine campaigns of the Atlantic in both World Wars.16

While there is no major instance in which a cumulative strategy has been unilaterally successful, the strategies are not mutually exclusive, and there have been signal examples — the Peninsula Campaign in Portugal and the US Civil War are but two — where a comparatively weak strategy achieved victory by virtue of the strength of the cumulative strategy behind it.17 Two points, then,

Defence in Depth

At this point, then, we have come up against the judgement that the span of strategies examined fails to adequately encompass the strategic approaches to threat control — to the extent that Australia would be forced to fight on terms so impropitious as to presage defeat. A strategy of denial facilitates enemy sanctuary, places Australia at risk of disproportionate response, and, perhaps most important, prejudices the likely efficacy of campaign strategy. During consideration of these difficulties, one impression has become exceedingly strong — that the span of strategies needs to be extended to permit operations in an area that encompasses a strategic reach sufficient for Australia to maintain control of the threat environment.

From a core concept of disproportionate response, then, the span of strategies has expanded outwards, in a concentric fashion somewhat similar to the strategic reach therein prescribed, to encompass further concepts necessary for Australia's defence. At the first level,
the concept of containment defence emphasises mobile conventional military structures for the continental defence of Australia, while at the same time advocating the use of applicable territorial defence doctrine. At the second conceptual level, denial strategy emphasises the need for air and naval forces capable of denying the air and sea gap approaches to an enemy. At the third, and final, level, the concept of strategic reach emphasises the need for air and naval forces capable of operating beyond those approaches to ensure the control of the threat environment is not lost to the enemy. The levels are not layers, but describe mutually inclusive conceptual circles, that, taken together, constitute the broad strategy of defence in depth. It is a strategy that raises an enemy’s costs and risks to the highest possible level, and that has the flexibility to permit Australia to cope with any conflict situation (short of a threat to national survival) it may face.

Just what strategic reach is needed to underpin this strategy of defence in depth need not be defined precisely as a matter of record. Indeed, it may be ill-advised to promote any interpretation of a precise geostrategic sphere of influence, as witnessed by Secretary of State Dean Acheson’s drawing of a line of US interests in Asia that excluded Korea in his speech to the National Press Club in Washington in January 1950. A generic description of “large” will suffice to permit examination of relevant joint and single service doctrinal precepts that will guide the ADF in exercising control over this area and hence shape force structure requirements.

NOTES

3. Ibid.
6. Ibid., p. 50.
8. Ibid., p. 166.
14. The United States Department of Defense Sealift Study has identified this particular requirement to project a large, balanced force into environments like those found in Australia. See Joint Military Net Assessment, Washington DC, p. 10-6.
15. The accuracy of the assessment was reflected in the July 1989 remarks of the Indonesian Defence Minister to his nation’s parliament that Australia’s defence posture, which currently includes a limited range of offensive weapons systems, in no way constitutes a threat to Indonesia. See Kim C. Beazley, Australian Minister for Defence, Hermann Black Forum Lecture, 13 September 1989.
Work Study in Defence

By Chief WRAN Work Study H.M. Anstee, RAN

Introduction

Hardly a day passes without one hearing the word “productivity” mentioned in the media. The politicians cry that Australia must be more productive to remain in touch with the world’s economic restructuring. It really doesn’t matter why other countries are changing or how! The thing is we must change with them because Australia has a free market economy, our dollar floats and our capital industries are open. We must provide what the customers require at a price they are willing to pay. As we (the nation as a whole) are not prepared to lower our standard of living through lower wages, we must produce more and better things at the same cost. By doing this we will increase our productivity.

This change of attitude is well and good in private enterprise, where the drive is for profit and the might dollar, but does it have a place in the Defence Forces?

The difference between BHP and the Department of Defence is that one is a profit maximiser and the other is a cost minimiser. In today's economic climate, Defence needs to practice economy when expanding the Defence budget. This is where Work Study can be of assistance!

What is Work Study?

Work Study is a term used to encompass the techniques of Method Study and Work Measurement which are employed to ensure the best possible use of human and material resources in carrying out a specified task — an aid to management to obtain optimum value from the factors of efficiency. What it means is that Work Study is concerned with improving efficiency and increasing productivity by utilising existing resources.

Method Study is the systematic recording and critical examination of the factors and resources involved in existing and proposed ways of doing work, as a means of developing and applying easier and more effective methods and reducing costs. An integral part of Method Study is Motion Economy, where the aim is to reduce effort and increase productivity. This is achieved by reducing movement and keeping the motion pattern within certain defined areas. Method Study can be employed in any work environment.

Work Measurement is used to establish the time for a qualified worker to carry out a specified job at a defined level of performance. Work Measurement data can be applied to many areas, namely management control — where it discloses the amount of time devoted to productive work and the amount of ineffective time; staffing — if the time needed to do a particular job is known, then management can allot the appropriate staff to cover that job; future planning — by comparing future tasks to tasks already studied, management can gain a realistic time the task will take and the resources required.

Defence Applications

In view of today's economic climate where Defence, like many other Government Departments, is faced with forever increasing cutbacks in all areas, Work Study has a role to play more than ever before. Now is the era of commercialisation of Defence Industries (ordnance factories etc) — where they are now more accountable for their productivity and have to compete on the open market to remain solvent. Although these industries may retain government contracts the quality of the end products must be well within the specifications and tolerances laid down or they will be rejected. "Close enough is good enough for government work" no longer applies.

A similar trend is falling to Unit Commanders; where they will be allocated finances for the year for them to use as they see fit, taking care not to overextend as no more money will be forthcoming. This is where Work Study enters
the picture. It can assist Commanders and Managers by making recommendations to increase productivity by improving methods that provide greater efficiency, better working conditions, improved staffing allocations, with an overall reduction in costs and waste.

Productivity studies cover a wide range of work-related activities. Examples are paperwork flows and procedures for offices, workshops, warehouses etc, layouts of offices and other work areas, assessing organisation/establishment levels, project management, reviews of unit/user requirements, facilities briefs and determination of task durations.

As Work Study becomes more and more accepted and its scope and investigational potential is increasingly appreciated, there will be a tendency for the practitioners to be asked to undertake a variety of jobs for which they seem particularly well fitted. Examples of these might be investigations into possible new equipment to assess suitability and costs, the financial effects of envisaged design changes, the possibility of using computers and so on.

It must be remembered that Work Study is a service to management — it is advisory in its nature and not executive. Work Study is not out to prove all existing methods are inefficient and is definitely not a substitute for effective command.

### Study Initiation

It should be noted that Work Study doesn’t go anywhere where it’s not wanted. Commanders and senior management request Work Study assistance to solve a perceived problem.

Upon receipt of a request, a Work Study team will conduct a feasibility study to determine that it is a Work Study solvable problem and not a managerial one. The feasibility study will also determine if the potential achievements will justify the effort (time, money) and to access the manpower commitment required to conduct the study. On completion of the feasibility study, management and the Work Study team produce a Terms of Reference which is basically the team’s licence to conduct a study in that particular area.

The study approach is totally open. Communication with everyone involved in the area of study is of the utmost importance; the results achieved in a study not only depends on the quality of the Work Study Practitioner but also requires the co-operation and input from all incumbents.

The Department of Defence has dedicated Work Study teams available to conduct studies. For more information on study initiations within the Defence environment contact the appropriate person from the list below:

### Defence Work Study Teams

**NAVY**  
Lieutenant Commander Steve Lawson  
Naval Work Study Officer  
Level 20 — Remington Centre  
175 Liverpool Street  
SYDNEY NSW 2000  
Phone: (02) 266 2698

Mr Ben Korhonen  
Principle Work Study Officer  
Navy Supply Centre  
ZETLAND NSW 2017  
Phone: (02) 663 7504

**ARMY**  
Officer-in-Charge  
Army Work Study Cell (DCOORD-A)  
G3-71  
Russell Offices  
CANBERRA ACT 2600  
Phone: (06) 265 4424

**RAAF**  
Squadron Leader Greg Newlyn  
OIC Work Study Consultancy Group  
A-6-14  
Russell Offices  
CANBERRA ACT 2600  
Phone: (06) 265 6306

**DEFENCE CENTRAL**  
Mr Lex Clark  
Material Policy Branch  
CP4-4-05  
Campbell Park Offices  
CANBERRA ACT 2600  
Phone: (06) 266 4907
The Royal Australian Army Ordnance Corps Centre at Gaza Ridge Barracks, Bandiana, Victoria has the sole responsibility for conducting Defence Work Study training. The role of the Defence Work Study Wing (DWSW) is to train selected personnel from the Royal Australian Navy, Army (all Corps), Royal Australian Air Force, The Public Service and Defence Co-operation Programme (DCP) members in all techniques of work study and their application in a Defence environment.

The 14 week course as it stands at the moment covers Method Study, Work Measurement and associated techniques like Network Analysis and Simplified Systematic Layout Planning. As a result of a review conducted recently by representatives from all services of the Defence Force, it was agreed that there was a need to restructure the course to meet the requirements of the users of Work Study. The course will, in the near future be broken down into a basic and an advanced course. The basic course will encompass Method Study and associated techniques as well as placing greater emphasis on topics that will bring the Work Study Practitioner more up-to-date with current government policies pertaining to work practices. The advanced course will cover the Work Measurement aspects of Work Study as well as a more comprehensive insight into some previous taught topics.

Total Quality Management is a management philosophy that seeks improvement in the quality of performances of all processes, products and services of an organisation. It emphasizes the involvement of employees at all levels to seek such improvements. It is concerned with ‘doing the right thing right the first time’, thus endeavouring to obtain the goal of ‘zero defects’. By striving to achieve this objective the need for rework and the volume of waste is greatly reduced thereby reducing direct and indirect costs. It is also involved in pre-empting problems and not waiting for a problem to arise and then taking remedial action.

Quality Circles are part of this management philosophy and consists of volunteer participants in a work group, who meet on a regular basis in normal working hours to identify and solve problems relating to productivity, efficiency, quality and safety within their immediate workplace.

In the past, Work Study has been introduced as the result of pressure from one or a few members of the executive. It is rare for studies that have been commissioned this way to succeed. Disagreement at the top, causing doubts to filter down to the workers at the coalface, leads to the lack of essential co-operation with the Work Study Practitioner and their consequent frustration. The degree of co-operation secured will generally be a function of the quality of relationships already existing in the area under review.

Work Study, however good, is no substitute for sound management, indeed it will tend to highlight and emphasize short-comings in human relationships. As stated previously the Work Study role is advisory only, it is only as successful as those with executive responsibility allow it to be after evaluating their recommendations.

For information regarding courses contact:

Staff Officer Grade 2 Training
Directorate of Ordnance — Army
CP4-3-02
Campbell Park Offices
CANBERRA ACT 2600
Phone: (06) 266 4054

CWRWS Heather Anstee joined the RAN in 1973 as a Radar Plot and specialised as a Weapons Assessor in 1975. In 1985 she completed the Work Study course held at the RAAOC Centre and transferred to the Work Study Branch. Her posting as a Work Study Practitioner was to RAN Work Study Team 3 in Sydney. She is currently as instructor at the Defence Work Study Wing at Bandiana.
In April 1990, a group of World War I veterans made the historic pilgrimage back to Gallipoli to take part in the events marking the 75th Anniversary of the landings at Anzac Cove.

The pilgrimage involved the deployment of a Qantas 747 aeroplane especially named 'The Spirit of Anzac' to carry the veterans and war widows to Gallipoli. The Australian Defence Force provided medical teams to care for the pilgrims as well as an Australian Army Half guard, a military band a Catafalque party and escorts for each veteran.

The Royal Australian Navy was represented by the landing ship HMAS Tobruk, the guided missile frigate HMAS Sydney and the submarine HMAS Oxley.

It was the biggest overseas movement of civilian and military personnel in the history of our nation.

The Australian Defence Force Journal was there to capture the atmosphere of this emotional event and has produced the book 'The Spirit of ANZAC'. This unique publication is a collection of excellent paintings by Defence artist Jeff Isaacs with the narrative prepared by Michael Tracey.

The Spirit of ANZAC is available from the Australian War Memorial bookshop for $9.95.
The Australian Cadet Corps (ACC) is a national youth program with enormous potential to augment traditional recruiting methods in the Australian Army. Unfortunately, the ACC has fallen into a state of disrepair. Attempts at limited support in the eighties were directed at primarily social goals, rather than reaping a military harvest. The future course of the ACC was very much a germane issue while this article was being researched. Advocates sought funds to revigorate the scheme. This article seeks to complement these fine efforts and, if possible, seek a broader level of awareness.

The Current State of Cadets in Australia

In 1989, there were 16,000 cadet units in Australia, organised in to 130 Fully Supported Units (FSU) or Limited Support Units (LSU). Only some 13 ARA personnel support this large undertaking, most of the burden falling upon the Army Reserve. This Reserve support requirement differs from the pre 1983 system when the ARA provided most support in a school based environment.

In a Defence budget of about $8.1 billion the ACC had direct costs of $2.26M in FY 88/89. In 1981, there were 20,810 cadets in 165 units funded by $4.1 Million (direct costs). In 1984, the government reduced the manning of 122 regular support staff as near its present level of about 13. Clearly then, there has been a reduction in the priority of cadets from both a funding and resources viewpoint. This article seeks to raise the positive aspects of the ACC Scheme from the perspective of the real investment gains to Army.

Cadets; A Brief History

The origins of the Cadet Corps before the Great War were entrenched in the colonies' education system. A number of voluntary school cadets units had existed in the colonies prior to Federation. Such regimentation in schools was not uncommon in the Victorian era.

The new century saw the introduction of a compulsory and highly controversial Commonwealth 'Boy Soldier Scheme'. During the inter-war years support was maintained with voluntary service in schools or the militia. The scheme was revitalised during the Second World War and the Australia Cadet Corps was officially founded in 1951.

During the post-war period the ACC grew to a massive 46,000 in the mid-sixties. In many schools it has remained compulsory since inception. The withdrawal from Vietnam, fiscal pressures and a period of anti-war feeling led to the disbandment of the ACC in 1975 by the Labor Government.

The key points of the post WWII period were that the ACC was fully supported by the ARA and was based totally upon school cadet units, officered generally by school staff.

The disbandment in hindsight was a cheap expedient at enormous cost to Army credibility and military community relations. The 1974 Millar Report into the ACC, despite its ambivalent overtones, admitted the broad based community support for school cadets. Accordingly, the disbandment and reintroduction attracted considerable political and community comment.

In 1975, the coalition Fraser Government honoured an election pledge and reintroduced the ACC scheme, though with a much reduced level of support to the pre-disbandment period.

The level of government support diminished even further in 1983 when the new Labor Defence Minister announced "Schools who wish to retain their cadet units are to be offered the opportunity to continue as part of the Cadet Corps, but without direct support." This announcement was really the death-knell of the once great school based scheme. From
that point only wealthy conservative school cadet units could survive, because only regionalised non-descript units were to be government supported.

During this time many long standing school units folded. Importantly also, the responsibility for support was to transfer from the ARA to the ARES, the latter facing enormous resource difficulties of its own.

Current Arrangements

Currently, control of the ACC is exercised by ACRESS-A assisted by DACRES-A. Fully Supported units (FSU) are regional, as opposed to school, based on a local ARES unit or community organisation. The Army funds one seven day camp per year, pays for Officers of Cadets (OOC), and provides uniforms and equipment.

Limited Support Units (LSU) retain the traditional sponsorship by a school. Use of stores and facilities by schools is on a repayment system in accordance with the 1983 Ministerial Statement.

The obvious weakness of the current system is that the school based cadet unit, the mainstay of the ACC over the century, has been allowed to wither. The school cadet unit was formerly a part of the collegiate fabric in the same way as the rowing eight or school band. (See such example as “Extracts of Unit History, Prince Alfred College Cadet Unit compiled by SGT (now LTCOL) D.M. Horner.)

However, the schools remain the focus of recruiting effort for RMC and ADFA. This is quite sensible as it is in a student’s final year that a service career is contemplated. The point is that students may find it less attractive to join a ACC unit unless it reflects the school or college focus. Yet it is the schools that remain the target of Army recruiting.

Cadet Aims — An Interest in Service Life

The ACC Policy Manual cites the aims of military training as follows:

a. give cadets a foundation of Army knowledge and discipline,

b. develop the qualities of leadership, self reliance and initiative,

c. develop an interest in the Army and its traditions, and

d. encourage cadets to continue some form of military service.

While the nature of these aims is noble, the significant degree to which they reflect youth development themes, rather than more military goals, is possibly why the Army has not afforded the ACC a higher priority.

Yet this priority of aims is questionable given reasonable evidence. Several surveys have inferred that the ACC actually creates an interest in Army life. Cadets currently represent 2% of the school population of Australia yet at RMC ex-cadets form 28% of the Corps of Staff Cadets, while at ADFA 30% of the Corps in 1989 were ex-cadets.

In Tasmania in 1987/88, 66% of school cadets pursued a military interest (ARA/ARES) after matriculating. Quite simply as the demographic base of young Australia shrinks, by the year 2000 this military inclined element of the school population will become a premium crop for the services.

The economies of increased support, to say, double the cadet numbers to 4-6% of the school population, must by extrapolation harvest a greater crop — simply the catchment area will be much larger. Historically this proved true with greater ex-cadet enlistment to RMC when school cadets had higher funding during the 1960s.

It could also be argued that a school cadet entering RMC or ADFA, or any other section of the services, is less likely to resign before commissioning or shortly after completing training. The sophistication of training is certainly absent, but a solid understanding of rank, barracks routine, discipline, basic field-craft and military organisation is understood. The decision to enlist or not to enlist is probably more informed.

Australian Army Cadets — The Way Ahead

The message as stated at the introduction is clear. The ACC has withered, primarily due to
the massive reduction in support, the switch to ARES support and the switch from school to regional basing. The cadet aims are ordered in favour of social goals rather than providing a spring board for service life.

The mathematics are simple, as the youth population shrinks and the community further drifts from an appreciation of service life, it will be very difficult to harvest a crop every year unless some entry standards are dropped.

Millions of dollars will probably be spent on recruiting to drive the wedge into a smaller, harder block. An alternative is in the Army's grasp. The ACC could be resuscitated and revigorated. The decision should be reviewed as an investment, not an expense.

A strategic plan to renew the ACC could be based on the following objectives:

a. Fully support all cadet units.

b. Supplement the level of total existing support by dedicating an element of the recruiting budget to fund ACC activities.

c. Re-order the aims of the ACC to highlight the role in developing community interest in Army life.

d. Re-establish the ACC along predominantly school lines.

e. Include on the ACC Board of Management representatives from Army Recruiting and Public Relations.

f. Instigate a system by which the relationship between cadets and an interest in Service Life can be measured and monitored to allow ongoing analysis.

g. Re-establish ARA support for the ACC, supplemented by ARES where appropriate (i.e. remote units etc).

h. Exploit fully the link between school based recruiting and school cadets units.

NOTES

7. Ibid., p. 7.

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Captain Jonathon Huston attended Aquinas College Perth from 1971-79. In his latter 3 years he was a school cadet. After commissioning from RMC in 1983 Captain Huston was allocated to the Australian Intelligence Corps. Following regimental duties with 5/7 RAR a number of intelligence staff positions were undertaken. Captain Huston is now Aide-De-Camp to the Land Commander Australia and is completing a Master of Business (Marketing) Degree at the University of Technology. Captain Huston has been posted to the Army Wargames Centre in 1991.
The Use of Armour in Low Level Operations

By Captain, D.W. Phillips, RAR

In both Vietnam and Afghanistan the success of armour depended upon the function it fulfilled within the combined arms team. J.F.C. Fuller defined these functions as finding, holding, hitting, protecting and smashing.

Introduction

This article seeks to determine the importance of armour in low level operations within Australia's area of direct military interest. Given the broad nature of the topic it will be first necessary to define what is meant by armour, low level operations and finally Australia's area of direct military interest. It is then intended to show the relative importance of armour in such operations by discussing the perceived advantages and disadvantages. This will also include looking at examples of utilization of armour in low level/low intensity operations.

Definitions

The term armour will be deemed to apply to tanks, APCs, armoured reconnaissance vehicles (ARVs) and mechanized infantry. The term low level operations applies to the lowest level of military conflict between two nations, far short of conventional war, and often with a political aim as opposed to a military aim on the part of the aggressor. In the context of Australian thinking it argues that a hostile nation may conduct limited military operations against selected military and civilian targets in Australia's remoter northern areas.

This philosophy of levels of conflict is very similar to the American strategic doctrine derived in the 1950s and 1960s. The aim of this doctrine was to define the ranges, and therefore appropriate responses, of conflicts between 'guerilla' war to full thermo-nuclear war. This doctrine went 'hand in hand' with the doctrine of containment and limiting escalation. Soviet war fighting doctrine traditionally does not recognise such distinctions between levels of war, but rather looks at the stages of armed struggle.

Low level operations could be conducted in isolation or in conjunction with conventional operations elsewhere. As stated by LTCOL Crawshaw 'A low level campaign could be spasmodic, sustained at a limited level, or precede or accompany higher levels of conflict. It would have the potential to disrupt the Australian community and to force a disproportionate response from the ADF'. In low level operations the initiative is firmly with the aggressor at the commencement of operations.

Advantages and Limitations in the Use of Armour

Perhaps the greatest argument against the utilization of armour in low level operations is that of political constraint placed on its use, even to the point where deployment to the 'Area of Operations' may not be approved. The reasons for this reaction would be not wanting to appear to be over-reacting, fear of escalating the conflict, and the belief that the deployment of offensive weapons may increase damage to the local civilian population, as well as go beyond the concept of maximum force.

This factor will pose very real limitations on the deployment of armour to an AO, especially if outside Australia's sovereign territory. Such opinions must be overcome, for not only does it place an illogical limitation on the balance of the deployed force (thus affecting its ability to achieve its military mission), but may also be misconstrued as showing a lack of faith by HQ ADF and the Government in its subordinate commanders.

It can also be argued that the deployment of a Battalion and Squadron of tanks to a situation may be a more adequate response than the deployment of a Brigade without armour. The response the Government makes must be
adequate and flexible enough to deal with the enemy’s action or any immediate escalation of the conflict.

Another limitation on the use of armour is that of logistic support. The development of armour to an AO in Australia or overseas will require a significant logistic support element. This will include the provision of POL, repair and maintenance facilities (if widely dispersed the conventional A1 and A2 echelon support structure will be inappropriate).

Unlike B vehicles the amount of support available from the local civilian infrastructure will be limited. It would be likely that if widely dispersed, each armoured element would require to have its own echelon ‘based’ with it. Deployment of armour may require the dumping of parts and POL at secure points throughout the AO. In regard to operations in the MT the logistic support problem may be somewhat eased by the planned facility for 2 Cav. Regt. at Palmerston Barracks.

Armour in low level operations can prove difficult to deploy by air (as in all levels of conflict). This is because a large air asset is required to move relatively small amounts of armour. Tanks can only be deployed by air with USAF assistance. There are also problems in deploying armour speedily by rail. Rail access to northern Australia is very limited. Within Australia road transport is likely to be the best and quickest.

Sea transport is somewhat slower and depend largely on the availability and pre-positioning of LSH. The deployed force commander is likely to face a significant delay before tanks are available (especially outside continental Australia), and in regard to lighter AFVs he has to make a choice of priorities if he wishes to move them by air (2 per aircraft with a significant fuel/range penalty). This will be a major consideration in the deployment of armour within or outside Australia.

Problems will also exist in the deployment of armour during the wet season both within and outside Australia. In this situation armour may be largely restricted to formed roads and the use of armour on graded non-sealed roads may create problems for other forms of transport. Further restrictions may be found in weight restrictions and size on bridges particularly in an off-shore situation.

Armour cannot hold ground and this is particularly the case in a guerilla warfare environment. Armour therefore requires infantry protection. The requirement for armour to operate as part of a balanced force if it is to survive has been demonstrated in Afghanistan.

The use of armour can also create lazy habits on the part of the deployed infantry if mounted. There can be a tendency to avoid dismounting unless forced to do so. Furthermore, it can lead to all reconnaissance being conducted visually from vehicles, as well as the loss of foot patrol skills.

The use of armour in a patrol environment also risk a loss of surprise given the noise signature of these vehicles. The above problem can be overcome by good leadership and policy on the part of the commander to ensure that such lazy habits do not become entrenched.

Advantages in the Use of Armour

There are a range of factors which can make the use of armour of vital importance in low level operations, both within Australia and without; in the open savannah of outback Australia as well as the jungles of the Pacific.

Within Australia one of the key problems that will affect our forces is the dispersion of combat power. The area is characterized by few metal roads which tend to channel traffic and are prone to ambush and sabotage. In this environment armour would give our forces a major increase in cross country capability both in mobility and endurance.

MBT bridgelayers also offer a limited but quick gap crossing capability. Such mobility allows for the quicker concentration of force as well as the ability to maintain contact with the enemy until sufficient force can be concentrated to destroy him.

Without armour the ODF lacks a significant cross country capability and indeed lacks sufficient assets to move itself in one lift. The Blackhawk Helicopter in itself will not necessarily provide sufficient mobility for the ODF and or 1 Div Units. While a great asset once they lodge their troops at the LZ, those troops suffer an immediate loss of mobility.

APCs can safely deliver troops to within small arms range of the enemy. Furthermore the APC can stay with the infantry if so desired, to provide
for quick remount. This is vital as it is unlikely that it is the enemy's intention to stand and fight a pitched battle if he can avoid it. Once troops are dismounted, APCs and tanks remain available to provide intimate fire support and be available for a quick remount if required.

The APC provides dispersed infantry with improved communication down to squad level. Communications will prove to be a vital factor given the dispersion of the force and the likely myriad of tasks. Improved communications will assist in the earlier reporting and reaction to the detection of the enemy.

The use of armour in the reconnaissance role offers some significant benefits but also has some limitations. Armour's mobility, protection and endurance makes it ideal for operating long distances from base. It can, however, be difficult to achieve surprise. Aside from combined arms patrols, reconnaissance is best left to the cavalry who are equipped for this task.

Given the wide area of possible AOs in Australia, it is also unlikely that sufficient uncommitted armoured vehicles would be available to fulfill a large proportion of the reconnaissance requirement. In closer country armour may prove a liability in reconnaissance.

Protection remains an important advantage in the use of armour in low level operations. Given that it is unlikely that the enemy will have an armoured capability in projected low level operations, the survivability and combat power of our own armour is even more significant than in a conventional situation. Therefore, while still vulnerable to mines and LAAW, our armour can be a significant threat to the enemy's combat power.

While armour cannot be guaranteed to deter the enemy it can certainly restrict his freedom and mode of operations. The APCs survivability would also be significantly enhanced and its effect would be only somewhat less than that of a tank.

Both the APC and tank offer a significant increase in firepower to the deployed commander both against hard and soft targets. This would also compensate for 1 Div Unit's significant lack of anti-armour and direct fire weapons. Should the enemy deploy armour then the best anti-armour weapon is another tank.

The aspects of mobility and protection with firepower make armour a devastating weapon in all low level contingencies. The shock action of armour both in jungle and open country would be devastating should the enemy be made to stand and fight.
In this regard armour can be seen as a more significant combat force multiplier when used as part of a combined arms team. AFV firepower (105mm, 30 cal, 50 cal, 75mm) allows accurate fire support and, unlike CAIRS and artillery, does not require the infantry to withdraw to a large safety difference. Correct use of armour, direct fire weapons would allow for the accurate engagement and suppression of the enemy and in comparison to artillery and CAIRS, significantly restrict damage to the civil population and civil infrastructure.

Armour can offer the ground commander a great deal of flexibility in low level operations. Ground forces will not spend most of their time fighting but rather protecting assets or patrolling. The conventional war imperative to keep armour massed near or at the FEBA does not hold sway. This then will release armour for wide range of tasks for which armour is ideally suited.

If necessary vehicles can be broken down assigned beyond troop level for tasks with infantry protection. These tasks include base protection, indirect fire support, traffic control, counter penetration, convoy protection, key point protection, ready reaction force, patrolling and ambush.

### Historical Examples of Successful use of Armour

Armour has proven an effective and important resource in low level/low intensity operations throughout the world since WWII. J.F.C. Fuller, one of the founders of modern armour concepts, foresaw its usefulness in such conflicts when he argued that armour could be used for policing the most remote corners of the British Empire.

The utilization of armour by the British in Africa and Asia during the so called ‘brush fire’ wars of independence during the 1950s and 1960s is noted.

Recent experience during the Vietnam and Afghanistan conflicts also gives support to the concept that armour can play a vital role in low level operations. Both these campaigns were conducted on a much larger scale than our present planning envisages and both fall into the category of low intensity operations. While pitched battles occurred in both, they were essentially counter insurgency operations.

In Vietnam, the US initially saw no role for armour, and indeed the first armoured unit arrived by accident. By the end of the US commitment to Vietnam armour constituted 24% of US forces there.

Armour, with its capability for rapid reaction and firepower, proved that it was vitally effective in jungle and low level operations. Whilst less effective in concentrated armour sweeps and hooks, they proved effective in the pursuit of contacted enemy, ambushes, counter attacks and search and destroy tasks.

Armour in Vietnam quickly gained the confidence and respect of the US infantry. One example of the reactive versatility of armour was the success of the 2nd Inf. Bn. 22 Inf. when surrounded and under attack by the Viet Cong (VC). The mechanized infantry and armour column broke through the jungle from the South West with their 90mm guns firing canister and all machine guns blazing they moved into the advancing VC cutting them down.

Similar lessons appear from reports of the Soviet campaign in Afghanistan. Initial attempts at large armoured sweeps not adequately supported by infantry failed to achieve their aim. However, the Soviets soon learned that when used as part of a balanced team, armour was very successful. The use of armour was limited in more mountainous areas, but it guaranteed the control of the valley floor and cities.

More in line with our own anticipated scale of operations, the South African Defence forces have used armour quite successfully in controlling insurgency and civil insurrection. In this context armour has offered a mobile firm base from which infantry and police can operate.

The use of armour for crowd dispersal is also noted. The South African situation has actually seen the development of a series of armoured vehicles designed specifically for low level operations.

### Conclusion

Armour has the potential to play a critical role in low level operations in Australia’s area of direct military interest. The way it is used changes from conventional war, but its function as defined by J.F.C. Fuller does not. These functions are
finding, holding, hitting, protecting and smashing.

The limitation that can be imposed on the uses of armour include required logistic support, air, portability, wet season, operations and political considerations. Most of these problems can be overcome by good planning and staff work. The reluctance on the part of the Government to deploy offensive weapons can also be seen as a limitation on planning and the use of armour.

The use of armour in low level operations can solve more problems than it raises. It gives the ground commander more flexibility to react and to achieve his mission. Furthermore it is possible to deploy a smaller balanced force containing armour, than one without armour. It has been shown that armour as part of a balanced force can contribute significantly to success in low level operations, both in the widely dispersed areas of Australia's North or in the jungles of the South Pacific.

Armour in particular offers the advantage of superior mobility, endurance, firepower, communications and protection. In addition armour is a flexible asset which can be used in a wide variety of tasks, and this flexibility extends to a means of battlefield transport over helicopters alone.

Given the present light force structure of the ODF, and also of battlefield mobility, the benefits of the use of armour are enhanced. The argument of a disproportionate response must be weighed against the requirement to deploy a balanced and effective force, a force that can achieve its aim, a force that can adequately defend itself from any immediate escalation of conflict.

NOTES
4. It is generally assumed that the enemy force will lack significant tracked or armoured capability and will largely be restricted to road and 4 x wheel drive B vehicles.
10. Ibid p.10.
11. On the grounds of minimum force and a desire to avoid escalation of the conflict.

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Captain Phillips graduated from RMC, Duntroon in 1981. He has held several appointments since then including, PI Commander in 2/4 RAR, SO3 at HQ1MD. He is currently posted as Captain at the School of Infantry.
Food for Thought—and Other Things

By Gordon Pound,
Materials Research Laboratory, Tasmania

Introduction

Old campaigners amongst readers will know that three elements represent the basic necessities in the bush. The opportunity to satisfy a craving for sleep, the chance to relieve oneself after hours of immobility in an ambush position and the replenishment of energy reserves with a tasty hot meal, surpass all the exotic pleasures available to those that dwell in semi-decadent middle Australia.

Of the three, eating brings the most pleasure while you're actually doing it. You can awake refreshed and appreciative from a really good zizz but remember nothing about it. While relief, although enjoyable at the time, is best accomplished in solitude and includes a certain feeling of vulnerability. Eating, on the other hand, is a matey affair; erudition is permissible, spirits soar, the body takes on a new and irresistible vigour and eventual victory appears inevitable. Providing always, of course, that it's good tucker you're eating.

Not long ago I read a series of personal anecdotes by people involved in combat and it was interesting to note their preoccupations. Liddell-Hart and other military scholars might dwell on strategy, tactics, equipment comparisons and logistics but the young men in the field seemed more concerned with home and family and, with those far away, their thoughts turned to the best substitute—food.

Troops who served in Malaysia with the British Army came home swaggering in their British issue 'airtex' tropical uniforms and wore their 'giggle hats' with the same pride as their GSM, but ask them if they had any complaints about supplies and they were universal in their condemnation of the pommie food. In Vietnam, American combat boots were highly prized as were special forces packs and M16s but those who had to subsist on USC rations longed for the homely taste of the Australian twenty four hour ration pack.

Australian service persons will quite happily fly American aeroplanes, drive German tanks or fire British guns but to invite them to eat foreign food is courting disaster. Multi-culturism has brought an appreciation of the cuisine of other nations but, for most Australians—and our service people are no exception—it has to be prepared in the Australian way using as many local ingredients as possible. A Chinese meal in Sydney is completely different from that available from a stall in the streets of Hong Kong or Changi. Residents of Beirut wouldn't recognise the menu of a Lebanese restaurant in Launceston, and a Vietnamese meal I enjoyed recently was a far cry from those I sat down to in Baria and Long Dien so many years ago. Steak and chips and pies may no longer comprise the entire Australian diet but there is a certain national flavour that is inescapable and, if the morale and the health of the troops are to be maintained, that flavour must be present in their rations.

During my service days I was as consumed as any other soldier with the quality of the rations provided. So it was indeed fortuitous when retirement and a happy series of coincidences brought me to the establishment that is primarily concerned with the quality of the tucker available to the services.

The decision to found an establishment to examine all aspects of service feeding was one of the more enlightened consequences of after action studies of the Second World War. The importance of food as a morale factor and the need for a balanced diet to maintain individual efficiency and to combat the diseases that decimated whole units, particularly in the tropics, were lessons that were fortunately not ignored.

Initially the arrangements were somewhat ad hoc but in 1958 the Army Food Science Establishment assumed the form that, with minor differences, exists to-day. Of course it is in the nature of things that there must be organisational changes. The AFSE became part of Controller Service Laboratories and Trials and broadened its charter to study all aspects of feeding for the Defence Force as a whole. The most visible change was the addition of another F to the name as it...
became the Armed Forces Food Science Establishment and as such it eventually became part of the Defence Science and Technology Organisation (DSTO). So it continued happily enough up until 1988 when it was incorporated into one of the larger DSTO establishments and, as a result, now rejoices in the name of Materials Research Laboratory (MRL)—Tasmania.

The establishment is charged with determining a scientific basis for the feeding of all defence force personnel and achieves this through participation in the Ration Scales Committee (RSC) and the Australian Defence Force Food Specifications Committee (ADFFSC).

Navy and RAAF eat fresh or refrigerated rations nearly all the time. The RAN totes its own kitchens around on operational deployments as part of each ship’s normal plumbing and the RAAF tends to be anchored to a three mile long strip of concrete, with all its associated infrastructure. This means that their rations were usually those that are commercially available, providing always that they meet the specifications set out in the ADFFS. The combat soldier does not enjoy the same level of convenience. He has to carry his rations on his back and cook his own meals in whatever way he can. His needs are therefore of particular interest to the scientists at MRL-Tasmania.

Of course their commitment is assisted by the fact that they too eat. It’s a habit that’s common to all of us and therefore has a very personal dimension that is absent from the work of a scientist involved with electronics, avionics or weapons systems. Their clients have the same involvement. Trial a prototype of a new piece of equipment and your average Digger will be somewhat reticent in giving an on the spot evaluation. However, give him a new item in his ration pack and the reaction is instantaneous and often couched in concise and pithy terms that leave no doubt as to its acceptability or otherwise.

It might be said that given the data from many conflicts to draw upon, the length of time research has been in progress and the extent of the food industry in Australia, there would be little more that MRL-Tasmania could contribute. This is far from the case. Advances in food technology, new discoveries in the field of nutrition, changing eating habits and a whole host of complicating factors, mean that Defence Force feeding is a truly dynamic field of endeavour.

There are established scientific bodies within Australia that publish details of the latest advances in human nutrition. Because it is a fundamental principle that such advances should be incorporated into service rations, these are analysed at Scottsdale
with a view to such incorporation. However, the problem with the external research is that it tends to concentrate on fresh foods and is usually qualitative rather than quantitative. Substantiated findings on fresh food can be readily introduced into static feeding but the problem of maintaining nutritional requirements in combat rations becomes a matter for the Food Technologists and will be referred to later.

**Nutritional Requirements**

The quantity of food available must be considered because when one contemplates the size of the Defence Department's food bill, even for the present level of the permanent forces, the question of economics must arise. If service personnel are given too much to eat they become fat and lazy and the excess is essentially wasted, at an enormous cost. Give them too little and they become lethargic, morose and inefficient.

In spite of the need for economic considerations, the quantity of food that should be made available to individual personnel cannot be determined by cost alone. A particular (non-service) logistics organisation attempted to do so by, amongst other things, suggesting that the composition of rations could be established on the basis of cost per kilojoule. MRL-Tasmania soon proved the argument totally unrealistic. Amongst other factors it was pointed out that the kilojoule requirement could be provided quite cheaply by a diet of sugar and mutton fat. Less so by caviar and crayfish. Obviously the quantity of food required must be determined scientifically and be on the basis of replenishing energy expended.

The necessary information can be obtained with comparative ease in a laboratory. The subject is asked to run on a treadmill, pedal a static bicycle or haul on a rowing machine while connected to apparatus that measures energy expenditure. All of which is great when determining a suitable diet for runners, cyclists and rowers. But how much energy does a jet pilot use, or a submariner or a parachutist on his way to the DZ? An Infantryman, having humped his pack all day and faced with the prospect of digging a hole in unyielding ground at the end of it, is likely to become downright uncooperative if he is asked to augment his burden with all sorts of scientific gismos. Yet this is the sort of effort that must be measured if his diet is to compensate for his work rate.
The MRL nutritionists became aware of a method developed in the USA that involves providing subjects with a very accurately measured amount of doubly labelled water. Urine samples are taken at specified intervals and analysed. There is a relationship between the amount of the introduced substance in the urine and the amount of carbon dioxide produced by the body in the period. This, in turn, can be related to the amount of oxygen taken in and the amount of energy expended.

The American experience was virtually confined to university laboratories but the MRL scientists have taken the process further and used the technique on troops in the field, at recruit training establishments and on submariners, with other groups planned for inclusion. The published results have generated wide interest. Not only has it been shown that, in some circumstances, the present ration is insufficient, but the leader of the team engaged in the study has been invited to America to discourse on his work.

Having established a basic quantitative requirement the nutritionists can develop proposals for a nutritious and healthy diet for the serviceman and woman. The Food Technologist is then tasked with turning those dietary principles into a practical combat ration.

**Food Technology**

It is axiomatic that the Defence Force must hold a reserve of combat rations, just as it must hold reserves of ammunition, fuel and spare parts, a factor that leads to the requirement that combat rations have a minimum shelf life of two years. This does not fit in at all with the nutritionists' theory that a healthy diet must include fresh fruit, vegetables, eggs and dairy produce.

The task of the Food Technologist is to select combinations of foods that will stay nutritious for long periods of time. There are few foods that will retain nutrition naturally. It is usually achieved by the correct combination of processing and packaging.

Readers will be familiar with the many varied ways of preserving food. Canning, drying, pickling and freezing have all been tried for centuries. The end product, the preserve, may not have actually decayed but its nutritional value was often minimal and the preserving medium often had its own dangers; lead poisoning from can solder and ingestion of massive doses of salt, to mention but two. Apart from certain techniques where the

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Navy and RAAF eat fresh food nearly all the time
preserving medium imparts the desired flavour, as in jams and pickles, the two most common and efficient preserving methods in use today are canning and refrigeration.

It would be superfluous to explain why there is no place for refrigerated foods in ration packs.

Commercially canned foods are common in combat rations but although the contents may meet specifications, the cans themselves may not be capable of standing up to the rigours that await them. Samples subjected to artificially created harsh environments at MRL-Tasmania—climates that are no worse than those that may occur naturally in many parts of Australia—frequently show severe corrosion in a matter of days. They are quite adequate for supermarket shelves but inadequate for the exposure they may be subject to during operations.

Logically, better quality tinplate is required but this would necessitate a special formulation and modified machinery, and the Department's yearly demand is so small that the unit cost would be prohibitive. MRL-Tasmania scientists continue to develop ways of improving corrosion resistance, by making available to the manufacturer innocuous additives that inhibit internal corrosion and/or by post production treatment of the outside of the cans.

In addition to having a corrosion problem cans are bulky, heavy and quite easily damaged. Consequently investigations continue into laminates, foils, plastics and paper products that could provide an alternative economic protection to the many components that make up the combat ration.

Given that refrigeration has very limited application and the inherent problems with canned foods, attention is focusing on new technologies. MRL-Tasmania has developed a particular expertise in freeze drying a wide variety of foods, a technique that has many advantages. The end product retains its nutritional qualities almost indefinitely, the shelf life of the food is prolonged, weight is reduced by between 50 and 80% and the packaging is light, cheap and easy to carry.

Currently the Experimental Processing facility in Scottsdale represents Australia's only multi-purpose freeze drying capacity and produces all the freeze dried components of the combat rations. Because it is an integral part of the R & D activity, a very high level of quality control is maintained. Only the best quality raw materials are accepted for processing and samples are taken at every stage of production to be tested for moisture content, bacterial contamination, oxidation and nutritional quality.

Concurrently MRL—Tasmania experiments with new menus, adapting and developing the existing technology to encompass an even wider variety of ingredients. Currently some twenty meals have been found suitable, varying from roast beef with vegetables and gravy to chicken tetrazzini. Each year five menus are produced for the Patrol Ration One Man (PRIM). Every following year one is dropped and another added so, in a five year cycle, at least nine menus are available in the system. It is no small matter for conjecture at MRL-Tasmania, therefore, as to why we receive complaints from soldiers that, when on exercise, they are issued with the same ration every day! Another manifestation of the Chaos Theory perhaps?

### Food Analysis

Back ing up the nutritionists and Food Technologists is a highly specialised and expensively equipped team of food chemists. This team analyses the products of the Food Technologists to establish whether or not those products conform to the nutritional parameters laid down by the Nutritionists. These analyses are performed on freshly processed food and also on samples that have been stored on the premises for varying periods of time under a variety of conditions. Samples from Logistics Command's stored stock too are analysed to check on any deterioration.

The chemical laboratory is also where the 'Bush Tucker Man's' samples were analysed.

### Future Trends

It is possible that the development of freeze drying technology will see an even wider variety of foods becoming available for combat rations and changes in the way the foods are presented. The current thrust is ICE (Infusion, Compression, Extrusion) Technology—whereby foods are freeze dried and compressed, reducing not only the weight but the volume as well. The eventual aim is a matchbox sized tablet that will not only be nutritious and taste alright but which will reconstitute into a meal that looks as good as any Mum used to make.

There are some who deny the benefits of freeze drying and ICE on the grounds that Australia is an
A Combat Soldier has to cook his own meals in whatever way he can in an arid country and if extra water has to be provided, that water may as well be in the meal. This attitude fails to recognise that freeze dried rations are only part of the total, that Australia is a big country and, with much of the resupply to forward elements by air, weight becomes critical. Furthermore, in most areas of operation, some water will be available, particularly if treated with the latest range of water sterilisation materials that MRL-Tasmania is also working on. If the area is especially dry then water will need to be provided anyway. The small amount required for the rations would make little difference to the overall logistic problem.

There are also some who ask why MRL-Tasmania is located in Scottsdale. The standard answer is ‘why not’? It was originally established close to a commercial plant engaged in food dehydration, the forerunner of freeze drying and a process with obvious advantages for the Defence Force. Since then it has grown into a modern laboratory that has assumed technological leadership in many of its areas of interest. Most of the professional staff are outsiders who have quite happily found their niche in this small country town. They all live within a few minutes of the establishment, they have no travel hassles and the clean air and relaxed way of life are conductive to academia.

Conclusion

An officer recently returned from Namibia told me that the Australian rations were highly sought after by the troops of other nations involved in UNTAG which is nice to know. Better still is to hear the grudging compliments of our own Diggers.

Even constructive criticism is welcomed. I know, I’ve seen the attention such criticism receives.

Those with a taste for the good life may rest assured that MRL-Tasmania will continue to set the standards for tasty and sustaining service tucker as long as we are allowed to. Believe it or not there are those who consider the research and development superfluous. So, the next time you sit down on an ant hill in the Kimberley and tuck in to a nourishing snack of Veal Italienne, just imagine what life would be like with a ration of ‘Big Macs’ prepared in Melbourne two years before!

Gordon Pound was commissioned into the Australian Army in 1964 following service with the British Army. He served in the RAA in a number of regimental postings including service in the SVN with 105 Fd Bty and 4 Fd Regt. His staff postings included HQ 7MD, Operations Branch at Army Office and sundry other Canberra directorates.

He retired as a Lieutenant Colonel in 1984 and is now the Executive Officer of the Materials Research Laboratory Tasmania (formerly the Armed Forces Food Science Establishment). A published author he has contributed regularly to professional magazines, including the DFJ.
Have a nice flight

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Determining the Cost of Personnel Wastage in the RAAF

By Wing Commander P.J. Wythes, RAAF

Introduction

'The one asset possessed by an Air Force that actually appreciates rather than depreciates over a period of time and operations is people.'

AVM R.A Mason 1987

Since 1985, when the issue of the rate of personnel turnover in the ADF began to gain a high profile, there have been several investigations and reviews, by a variety of organizations and individuals, into all matters germane to personnel wastage. These inquisitors range from the Parliament and Defence Department through to academics and private consultants. Their reports canvass all aspects of the change in personnel turnover rates, the consequences of increased or abnormally high turnover in the Defence Forces as well as ways of solving or ameliorating the effects of inadequate retention of personnel in the ADF.

Like all things military, the issue has developed a momentum of its own, and each new report invariably includes a recommendation that further study be conducted into one particular aspect or another.

The actual cost of personnel wastage, that is the value expressed in monetary terms of resources being consumed or diverted by personnel separating from the three Services, has been questioned. Apparently, no universally accepted current costs have been determined and at least two reports have recommended that a study of the cost of personnel turnover be undertaken. To support recommended retention strategies, the 1988 Cross Report called for 'a thorough assessment of the likely costs and benefits'. The Jans Report, which had its genesis in the Cross Report, also recommended: 'The Services analyse the costs of personnel replacement further so that informed decisions regarding the magnitude of committal bonuses can be made'.

Besides the more immediate needs of the Cross and Jans Reports, is there another useful reason to establish the cost of personnel turnover?

Most members of the ADF appreciate the importance of experienced personnel, especially when future conflicts and expected warning/ preparation times are likely to dictate a 'come as you are' war due to the long lead times for the acquisition of specialist skills and equipment.

However, appreciation of the need to retain experience in the ADF appears to diminish rapidly the further one is positioned away from the actual force towards the community (ie, via HQADF, Defence Central, Defence Minister, other politicians to the Australian public).

Although all parties would readily agree on the importance of experience in the ADF in a conceptual sense, as soon as any monetary or other resources are identified requirements to either protect or create experience within the ADF, the support for experience wilts quickly. This phenomenon is encouraged by the lack of success by the ADF in quantifying experience in measurable and meaningful terms.

Without meaningful quantification, perceptions of experience will always be subjective, to the detriment of arguments for protecting or creating experience. One imperfect gauge of experience, that is readily quantifiable, is to measure the replacement cost and consequent monetary overheads incurred every time a person separates from the Service; but this method has attendant dangers.

Besides failing to measure the intangible aspects of experience, the simple toting up of costs reinforces an undesirable perspective of manpower. The view of labour (along with capital and land) as a factor of production creates a dichotomy with the view of experience, because from this perspective the 'cost' of labour affects the 'profit' on capital and is therefore something to be curbed.

On the other hand, taking a lesson from Human Capital Theory, training expenditure is an investment in capital, not an overhead cost, and capital produces profits. An erudite description of this theory and its application to the ADF was published in the Defence Force Journal by Alexander in 1989.
Therefore, there is a need to establish the cost of personnel wastage beyond the requirement to provide economic rationalization to wastage preventative measures. This need is to provide the data that can support a change in attitude that will view manpower as capital instead of labour; an investment to be protected, not a cost to be curtailed.

Leaving the development of the economic theory of Human Capital Formation and the policy extensions of that principle to others more capable, this work deals with the more pedestrian mechanics of the exercise. It examines elements of RAAF expenditure to formulate the cost of a given rate of personnel turnover on a Training Replacement basis and a flow-on effect or Cascade basis. Although concentrating on the RAAF, the methodology could be transposed to the other arms of the ADF.

The study is confined to the airmen force and only distinguishes between the technical and non-technical training streams by focusing on the Radio Technician-Air (RADTECHA) and the various Supply musters (SPLR, SPLRSPVR). Once established, the cost elements are applied to actual FY1989-90 wastage in those musters to extrapolate some general meaning to the airmen force as a whole.

Hopefully, this treatise will be in the nature of a pilot study to precede detailed and comprehensive research to meet Recommendation 6.5 of the Jans Report and support Recommendation 48 of the Cross Report. The aim of this study is to quantify and analyse the cost of wastage of personnel, from two representative groups within the RAAF airmen force.

The Cost of doing Business; or an Unrealized Investment

The increased rate of personnel turnover being experienced by the RAAF since 1985 has been the focus of considerable attention since 1987. In particular, the voluntary wastage from the Officer Corps (especially pilots) has, not surprisingly, received the bulk of this attention. Perhaps because it lacks the same visibility, little has been published about the growing shortfalls in some musters in the airmen force where the shortages of trained personnel, as a result of wastage, are becoming equally desperate as the shortages of experienced, middle ranking pilots. Because comparatively fewer studies of personnel turnover in the airmen force have been made, this study will concentrate on that element of the total RAAF manpower.

To reduce the scope of this exercise to a manageable level it is necessary to examine a representative sample of the airmen force. Consequently it seemed logical to divide the force between the technical and non-technical elements because the training replacement factor is a prominent feature of the study. Other discriminating criteria could have been used.

Areas where the level of wastage is considered a problem was the next criterion used to select a mustering from each element. The technical mustering chosen for study is Radio Technician-Air (RADTECHA) while the Supply musters will represent the non-technical group. Both musters are adversely affected by the current level of wastage they are experiencing (RADTECHA lost 78 in FY1989-90, while SPLR and SPLRSPVR lost a total of 115 airmen in the same period). In the case of the RADTECHA mustering, the level of wastage is exacerbating a manning shortfall from which the RAAF does not appear to be able to shortfall from which the RAAF does not appear to be able to recover in the short term. Although there is not a manning shortfall for the Supply musters, the volume of personnel turnover is a wastage induced problem.

Having settled on two representative musters the focus of the study is narrowed further by examining separations at three rank levels within each group. The rank levels selected are Warrant Officer, Sergeant and Leading Aircraftman. Study of the wastage at these rank levels is considered sufficient to give indicative costs across the sample for the purpose of this study.

Methodology

The cost of any particular pattern of personnel turnover is the aggregate of:

a. the cost of replacement at unit level of fully trained personnel;
b. the cost of replacing the specific skills and training of personnel who separate, eg, postgraduate courses; and
The greatest asset of an air force is people

c. the cost of postings (including those associated with promotion) directly induced by wastage.

The cost elements at points a and b are dealt with as Training Replacement Costs while the cost element at point c is dealt with as Cascade Costs.

The costing methodology used in this study is the cost model developed by Group Captain M.J. Rawlinson when he was a Defence Fellow in 1978. That both Cross and Jans also cited Rawlinson as the authority on this subject is noteworthy. Some modifications have had to be made to the Rawlinson model to take into account changes in cost capture and costing methods adopted by DCOST since 1978. Also, some aspects of the model have been ignored where they are irrelevant to this study. This study is an extension of Rawlinson's work, so far as Training Replacement Costs go, by updating to 1990 prices.

In any decision about whether to vary an activity, it is always the marginal cost (and marginal revenue) that is the relevant factor. The role of marginal analysis is fundamental to any examination of the rate of personnel turnover. Understanding this concept is crucial to following the methodology employed in determining Training Replacement Costs. Accordingly its rationale is worth describing.

Historical records reveal that since 1963 the annual airmen force loss rate has been within the range of six and 13 percent. Therefore, the RAAF can confidently predict there will always be a need to train a certain minimum number of replacement personnel. Indeed a continual (and preferably constant) turnover of personnel is necessary to maintain a vibrant, young force and a healthy personnel structure profile. Also, under current policy the RAAF is required to maintain a training organization to meet force expansion requirements in times of conflict. Bearing the fixed costs of offices, accommodation blocks, classrooms, workshops, etc, and the overhead costs such as school administration and base services is the corollary of having to maintain an ongoing training capability.

Marginal analysis is applicable to the rate of replacement training that is generated by a variation in the rate of personnel wastage. The cost to produce additional graduates is not proportional to the requirement to produce those extra graduates caused by an increase in the level of personnel turnover. Thus, if the cost to produce n graduates is $y$, the marginal cost to produce
n + 1 graduates is not equal to $y + 1$. RAAF training schools and base complexes are large organizations with other functions, so economies of scale permit considerable variation in student numbers before overhead costs change. However, the effect of the stepped curve of marginal analysis could mean that the cost to produce $n + 20$ graduates is the same as the cost to produce $n + 1$.

The beauty of using the marginal cost concept (apart from its veracity) is that, within certain ranges, it enables infrastructure costs and certain support costs to be ignored. These types of costs are exceptionally difficult to define. Nevertheless, it is important to recognize that the marginal analysis reveals the cost of additional training not the total cost of all living.

**Departmental Costing Methods**

Primary elements of manpower costs are salary and allowances, non-effective benefits (NEBs), general services costs and some base support costs. Following the justification for the marginal cost concept presented earlier, the base support costs are not applicable to a marginal course. The scale of NEBs is calculated from averages of aggregate expenditures, and is used by DCOST for comparative costing of civilian, officer, and other rank positions within the Defence Department. NEBs are presented as percentage 'on costs' to be applied to military salary. The scale of NEBs as at June 1990 was modified to suit personnel turnover costings.

General Services (GS) costs are calculated by averaging the aggregate cost of a basket of 18 expenditure classes over all RAAF personnel. The cost for FY1989-90 was $25.08 per person per day. The uncritical use of this figure for calculating replacement costs has limitations as some of the cost classifications are overhead costs (not applicable to a marginal course) and others do not relate to trainees. The large number of variables associated with training expenditures and the absence of disaggregated cost information means that a modified general services cost is used in preference to imputing costs on an individual basis.

For convenience, the costs were calculated on a working day basis because courses are measured in working days. The GS cost, for FY1989-90, per man per working day is $40.68. However, on the basis of the modification described in the preceding paragraph, the cost per trainee per working day is $25.67 while the cost per instructor per working day is $35.88.

**Training Replacement Costs**

There are four stages in the Training Replacement Cost chain. The stages are recruitment, recruit training, basic trade training and postgraduate and field or unit training, and the cost of replacing a fully qualified airman is the sum of the costs per individual at each stage in the chain. Because the RAAF conducts a continuous recruiting programme for airmen, recruitment expenditure is not applicable to a marginal course. The recruiting machine grinds on relentlessly as a function of the Service recruiting strategy and the state of the labour market, and, provided the numbers do not fluctuate widely, it is insensitive to variations in the rate of personnel turnover. Therefore, the components of the Training Replacement Costs to be calculated are recruit, basic trade and postgraduate training.

In a straight forward, but tedious series of calculations, salary costs, the product of a NEB percentage and a modified GS cost are used to derive a cost-per-working day factor for students and instructors. This factor is applied to course throughput (which includes failures) and instructors, by the course length in working days, to obtain a cost per graduate. A variation on this methodology is used to calculate the cost of postgraduate or unit training which is based on the opportunity costs of the student's time and includes an efficiency penalty for personnel undergoing on-the-job training (OJT).

Calculations using the costing methodologies described in the preceding paragraphs show that the cost per graduate of a marginal recruit training course is $6342. The basic trade training costs for SPLRs is $7939 while for RADTECHAs it is $69130.

Unlike the throughput of the trade training schools, which must be equal to the level of personnel turnover under steady flow conditions, the postgraduate and unit training throughput...
is dependent upon the number of inwards postings to a unit. The level of personnel turnover is only a contributory factor in generating these postings. As the output of a marginal course from RADS RAAFSCST will only produce students who are marginal to existing postgraduate/unit training throughput, all operating costs are treated as overheads and only the salary and NEBs are costed.

General services and base support charges are not included as the 'students' are now part of the workforce, the support costs of which are independent of manpower turnover. When the costs of postgraduate and specialist/unit training (including supervisor/management training for SNCOs) are included, the training replacement costs for WOFF, SGT and LAC RADTECHAs are $131,637, $126,133 and $166,164 respectively. The training replacement costs for a WOFF and a SGT SPLYSPVRR are $31,982 and $30,304 respectively while for a LAC SPLR, the cost is $26,938.

### Cascade Costs

In contrast to other employers who recruit into all levels of their organisation, the RAAF, in common with other military forces, has a vertical manpower structure and generally only recruits into the bottom echelons. Vacancies in the airman force at corporal level and above, created either by wastage or organizational restructuring, are filled by promoting a person from the immediately subordinate level. In turn, vacancies created by promotion from one rank level are filled by successive promotions from subordinate levels.

The RAAF maintains the quality of personnel by promoting the next most suitable person in the mustering (provided other qualifying criteria are met) irrespective of his/her location or the location of the vacancy. This creates the need for posting personnel between different locations. Unfortunately, the posting process is not simply on a one-for-one basis with promotions. Factors such as individual training, skills and experience have a significant influence in selecting and posting replacement personnel. Wastage of trained and experienced personnel creates, by far, the predominant number of vacancies and consequent promotions, so the pervasive effect of wastage is a cascade of postings.

An external consultant engaged to review ADF posting policies and procedures in 1986-87 concluded 'as far as postings are concerned, one could expect a 5:1 ratio of postings to resignations per se'. This ratio is accurate when applied globally to ADF postings; however, it lacks the precision necessary to study the cascade costs of postings of specific rank level wastage. For example, it is difficult to see how the discharge of an LAC could (in general) create the need for five postings.

To define a more precise means of equating postings with personnel turnover, another measurement factor has to be used. Current data indicates that an average of 3.68 postings occur for every promotion. This relationship between promotions and postings for the rank levels being examined by this study has been extrapolated to reveal: 13.04 postings for each WOFF discharged; 5.68 postings for each SGT discharged; and 1 posting for each LAC discharged. These figures are diffused, nevertheless they serve a useful role in enabling the spread of expenses to be identified and the product of their factor is 6.4 percent smaller than if the 5:1 ratio is used.

An average posting cost per RAAF posting was calculated using a modified total posting cost element and total postings for FY1989-90. Overseas posting costs and postings were excluded, as were postings that, prima facie, did not attach a removal entitlement. The average cost of a posting in FY1989-90 was $6,410.

### Analysis and Evaluation

Having established a means of determining the cost of personnel turnover, the cost elements can now be applied to actual wastage in the technical and non-technical mustering under scrutiny. Table I combines the marginal Training Replacement Costs and the Cascade Costs for all WOFF, SGT and LAC RADTECHAs, SPLRs and SPLRSPVRRs that left RAAF in FY1989-90. The wastage figures have not been refined to distinguish between voluntary and non voluntary discharges.

Prima facie, the bottom line figures indicate that at $10.5m, a significant sum of money walked
Table 1: Training Replacement Costs and Cascade Costs of Selected Wastage for FY1989-90

<table>
<thead>
<tr>
<th>Mustering/Ranks</th>
<th>No Wasted (a)</th>
<th>Training Cost Factor (b)</th>
<th>Training Replacement Cost $ (c) = (a x b)</th>
<th>Cascade Cost Factor (d)</th>
<th>Cascade Cost $ (e) = (a x d)</th>
<th>Total Cost $ (f) = (c + e)</th>
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<tbody>
<tr>
<td>RADTECHA</td>
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<td>WOFF</td>
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<td>131 637</td>
<td>1 053 096</td>
<td>83 586</td>
<td>668 688</td>
<td>1 721 784</td>
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<tr>
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<td>126 133</td>
<td>1 891 995</td>
<td>36 409</td>
<td>546 135</td>
<td>2 438 130</td>
</tr>
<tr>
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<td>116 164</td>
<td>2 207 116</td>
<td>6 410</td>
<td>121 790</td>
<td>2 328 906</td>
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<tr>
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<tr>
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<td>112</td>
<td></td>
<td>7 167 393</td>
<td></td>
<td>3 358 582</td>
<td>10 525 975</td>
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out the door when a relatively few number (5.3 percent of total wastage) of airmen separated from the RAAF last financial year. Alternatively, one could resignedly accept this expense as the unavoidable 'cost of doing business'.

If the indicative costs of wastage of this sample of technical and non-technical airmen were applied to total airmen wastage in FY1989-90, the cost involved is in the order of $195.95m. Even the most sanguine analyst would have difficulty writing-off such an amount as simply the cost of doing business.

Before getting too carried away with such analyses and speculation, it must be emphasised that the costs portrayed in Table 1 are not the real costs (which are greater) but the marginal cost of additional training courses, coupled with averaged real costs associated with the posting function. Hence, care must be exercised in how the data is used and for this study, only two avenues of analysis are followed.

The breakdown of costs in Table 1 is useful for discovering the sources of expense. Firstly, note that the greatest source of expense is the Training Replacement Cost for LACs. This rank level is probably the most susceptible to retention strategies as, in both cases, the volume of turnover created the higher cost.

The next observation to note is the substantial effect of cascade costs, which is particularly evident in the non-technical summary. Although the number of SGTs discharged was exactly half the number of LACs, the total cost for SGTs was the same as for the LACs; and while 65 percent fewer WOFFs than LACs were discharged, the WOFF total cost was the greatest. This pattern is replicated in the technical summary but the high training costs mask the effect.

The last point to note in this section of analysis is that in terms of total cost, no one rank level stands out as a target for special attention (subject to the qualification stated earlier in this paragraph) as each contributes about a third to the total. While a different emphasis between technical and non-technical may be justified, the spread of costs across the various rank levels dictates that any strategy implemented to ameliorate the rate of personnel turnover must be carefully considered, lest it bring into play a phenomenon that Jans labels "Newton's Law of military personnel management".

The most significant application of the data in Table 1, and the purpose for which the methodology was designed, is to determine the marginal costs of variations in the level of
wastage. Total airmen wastage in FY1989-90 was 2,085 which represents 11.48 percent of the average airmen force strength throughout the period.

For the reasons described earlier, wastage will not be eliminated, (nor would it be desirable to do so) simply increased or reduced. Without entering the debate about what level of wastage is acceptable, this study is designed to quantify the potential savings that could result from a reduction in the current level of personnel turnover.

For the purpose of this analysis, a reduction of two percent in the airmen force wastage rate will be costed. To shave two percent off the present wastage rate, ie, reduce it from 11.48 to 9.48 percent, means reducing the number wasted from 2,085 to 1,772 which represents a 17.4 percent reduction in the number wasted. Using a combined average cost of technical and non-technical airmen, derived from Table 1, the indicative annual savings resulting from a two percent reduction in total airmen wastage are $34.115m.

To continue the examination of the two representative musterings selected for this study, a 17.4 percent reduction in actual wastage was hypothesized. A more precise result is obtained by recalculating the actual cost components than by simply applying a global percentage reduction. The potential savings that could result from a two percent reduction in the airmen force annual wastage rate (assuming the reduction applied evenly across musterings and rank levels) when applied to the musterings under study are $1.735m. This data is summarized in Table 2.

While it is outside the scope of this study to examine anything beyond determining the cost of personnel turnover (and consequent savings), it is nevertheless difficult to resist speculating how much of the $1.7m would have been needed as a bonus to retain the seven RADTECHAs and 12 SPLR/SPLRSPVRs in the RAAF for another three to four years. This application of the data — deciding how much to pay, to whom it should be paid and when it should be paid, vis a vis the implementation of the Cross and Jans recommendations — must be left to others. The cost of wastage in all musterings, and at all rank levels would be necessary to determine the optimum quantity and target group of any retention strategy conceived.

### Conclusion

In addition to meeting the specific needs of the 1988 Cross Report and the Jans Report, there

<table>
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<th>Rank</th>
<th>Wastage Reduced</th>
<th>Training Replacement Saving</th>
<th>Cascade Cost Saving</th>
<th>Total Saving $</th>
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<td>RADTECHA</td>
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<td>19</td>
<td>1 201 970</td>
<td>533 312</td>
<td>1 735 282</td>
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</table>
is an overwhelming need for the ADF to be able to quantify personnel experience levels in measurable and meaningful terms. Measuring the training replacement and other overhead costs of wastage satisfies this requirement, but reinforces the economic perspective of manpower as labour. Modification of this perspective, using Human Capital Theory supported by data on the marginal cost of personnel turnover, should lead to the view that manpower is an investment to be protected instead of a cost to be curtailed.

With the bulk of past attention being focused on wastage from the RAAF Officer Corps, this study redresses that imbalance by exclusively looking at the airmen force. By costing a sample of airmen force wastage, it attempts to demonstrate that a complete examination of the cost of wastage in all musterings and at all rank levels will yield useful data to support retention strategies recommended by others.

Manpower is labour and, by economic definition, an overhead cost. Another economic definition holds that manpower is capital and, hence, is capable of returning profits. Irrespective of which view of manpower turnover one adopts — the burden of the cost of doing business, or an unrealized investment in capital — the price the RAAF is paying is colossal.

NOTES
3. Alexander, M.J. LT (RNZIR) and McGavin, P.A. Dr Officer Training and Retention In The Australian Defence Force: Lessons From Human Capital Theory.
7. Rawlinson used 12 expenditure classes and obtained a greater proportion for instructors and trainees. Hence, the GS cost could be considered conservative.
9. The uncritical application of the 5:1 ratio to the 112 discharges shows a cost of $3.589m or $231,018 more than the promotion : posting ratio cascade cost (column e of Table 3). The small difference between the results obtained using either method supports the accuracy of both methodologies.
10. Postings to or from courses were not included but local area postings could not be screened out. The effect of including postings that did not attract a removal entitlement reduces the average cost per posting and therefore the cascade costs must be considered conservative.
11. Jans. op cit p 20. Newton's Law of military personnel management 'for every action there is an opposite reaction — and often in a surprising place'.

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Articles

Squadron Leader Wythes joined the RAAF as an Administrative Officer in 1975 and has held Unit Administrative positions at CFS, 77SQN and RAFAFCOL. He has gained further experience in recruiting, instructional and manpower planning appointments. He was a graduate of No. 43 Command and Staff Course. He is currently Administrations Staff Officer at RAAF, Wagga Wagga.
The Pressure Group Activities of the RSL

By Captain M.J. Barry, ARA

The Returned Servicemen's League (RSL) was formed in 1916 to:

"... provide for the sick and wounded and needy among those who served, and their dependents, including pensions, medical attention, homes and suitable employment."

**Introduction**

The RSL has developed into one of the largest and most successful pressure groups in Australian history, and has influenced Government policy in such areas as repatriation, defence, foreign affairs, immigration and National Service. It has also entered public debate on such topics as the Australian flag, the National Anthem and War Crimes legislation. As one of Australia's most controversial groups, the RSL has been labelled by some as Fascist and by others as patriotic. Its critics view the League as militarist and reactionary, with a leadership that is out of date with modern Australia, and members that glorify war and use the club as little more than a drinking hole. Its supporters see it as a patriotic guardian, dedicated to Australia's interests, and a welfare body, unique to Australia, that provides assistance to returned servicemen and their families. The success of the League prompted a former Repatriation Minister to say, "If there were no RSL to take care of the bereaved and disabled, one would have to be created." As a pressure group, the League attempts to influence Government Policy in certain areas of concern to its members. A pressure group can be described as, "an association that, either directly or indirectly, makes a claim on the Government, so as to influence the making, or administering, of public policy, without itself exercising the formal powers of government." One of the major areas of criticism is as a result of confusion concerning the relationship between the RSL and the RSL Clubs. The RSL is a National body comprising a National Executive, with branches and sub-branches located in each state and the League's goals by providing support to ex-service territory, that work toward the achievement of servicemen and advice to the Government on policy matters. The RSL clubs by comparison, are social venues, generally not connected with a sub-branch, and having little involvement in the RSL's welfare and policy activities. This article will discuss the activities of the RSL by first looking at the aims and charter of the League, secondly by examining the methods by which the League as a pressure group attempts to achieve its aims, and finally by examining how successful these methods are, and commenting on the future of the League.

**First World War**

The League was formed out of a need for representation of the interests of the servicemen returning from the First World War. Initial emphasis focused on a desire for adequate treatment of wartime disabilities and medical rehabilitation after discharge, and developed into calls for employment security and war service home and land assistance. Today much of the League's activities continue to centre upon the welfare of servicemen and ex-servicemen, but the League is also prominent in promoting causes it regards as being in the National interest, even if not directly related to the needs of its members. Such activities include the League's stand against Communism, its policy on immigration and its interest in Australia's foreign policy. The RSL has remained a strong political force since its inception but has purposefully resisted efforts to form a party, or stand members for Parliament. The Leadership of the RSL circulated a memo in May 1918 which suggested that the League become an ideal political party that would,

"exist and aspire, not to seize government ... but to promote the common welfare of the whole people ... by becoming a non-party political organisation."
**The League in 1918**

The proposed political platform of the League in 1918, numbered as its first priority, the Nation's duty to Returned Servicemen which included the welfare of dependants of men killed in service to Australia, the maintenance of the principles of liberty and freedom for which they fought, and the welfare of incapacitated men in industrial, commercial and rural activities. The proposed platform also listed goals such as the abolition of charity, the resumption of direct taxation for returned servicemen; land settlement; official recognition of the League in areas such as amelioration and repatriation; the securement of preferential voting, elective ministries and proportional representation; and finally the acceptance of the principle that it is a citizens first duty to defend the country that sustains him. During the seventy years since its inception the League has abided by its policy of party neutrality and has actively pursued the achievement of its goals in the political forum.

**Three Points of Contact**

Analysis of pressure group activities reveals three points of contact in the political process; legislation, administration and public opinion. A unique privilege enjoyed by the RSL is that of direct access to senior ministers. In 1917 the League was asked to discuss matters directly with the Government, rather than speaking through the press, an invitation reiterated by successive governments. The League is a very political organisation, but it is a 'non-partisan', 'non-party' political body. It is not involved in any way with any party political processes, nor has it ever attempted to become involved in any party political procedures. This has enabled it to be favourably received by all governments, and the National Headquarters is usually able to secure an interview with cabinet ministers at short notice. The League has always favoured direct tactics in its dealings with the Government, although at times frustration with direct representation has led to the adoption of indirect tactics such as lobbying and the enlistment of support from other sources. This has rarely occurred with regard to repatriation matters but has been the case on occasions affecting Australian security, such as Communism and the immigration debate. RSL policy is often initiated at the lowest levels within the League, for example, policy issues are often first raised at sub-branch meetings. These may then be developed through the hierarchy of the League and representation may often occur at all levels, from individual members speaking to their local Member of Parliament, to the National President seeking an interview with the Prime Minister. Changes in Leadership of either the League or the Government may affect the informal relationship that develops at this high level, but should not affect the right of direct access currently enjoyed by the League.

The second point of contact is through the administrative function of the Public Service. The RSL is encouraged to maintain close contact with Federal Departments such as Veterans' Affairs, and is thereby able to provide information, advice and assistance to these departments on matters relating to the League's interests. This enables the League to pass their views and the reasons behind them directly to the public service officials who draft departmental policy. The RSL is aware of the benefits of such relations and does not jeopardise its position by seeking to influence government ministers through their public servants.

The third point of contact for a pressure group is by the harnessing of public opinion and media support. Apart from the tentative efforts in regard to defence expenditure prior to World War Two the League's external publicity arrangements up to 1960 were at best haphazard. There was no National journal, press releases received inadequate publicity and interviews were mainly by request. Since 1960 some progress has been made in making the League's demands public, primarily in areas such as Communism, National Service and immigration. Media coverage of RSL activities however, ranges from indifference to deliberate misreporting and even lies. The Australian media often only reports controversial issues, or endeavours to make issues controversial and press coverage of the RSL often involves the misquoting of outspoken officials, and the selective reporting of activities. Due to their efforts and in spite of critical media coverage, the RSL has achieved a great deal since its formation and is still active today.
Government Policy

The RSL has succeeded in influencing government policy in areas such as repatriation, but has been less successful in matters relating to foreign policy and defence. It has been argued that it is difficult to measure the effectiveness of a pressure group for two reasons. Firstly, because of the lack of a suitable index of power or pressure, and secondly because there is rarely proof that a particular measure is due to the particular pressure of a specific group. Kristianson, although agreeing with Finer, asserts that conclusion can be drawn by analysing specific issues over a protracted period. The League's influence in repatriation and veterans' affairs legislation prompted the SA Branch State Secretary to say, "There is no doubt that Australia currently has, at least equal to, if not the best, veterans' affairs benefits in the world and that is directly as a response of the government to the RSL's . . . ability to lobby."

The New Challenge

The RSL also shows an interest in the welfare of currently serving servicemen and women and their families, for example it is due in part to the efforts of the RSL that Australian troops who served in Namibia are covered by repatriation legislation; they were to have deployed with no extra benefits than if they were on an exercise in Australia. Not all of the RSL's attempts to influence Government policy have succeeded however, and in areas such as anti-Communism the League has been rebuffed. In regards to successful achievement of its primary goals, the League has certainly become the envy of other ex-servicemen organisations both in Australia and overseas, although the League is still to resolve the current repatriation hospital dispute in which these hospitals are to be placed under State Government control. While it is generally true that in Australia, "society retains its distrust of pressure groups, and allegations of pressure continue to arouse connotations of bribery and corruption," the RSL has never had to overcome this as, almost eagerly, both the Government and public accepted the principle that the Commonwealth should compensate returned servicemen for, not only their disabilities, but also their service. RSL success may in part be attributed to this sense of obligation, but also to the fact that much of Australia's national pride and ethos was born amongst the 'Diggers' of Gallipoli and the ANZAC legend which saw 25 April 1915 become symbolised as the birthdate of Australian nationhood. Pressure groups competing for a share of the public purse have never opposed the RSL's claims, and while sections of the public may disagree with some RSL policies they rarely disagree with its fundamental goal, adequate treatment for returned servicemen.

The RSL was formed primarily to represent the interests of returned servicemen and has developed into one of the most successful veterans' organisations in the world. Due to the efforts of the RSL, and the willingness of the Australian people to support its cause; Australian returned servicemen enjoy the best benefits available anywhere. The League achieves its aims by direct representation to the Government, negotiation with the Public Service and occasionally by using the media to gain public support. In the areas of prime interest the League has proved to be most successful but has achieved fewer successes in areas concerning National security. The level of success is hard to quantify as it is difficult to prove that a particular measure is due to the particular efforts of the League, or whether it would have occurred anyway. The measures obtained in repatriation benefits however certainly indicate a large degree of influence from the RSL and therefore are an indication of success. Until most recently the League has been able to devote an increasing amount of time to matters affecting Australian security due to a decline in the burden of repatriation as benefits became Government policy, but the latent effects of the Vietnam War, and changing Government attitudes towards veterans benefits has sparked a renewal of interest in this area. The exertion of political pressure will become more difficult as time passes and Australia's awareness of veterans' needs diminishes due to the current period of protracted peace. The RSL will need to take steps to avoid a decline in power and may need to consider measures such as the active recruitment of new members and outside support. The author feels that recent surges in public awareness due to a
feeling of National guilt over the treatment of Vietnam veterans will not prove to be effective in the long term, and will not significantly increase public support for the cause of returned servicemen, especially in the current economic climate and against competition for funds from other sectors such as education and welfare. The RSL has met the challenge of obtaining adequate repatriation for returned servicemen, but only time will tell if they can meet the new challenge of maintaining those benefits in the years to come.

**NOTES**

1. Australian Encyclopaedia, p 495.
9. Extracts from an address by BRIG A.B. Garland, AM (RL), National President of the RSL to the USI of the ACT on 2 Nov 88.
11. Ibid, p 166.

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Australian Encyclopaedia


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Editors Note:

RSL National President BRIG Alf Garland recently announced details of the name change approved by the 75th National Congress.

"Adoption of the name Returned and Services League of Australia will make it clear to all members and ex-members of the Australian Defence Force that they are welcome as members of the League, whether or not they have returned from overseas service".

"The two main eligibility criteria for RSL membership are Australian citizenship and 6 months or more service in the ADF".

"In addition the inclusion of a fourth figure, that of a servicewoman, will emphasize that the League had welcomed men and women as members since 1916 and will continue to do so".

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Captain Barry enlisted in the ARA as a soldier in 1979 and entered and graduated from the Officer Cadet School Portsea in 1984. Although he was commissioned into the RAA, he was transferred in 1986 to RAEME as Senior Instructor, Regimental Training Wing at 4th Training Group. He is studying for a Bachelor of Business in Human Resource Management and Industrial Relations at the South Australian Institute of Technology and upon its completion in 1992 he hopes to take up an appointment within Army office in this field.
RAAF Air Power Doctrine
An Overview of the RAAF Air Power Manual

By Squadron Leader R.W. Reading, RAAF

Background

Airmen have traditionally sought to be masters of technology rather than of intellectual thought. Practical men, perhaps, rather than theorists. This has meant that airmen in the generic sense, have been slow to enter the arena of debate about the best use of air power in the defence of their nations, relying instead upon the new technologies to speak for themselves. Judgement by results if you will.

This silent pride has meant that airmen have been equally slow to capitalise on their successes as they have to explore their failures, leaving this to others. Success has been the stuff of heroes and legends, whilst the failures have been the results of poor technology. In short, air power advocates have been reticent to rigidly examine the theory or doctrine.

In Australia's case, for the first 70 years of its existence as an independent service, the Royal Australian Air Force (RAAF) did not have an officially endorsed volume of air power doctrine; or distillation of thought and experience. That is not to say that the nation was without air strategic thought. Indeed, in April 1925 the RAAF's founding father, Air Marshall Sir Richard Williams, presented a highly detailed 70 page strategy for the defence of Australia based on substituting air power for land and sea power where it would be most effective and efficient. Its central judgement that Australia should be defended in the air-sea gap to the North was a clear expression of the same strategic approach which, of course, some 60 years later resurfaced in the White Paper DOA 87. However, whilst independent theory and development were considered, the tendency simply was to adopt existing doctrine. Thus the RAAF's sole definitive publication on air power between 1921 and 1990 was the British manual titled Operations which was used from 1957 to 1984.

It should not be surprising, then, that in the late 1980s the RAAF's Chief of the Air Staff, Air Marshall R.G. Funnell, observed that the use of air power in military operations 'has been and continues to be the major intellectual problem confronting military thinkers', as a consequence of which air power as an element of national military power 'has been consistently undervalued in Australian defence thinking'. Air Marshall Funnell identified as a major cause of that unsatisfactory state the failure of airmen to present a 'comprehensive, coherent, well-articulated and broadly supported theory of air warfare'.

Structure and Purpose

In 1990, The Air Power Manual was published as the officially endorsed RAAF air power doctrine by the RAAF Air Power Studies Centre. The manual consists of three parts: Part 1 covering war and air power in general, Part 2 focussing on the Australian approach, and Part 3 dealing with the process of doctrine review.

Air power is described as fundamentally important to Australia's security. It is also the dominant component of combat power in modern warfare: this dominance means that, although air power is not always the most important component, it is the most pervasive. For Australia, success in conflict will therefore largely depend on understanding air power and the full extent of its application.

The Royal Australian Air Force cannot fully discharge its responsibility to the nation until it can, through rigorous analysis, explain the best use of air power. The first essential step in this responsibility is the establishment of Australian air power doctrine: this is the purpose of The Air Power Manual. From this first step, a knowledge and sense of purpose can develop within the RAAF. They will guide an understanding of the importance of air power in the defence of Australia which can be conveyed to the wider Australian community.
War in General

In Part 1 of the manual, War is described as an act of force to compel an enemy to do our will. War takes over where politics fails but may have political objectives of its own. However, it is not an end in itself. This notion is reinforced through a long evolution of combat rules or 'laws of war'. While the laws have arbitrarily applied throughout history, a consistent expectation of some code of conduct exists.

The confusing and unpredictable nature of war arises from the contest of opposing wills (friction). This contest is a series of offensive and defensive actions. Historically, defence has proven the stronger, yet the offence has always been necessary to achieve victory. Indeed, offensive action against an adversary's critical point (the centre of gravity) has met with greatest success.

War varies in degree from global nuclear to low intensity conflict. Whatever the degree of conflict, offensive and defensive actions can be undertaken at various levels of intensity.

Wars of all degrees and intensities have the potential to profoundly affect the economic, social, political and institutional values of a nation. War can transform a nation. Its nature and likely consequences must therefore be studied and understood.

Past experiences show the consequences of war; they also indicate the complex relationship between threat and response. Understanding this relationship will assist in developing judgement in the application of military power. Thus judgement derives in part from a knowledge of past experience. Judgement is also aided by the development of theories of military application. Together, experience and developed theory produce doctrine which should provide the guidance in preparing for war. Actions, force structure, organisation and future development are thus shaped by doctrine. So doctrine is central to the profession of arms and the successful prosecution of war.

Air Power in General

Air power, land power and sea power constitute the three components of combat power. Air power is distinguished by its flexibility, speed, ubiquity, range and shock effect. These, in combination, give it a unique ability to concentrate force and manoeuvre rapidly over long distances. However, the successful use of this ability is likely to depend on the availability of secure, operating bases, substantial logistic support and effective command and control.

Further, RAAF doctrine defines this framework of air power application as air campaigns. These air campaigns can, and have been, prosecuted at both the operational and strategic levels of war, but they are not isolated in any sense. Air campaigns are properly aligned to the overall conduct of a war or theatre operations.

The RAAF recognises three distinct air campaigns: Control of the Air, Air Bombardment and Air Support for Combat Forces. The prime campaign is Control of the Air and its objective is air superiority. Control of the Air generally will be established for a specific time and place; that is, it may be unrealistic and unnecessary to attempt to achieve continuous control of the air. Air Bombardment is the offensive use of air power to strike at an enemy’s homeland, national interests, resources and war-marking capacity. The objective of Air Bombardment may be achieved by either a few missions or a prolonged offensive. The third campaign is Air Support for Combat Forces. It includes the traditional application of air power in support of land and sea operations and extends to support for air operations.

Air campaigns are the continued application of operations to gain an objective. There are six operations that can be employed in any one of the three campaigns. Those operations are Counter Air operations for control of the air, Independent Strike, Reconnaissance, Airlift, Combat Air Support for sea, land and air forces and Sustainment operations which initiate and support the air action.

The objective of air power is to gain maximum military effectiveness from the use of the air. That objective can be achieved in combat only by conducting concurrent air campaigns using a unified, balanced and independent force. If the four doctrinal maxims of concurrent campaigns, unity, balance and independence are not observed, military effectiveness will be decreased.

Air power incorporates all of a nation’s aviation capabilities. The use of those capabilities for military purposes traditionally has centred on an air force — an organisation characterised by
its readiness, mobility and survivability and its capacity for interoperability, sustainment and regeneration. The emphasis on an air force does not preclude augmentation by specialised capabilities. These include naval and army air arms, civil aviation capabilities and space based systems.

High costs and technological developments will remain key influences on air power strategies and capabilities. Both will attract and facilitate increasingly direct political control of air campaigns. The challenge for the professional airman, now and in the future will be to contribute, in the national interest, to the effective management of operational and technological developments and provide expert advice for political use.

War and Air Power in Australia

Having set down some initial outlines on warfare and air power in general, the focus changes now to the Australian scene, its situation and environment.

The influence of 'place' on a nation is an interesting study in itself. Over the past few decades, Australians have increasingly tried to gain a deeper understanding of the way Australia's situation and historical development have influenced events and outlooks. In this Manual, the barest outline of these factors will serve to introduce the important discussion of what air power means to Australia, how it is shaped and how it can be used to best effect.

No other nation can prescribe this for us. Air power has been proven across the world to be an important element of security. However, the RAAF must establish and continually improve its own solutions to maintaining that security through air power in its own region.

The Australian Approach to War

Australia's involvement in war has usually been as part of a larger allied force, often remote from home. More recently however, attention has been focused on defence self-reliance within a defined area of direct military interest. This approach was detailed in the 1987 Policy Information Paper — The Defence of Australia (DOA 87). The defence policy established a strategy of defence in depth based on air. ADF characterised by flexibility, mobility and long range capability.

The ADF has endorsed 10 principles of war as broad guidance for conflict. They are applied in conjunction with the more specific direction of international conventions and protocols acknowledged by Australia, such as the Law of Armed Conflict (LOAC). Further guidance exists in the form of joint force and single service doctrines. ADF joint doctrine guides joint force operations while single service doctrine promotes the most effective application and development of individual service specialist skills. The latter contributes to more effective joint capabilities which is important for the ADF because most future ADF actions are considered likely to be joint.

The essential elements of a vigorous, independent nation are critical to Australia's war potential. The ADF will be most effective if it is supported by a strong economy, diverse and innovative industry and technology and a well-educated population.

Air Power in Australia

DOA 87 emphasises both the importance of defending the air-sea gap around Northern Australia and the need for the ADF to be flexible, mobile and able to operate over great distances. It follows, therefore, that air power is fundamentally important to Australia's security. Only air power possesses the capability for speed, mobility and range in rapidly bringing offensive and defensive action to bear in the air-sea gap.

The RAAF has exercised air power in support of national defence policies since 1921, when it was established as an independent service. It has applied that power successfully and effectively by observing the doctrinal maxims of concurrent campaings, balance, unity and independence.

The RAAF interpretation of these maxims continues to provide guidance expressed in the imperatives of command, qualitative edge, attrition management, centre of gravity, timing and preparedness. Those imperatives emphasise
the essential nature and characteristics of a small, modern, conventional air force.

Although the RAAF is the dominant source of air power in Australia, the total air power of the nation includes the specialist air arms of the RAN and Australian Army and civil assets and infrastructure. Space based systems and their emerging technologies can also enhance Australian air power—a potential as yet unrealised.

The RAAF is structured to maintain a state of operational readiness in the six operations of air power within the context of the three air campaigns described above, commensurate with government defence policy. It does this partly through conducting, and participating in, regular exercises at home and overseas, on a single service, joint ADF and combined basis.

**RAAF Counter Air Operations**

RAAF Counter Air operations can attain and maintain the desired extent of control of the air through offensive and defensive action. The control of the air in time and space is the prime campaign of the RAAF.

Offensive Counter Air (OCA) operations achieve control by attacking enemy aircraft on the ground, whereas, Defensive Counter Air (DCA) operations nullify or reduce the effectiveness of enemy air attacks. The RAAF may have to carry out both operations and therefore its capabilities must reflect this need. To achieve the former, aircraft with range, mobility and endurance are required, supported by efficient intelligence and command and control systems. To achieve the latter a complex interdependent system comprised of elements of control and reporting, Low Level Air Defences (LLAD), fighter aircraft, intelligence, communications and passive defence measures all must be established, and then co-ordinated and closely controlled.

The complexity of both forms of Counter Air operations extends deep into the capability of the RAAF as an effective military force in the defence of Australia. For OCA operations to be effective, high level direction which is appropriate to the circumstances has to be applied. Substitution of surface forces for example, in OCA tasks must be considered. Often assets such as gunfire support or special forces can provide effective OCA. Surprise, concentration, selectivity and security are cardinal attributes of OCA. With DCA operations, effectiveness is heavily dependent upon ground-based radars both civil and military and Airborne Early Warning and Control (AEW&C). Passive measures such as concealment and deception also play their part. The use of Electronic Warfare (EW) in both passive and active modes can also enhance DCA operations. Such complexity requires appropriate command and control which is practised and tested regularly.

The skills required in the complex system of Counter Air operations cannot be acquired at short notice. Yet an effective response to short notice military pressure and tension is expected of the predominantly RAAF system. The implications are clear: training for, and exercising with, long lead time skills are essential. The ability to control the system is also a high priority. Counter Air operations capabilities are a measure of the determination of a nation to control the outcome of battle, for control of the air remains the prime campaign and the key to the surface battle.

**RAAF Independent Strike Operations**

Independent Strike operations take the war to the enemy. The concept of attacking targets not immediately involved in the surface battle grew out of World War I experience. Attacking the ‘heart of the enemy’ became a strategic capability from 1917 onwards. In the post World War II era, although RAAF strike operations were focused mainly on interdiction, the RAAF retained a capability for the full range of strike operations.

For Australia, the three roles of Independent Strike operations — Strategic Land Strike, Strategic Maritime Strike and Interdiction — are necessary capabilities in conducting the Air Bombardment campaign. These capabilities provide a significant defence, and within that, a deterrent effect and offer the Government a choice in projecting power into the air-sea gap. The strategic implications of such an option warrant a command and control arrangement that will keep decision making at the highest appropriate level and execution at the lowest practical level.
Land and maritime strike can be pre-emptive and discriminatory. The roles are suitable for all levels of conflict and may be used positively to contain escalation. The roles require careful judgement which emphasises the need for a sound command and control arrangement. The third role — Interdiction — can be conducted by the combat elements of the RAAF; the likely employment being in the air-sea gap thus enabling ADF surface forces to dictate the tempo and timing of battle.

In exploiting the capabilities of these roles the RAAF must emphasise appropriate weapon systems; a 24 hour day/night all-weather capability; responsiveness; reliable, secure real-time communications; and dedicated logistics support. Training and retention of complex skills will incur expense in peacetime but not to do so results in high attrition and reduces capability in conflict.

Aerial Reconnaissance, Surveillance and Electronic Warfare

To observe an enemy from afar in order to know what he is doing gives an advantage in war. It gives an edge over the enemy and counters his ability to surprise. Elevation enables an observer to see further: airborne observation combines this with the ability to go deeper and faster into enemy territory to provide timely intelligence.

Reconnaissance is observation directed against specific targets and for the RAAF involves photographic, radar, infra-red, electronic, acoustic and visual means of collecting information. Aerial reconnaissance, through the RAAF’s ability to respond quickly, at night, in poor weather and over long distances within the RDM1 provides a counter to surprise and hence a valuable deterrent. Both strategic and tactical aerial reconnaissance can be carried out with varying degrees of capability by all RAAF platforms.

In the future, both Remotely Piloted Vehicles (RPVs) and space based systems could provide an enhancement to RAAF manned reconnaissance aircraft. However, manned assets have special characteristics namely; mobility, adaptability and flexibility which will ensure they are used for some time to come. Any future conflict will depend more on the electronic warfare battle than the airframes per se.

Surveillance — a systematic and repetitive observation of areas of interest — uses both ground based and airborne systems. The RAAF provides the airborne capability for surveillance of the air and surface environments. This capability is augmented by ground based radars including microwave and, in the future, OTHR. Satellite surveillance may also be used. Coordination of current and future surveillance capabilities remains a critical aspect of the role with major implications for the RAAF.

Electronic Warfare (EW) is concerned with the gathering or denying of information by electronic means. Unlike the other two roles, EW is both active and passive. Emerging technologies have given rise to many kinds of active and passive techniques, most are extremely complex. However, of vital importance to the RAAF is the need for a centralised command with decentralised execution of all EW systems to retain maximum flexibility.

RAAF Airlift Operations

Airlift operations are at the heart of Australia’s strategy of defence in depth. The reasons are twofold. Firstly, airlift provides mobility to project air power over long distances. Secondly, airlift enhances manoeuvre for surface combat power. Moreover, whatever the level of conflict, the call on airlift resources both civil and military in Australia will be considerable. An understanding of the strengths and limitations of both is essential for successful application of air power.

Historically, airlift has proved critical to success in modern warfare. The demands for airlift have always exceeded that available and the variety of missions performed has expanded to include diverse applications such as the insertion or extraction of special forces on the one hand to civilian evacuation on the other. Moreover, airlift has been the lifeline to besieged forces such as in Berlin in 1948 or Khe Sanh twenty years later.

The greatest advantage of airlift is its capability to quickly overcome terrain obstacles such as mountain ranges. However, airlift relies upon infrastructure including large reserves of fuel, is
limited by the effects of weather and is vulnerable to hostile action. Furthermore, airlift operations in remote places require self-sufficiency in air traffic control, security, communications and aeromedical facilities.

Civil resources can be used to augment military airlift particularly for escalation and force expansion, but not without incurring considerable costs. Civil airlift is not tailored to military application and requires different facilities, handling equipment and safety measures.

The system of airlift includes roles and tasks which can be strategic and tactical. Strategic Air Transport refers to broad strategic or operational goals whilst Tactical Air Transport provides for rapid movement within an area of operations (AO). Both Strategic and Tactical Air Transport involve aeromedical evacuations, special operations and mobility. Only Strategic Air Transport refers to scheduled services. Airborne and air logistics support are Tactical Air Transport tasks.

In both peace and war, airlift in Australia will be in great demand and its mobility will be of key importance to the successful outcome of conducting concurrent air campaigns.

### RAAF Combat Air Support Operations

Combat Air Support operations involve all the three environments; sea, land and the air. Traditionally support of surface forces has been well understood. Indeed, both navy and army commanders view air support as essential to their operations. More recently however, air support to air operations has become more widely understood.

Inherent within Australia's strategy of defence in depth is a priority of emphasis within air support operations. The priority would likely be maritime, air then land. Within the maritime environment, RAAF Combat Air Support operations would be carried out in direct support of naval or merchant shipping threatened by or in contact with the enemy. These operations are either Anti-Submarine Warfare (ASW) or Anti-Shipping Warfare (ASUW). In the broader maritime environment, air co-operation is not limited to these two support roles. Additionally, other roles such as Reconnaissance, Defensive Counter Air and Maritime Strike would also be involved. The distinction is the concept of co-operation rather than simply support. There are different command and control aspects in each. Co-operation is discussed later.

Within the air environment, air support roles such as Air-to-Air Refuelling (AAR), Airborne Early Warning and Control (AEW&C) and Suppression of Enemy Air Defences (SEAD) are all needed by the ADF. All incur high costs to procure and maintain but all enhance RAAF operations by enabling valuable and scarce assets to be better employed with subsequently reduced chances of attrition.

The combat air support roles over the land environment involve Close Air Support (CAIRS) and Battlefield Air Interdiction (BAI). CAIRS involves air attacks against the enemy in contact with friendly forces, whilst BAI is air action against enemy resources which are in a position to directly affect the outcome of the surface battle. Thus, BAI aims to isolate the enemy on the battlefield. Both roles would receive high priority in low levels of conflict and CAIRS requires detailed integration with the firepower and manoeuvre of friendly forces. However, the short term effectiveness of CAIRS must be balanced against diverting resources from other roles that could be of greater value to the overall objective in the longer term.

The RAAF has limited assets, which could be expected to be reduced continually as conflict developed. The challenge in the command and control of these assets has significant implications for the differentiation between the support roles of Combat Air Support operations and co-operation.

### RAAF Sustainment Operations

Sustainment operations are an integral part of the air power effort to achieve maximum military effectiveness from the use of the air. The diverse roles of sustainment provide the RAAF with the ability to initiate and maintain the other five air operations.

Command and Control, which directly affects the battle, includes the tasks of planning and directing. The success of this depends upon a second role-Communications. Intelligence too is a vital role in the commander's decision making
Air Power — Fundamentally Important to Australias Defence
process. A very different role in sustainment is that of Ground Defence which contributes to the security of airfields and aircraft. The RAAF maintains a qualitative edge through the role of Research, Development, Test and Evaluation, for both systems and equipment. This edge can be extended by synchronising Logistics preparedness which promotes operational readiness and sustainability, and emphasises maximum coordination between the civilian and military Infrastructures. The necessary roles of Administration, Training and Education capitalise on the latent potential within the people and the organisation of the RAAF.

Air power is a complex entity. It can only function effectively through the synchronisation of the roles of Sustainment and Air operations.

**Australian Defence Force Co-operation**

Within the ADF, the concept of co-operation is the basis of joint warfare. The co-ordination and mutual support of different elements of the three Services to achieve a particular objective occurs in all three environments — sea, land and air. While co-operation is traditionally identified with air-sea and air-land warfare, a modern consideration is surface co-operation in support of air power.

The importance of the air environment in the defence of Australia warrants discussion first. The air objective can be supported by co-operating naval and land elements in offensive, defensive and counter force roles. Unity of command and decentralised execution is essential for cooperation by the surface elements with air assets. Maritime forces can perform a number of tasks in offensive operations including strike coordination, mobile, air defence and early warning and control. Some of these together with Search and Rescue can be used in a defensive role for air objectives or in the defence of major coastal airfields. Counter force roles may be either offensive or defensive in nature to enable specific capabilities to compensate for deficiencies in airborne systems. The use of surface vessels as radar and air defence pickets is one such example.

For their part, land elements can also provide offensive and defensive capabilities in cooperation with air activities. For example, surface to air assets including control systems can be used to augment defensive counter air operations as well as providing airfield defence. Combined with ground defence, the significance of this cooperative effort has immense value for the success of ADF operations in Northern Australia.

The RAAF can perform the majority of roles traditionally identified with air-sea and air-land warfare. In air co-operation the emphasis and priority of allocation is in the air-sea gap in the first instance as described in the Defence White Paper, and thereafter to the tactical needs of the land forces. The command and control of air assets in tactical tasking draws upon the ultimate example of co-operation between the three independent Services.

**Conclusion**

The publication of this Doctrine marks a watershed for the evolution of intellectual thought concerning the application of air power in the defence of Australia. Moreover, although the production of *The Air Power Manual* in 1990 is not the first time the RAAF has made an indigenous statement concerning the vital place air power has in the defence of Australia's interests, it is perhaps the most significant. For, while the relevance of doctrine to military activity is timeless, the relatively recent Australian declaration of defence-reliance and the current development of indigenous joint doctrine — to be based squarely on single service doctrine — reinforces its significance at this time.

**BIBLIOGRAPHY**


Squadron Leader Roger Reading joined the RAAF after completing 18 months of two year RAF exchange tour as the Senior Supply Officer at RAAF Richmond. He served in Air Force Office on Exercise and Contingency planning and was part of the Administrative Planning Groups for Operations Morrisdance and Sailcloth, and for Exercise Kangaroo 89.

Squadron Leader Reading has contributed to several journals in the fields of Logistics Readiness and Sustainability. He is presently serving on the staff of the Air Power Studies Centre.

Reviewed by Wing Commander Ian MacFarling.

As World War Two approached the Dutch had controlled the Netherland East Indies for well over 300 years. Their methods were not subtle. Governor-General B. C. de Jonge (1931-36) noted: ‘We have ruled here for 300 years with the whip and the club and we shall still be doing it in another 300 years.’ This attitude meant that relations between the rulers and the ruled were not the best. They deteriorated even further when the Japanese invaded the archipelago in 1942. The Dutch had no answer to the combat skills of the Japanese and consequently lost any credibility they might have had as rulers and administrators.

The Japanese set up the Great East Asia Co-prosperity Sphere which encompassed the East Indies. What the Indonesians did not known was that co-prosperity did not imply Asian equality. The new rulers had a policy that stated: ‘although we use the words “Asian Co-prosperity” this by no means ignores the fact that Japan was created by the Gods or posits an automatic racial equality.’ Thus life in the Japanese-occupied Indies was crueler in many ways than in earlier Dutch colonial times including the Depression.

After the end of the Second World War the Dutch returned to their former colony in what Legge has said ‘must rank as one of the major pieces of self-deception in the annals of empire.’ In 1945 and 1946 anarchy reigned in many parts of Indonesia. Eurasians, Chinese, Arabs, rich Indonesians and the poor pitted themselves against one another while the infant Republic of Indonesia struggled to survive in the face of British and Dutch military operations. In some places there was relative calm, in other bloody mayhem that reflected Richard III’s words ‘the world is grown so bad that wrens make play where eagles fear to perch.’

Dr Anton Lucas has documented events in the region where the anarchy seemed worst. The place is in northern Central Java where Dutch sugar mills had ruined the rice farming, where land customarily set aside for the poor was taken over by the rich and where malnutrition under Japanese rule had been terrible.

The Pengalongan Residency is not large. Those who live in Canberra and have driven to Liverpool will have covered much more than the major axis. We are talking about a 150 by 60 kilometre area where in some places the population density had reached more than 1750 people per square kilometre by 1930. The residency was divided into three sub-areas and each seemed to set its own rules in the aftermath of the Japanese surrender. In one place a murderous thug became the police chief; eurasian infants were stabbed to death with bamboo spears and savage, undirected revenge occurred as a result. However, in a neighbouring region a rich Eurasian theosophist, W. O. McKenzie, restrained the population by force of personality — he was seen as having magical healing powers — so that no one died there because of revolutionary violence.

Dr Lucas’ book is excellent. It stems from his PhD thesis produced in the 1970s and my only regret is that the time taken between research and commercial publication was so long. It makes not difference to the content; I just would have liked to read the book earlier. The only criticism I have is that the maps have no scale but this may just be a navigator’s pickiness.

The book can stand on its own but interested readers might benefit from browsing through a variety of other Indonesian histories as well: Legge, Bone, Fieth, Reid and Geertz could provide a broader picture. Dr Lucas’ study makes the reader aware of the political and social turbulence in the creation of Australia’s nearest neighbour. A wider reading would create a setting for his work and may engender sympathy for the British forces who were sent to Indonesia to work under an explicit political direction of non-interference but who found that every act had political repercussions.

In summary the book is a credit to both the author and the publisher. It gives a clear picture of events and also an idea of how Javanese people think on political and social issues. I look forward to reading the other books in the series that Allen and Unwin are producing on South East Asia.
especially if Dr Lucas’ book is an indication of the quality we can expect.

BREAKING THE AMERICAN ALLIANCE

Reviewed by Lieutenant Colonel R.E. Radford.

Throughout our short history, Australia as a nation has always relied upon a strong ally to support us against what we perceived as possible threats against our sovereignty. Up until the Japanese push south during World War II, that strong ally was Britain, and since that time the US has assumed the mantle of responsibility for us, under the guise of the ANZUS treaty, because of our perception that a so-called Western nation in a South East Asian environment required a big brother to assist us in times of potential threats to our nation. Gary Brown suggests in this book that there is now a better way, and that Australia, due to our continued development of defence self-reliance, amongst other factors, has grown to the extent that ANZUS is no longer required, and that we can now develop a more independent (not necessarily non-aligned or armed neutral) self-reliant defence posture. His arguments are most convincing.

Brown considers that we have outgrown the need to be closely aligned in a treaty with any large nation. He however narrows in on ANZUS in particular and questions whether it would be of any use to us should we get embroiled in a conflict. Even though ANZUS has been sold to the nation as a guarantee of security, he states that in fact there is no guarantee that the US would come to our assistance, and if they did come to the party, what form of support they would decide to provide. Indeed he postulates that the US threat of involvement is not credible and therefore is not a threat, thus allowing a potential aggressor freedom of action. He also suggest that the US could, if its policies so demand, withhold support from Australia, because of other political or economic considerations.

The ability of a small nation to influence the policies of a larger treaty partner is also discussed. The failure in the past by Australia to influence US decision making over the past trouble spots of West New Guinea (Irian Jaya) and Timor are two examples cited, as is the Australian sponsorship of the South Pacific Nuclear Free Zone. American economic policy, especially US subsidies to its primary producers, and its effects on Australia, is also covered as is also the inability of Australia to change these policies.

Other problems as perceived by the author are also dealt with most effectively; the withdrawal of New Zealand and effects on His foreign and defence policies foremost amongst these. Brown suggests most eloquently that even though there have been some predictable US response to the New Zealand action, such as the cessation of combined exercises, restriction of New Zealand officers attending US courses and a reduction in the degree of intelligence sharing, there has not been any resultant marked changes in the New Zealand force structure or operational doctrine. Indeed where it has suited US purposes, they have actively assisted New Zealand in her defence preparation — the A-4 Skyhawk upgrade and the Waihopai satellite communications intercept station project being two good examples. Australia, the author suggests, if it took the same path as New Zealand, would no doubt find itself in a similar position.

Even though many would not necessarily agree with all of the author’s treatise, his arguments remain most convincing. His suggestion that Australia has grown up sufficiently to take a more independent stance on the international stage is appealing to say the least. I would have liked a more detailed discussion however on the economic costs of this independent approach. Brown suggests we should stockpile more defence requirements, diversify our sources of supply, and develop a larger defence manufacturing industry in Australia. Unfortunately all of these actions are expensive, and in these days of economy restructuring and government expenditure cuts, such an option is not attractive and indeed may not be viable. However such options should not be ruled out.

Gary Brown has spent sixteen years working on Australian defence and national security issues. He has published works on Australian military history, higher defence organisations, the RAN carrier debate and nuclear weapons. He is an honours graduate of the University of Newcastle, a graduate of JSSC and presently a researcher with the Defence Research Group of the Parliamentary Library in Canberra. I most heartily recommend this book to anyone
interested in Australian defence, national security and foreign matters. At $15 it is a cheap investment resulting in a stimulating return.

WHEN THE BALLOON WENT UP Short Stories From a War by Hugh V. Clarke Allen and Unwin, North Sydney 1990, Price $16.95

Reviewed by LTCOL R.E. Bradford

This delightful anthology of fifteen short stories written by Hugh Clarke is based on his and others experiences in World War II. Although the stories were individually written over a twenty year period they have been placed in the book in chronological sequence, giving the effect of being chapters in a novel.

The stories commence with the author in Malaya where he was serving with the 2/10th Field Regiment When the Balloon went Up. Successive stories relate to incidents that occurred during combat and continued whilst the author was a POW in Singapore, Thailand and Japan. The book concludes with The Book which is a poignant account of an ex-POW attempting to integrate himself back into a society that somehow felt alien to him and which could not comprehend his actions or restlessness.

A strong sense of mateship pervades all the short stories, as does the new say die attitude of the prisoners as they battled the Japanese brutality, tropical weather, the ravages of fatal diseases as well as the near starvation diet imposed upon them. The desire to overcome this deprivation of liberty fed the mateship and led into the incidents related which despite the serious nature of them are tinged with humour. Clarke's easy reading style allows him to relate the predominate human interest side of these stories which heightens their sense of reality. Although fictional one can easily imagine the incidents as actually happening although not necessarily without serious consequences.

I thoroughly enjoyed the experience of reading these short stories, but was disappointed that another fifteen yarns were not included. This probably occurred because the serious nature of being a POW never overwhelmed the stories while allowing the sense of humour innate in the situations to bubble to the surface. Each story urged me onto the next and consequently I finished the book in a sharp fashion. Hopefully Clarke will follow this selection with another in the not too distant future.

A SOLDIER RETURNS A Long Tan Veteran Discovers the Other Side of Vietnam by Terry Burstall, University of Queensland Press, St Lucia, 1990.

Reviewed by LTCOL R.E. Bradford

Twenty years is a long time to ponder the vagaries of war. Being such an unpopular conflict (at least more so than most), the Vietnam War has once again come into focus with a plethora of film, television and printed matter being produced, concentrating mainly on the effects of the war on the combatants. This is another book on this general theme, albeit with a slightly different angle.

Since he served in Vietnam in 1966, Burstall has undergone a series of changes in his personal circumstances, ranging from his initial manual labouring jobs in the building trade, to being a plantation manager in Papua New Guinea, and culminating in his completion of secondary education, finally obtaining a tertiary qualification.

Over this extended period of time he had doubts as to Australia's role and actions in the Vietnam War. His tertiary studies presented to him an opportunity to put these doubts formally into print. In many ways this book is a sequel to his first A Soldiers Story, an account of a soldiers war in Vietnam.

The first thing that hit me about this work is the strong emotions that abound throughout. In conducting his research, Burstall was able to return to Vietnam, and probably as a result of his compassion expressed towards the Vietnamese veterans (Viet Cong mainly) was able to meet many of his former opponents, and conduct interviews with them. The stories he obtained from them are fascinating and provide an aspect of the war that will never be found in any official histories. Interestingly few of the soldiers hold any animosity towards Australia or Australians, but simply expressed bewilderment as to why Australia became involved in the conflict, a feeling not too unknown to many in this country.

It is however the stories of the civilians, many of them Viet Cong supporters which reveal a side of the conflict not previously widely published. The leveling of townships and hamlets, and the forcible removal and resettlement of people away from their sole source of income are most poignantly related. Stories of death and maiming
of civilians caused by ambushes and artillery harrassing fire are disturbing but need to be told. Burstall relates them in a most compassionate manner and easy flowing style, and in doing so reveals a great deal about himself and his concerns about the conflict. He also highlights the obvious concerns and mixed emotions about the conflict felt by many ex-servicemen.

In his criticism of the Australian Army in Vietnam, Burstall unfortunately does not present a balanced view of our involvement. He avoids the political motivation of our involvement concentrating on the actions of the Army in the early days of the involvement. Issues of note he covers includes the evacuation of townships located within 4000 yards of the Nui Dat base, the lack of resettlement support provided to civilians evacuated, the lack of re-imbursement provided to Nui Dat landowners and the killing of seemingly innocent civilians. In all of these matters he lays the blame solely at the feet of the Australian Army, avoiding criticism of those who placed the force in this situation insufficiently trained and prepared for civil affairs action. He also avoids mentioning the policies and involvement of the South Vietnam Government and United States forces, which would have also helped evolve Australian policy and actions. The one sided nature of the book is further exacerbated by the lack of criticism of Viet Cong methods of harrassment and intimidation of innocent civilians and their associated terror tactics. Inclusion of accounts of their actions, which he could have obtained as part of his research and interviews would have added a deal of credibility to the work, and would have provided the necessary balance to it, and even accentuate his criticism of Australian methods.

That criticism aside, I thoroughly enjoyed the book. Burstall’s compassionate coverage conveys the fear, bewilderment and uncertainties of civilians caught up in conflicts regardless of their political or ideological affiliations. He has highlighted the many emotional problems faced by ex-servicemen again of both sides after their war is over. I don’t believe Burstall satisfactorily answers his own question of ‘why’, possibly because the question becomes clouded by other issues. His close affinity with Vietnam and his own emotional state probably added to the lack of definite answer. He has however at least portrayed the unfortunate side of war that everyone needs to be made aware of, and in that way has added further knowledge on the dimension of disenchantment with war.