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Permission to reprint articles in the Journal will generally be readily given by the Managing Editor after consultation with the author. Any reproduced articles should bear an acknowledgement of source.
The views expressed in the articles are the authors' own and should not be construed as official opinion or policy.
Four RAAF Macchi trainers from the No. 2 Flying Training School based at RAAF Pearce in Western Australia approach Rottnest Island.

With HMAS SWAN tied-up alongside the escort wharf at HMAS STIRLING in Western Australia, HMAS STUART backs away from the wharf as she proceeds to sea.
Letters to the Editor

Vietnam and the Kennedy Administration
Dear Sir,
Re Wendy Heckenberg’s ‘Vietnam and the Kennedy Administration’ — She left out the ‘Three Cheers for Uncle Ho!’.

R. LOFTUS
Warrant Officer

Norforce Recruits
Dear Sir,
I would like to comment on No 67 November/December 1987 Defence Force Journal on an article by Colin Blair titled ‘Norforce Recruits Struggle for their ‘Double Diamond’.’
I found the written article well presented by the author but its credibility was totally detracted by the caption under the photo on page 38, depicting a soldier with a rifle without a magazine, not wearing webbing, smoking and making a brew. The caption reads in fact quote “Vigilance against possible attack.”
The soldier is in no way prepared for an attack, he is in fact cleaning his rifle whilst waiting for his brew to boil during the period just prior to dusk when administration of this nature occurs.
This is then followed by “Stand To” where the soldier has his weapon at the ready, wearing his webbing, not smoking, not cooking and in a firing position. This should be the posture of a soldier “vigilant against attack.”
As the Regimental Sergeant Major of a Reserve Formation I find that the photo and the caption discredit the aim of the article, Norforce and the army reservist in general.
Detail in photos should be carefully vetted before being used to garnish an article.

K. W. SCHEUERMANN
Warrant Officer

Defence co-operation Programme
Dear Sir,
Having been involved in the provision of DCP to PNG on and off since 1975 I felt compelled to comment on LTCOL Urquhart’s article about the effectiveness of the Defence Co-operation Programme. It should also be noted that I have some knowledge of how other SWP countries view the programme, after all the “Melanesian brotherhood” is a major factor that affects the area.
Any aid programme must be geared to the recipient country and AIDAB by engaging ‘consultants’ and thus showing their ‘ignorance’ of the problem increase the chance of the subsequent bid being inappropriate. Hence my belief that their assistance is not as beneficial as it should be to the recipient country. If the aid is correctly matched to the recipient country’s requirements, and then that aid is correctly sold to the country, then Australia will achieve its aim with DCP.
On the broader front the growth of Soviet and Libyan influence will never be effected by DCP. It is my belief that their growth in the area is a direct result of the way SWP countries believe they are being treated by the USA. The tuna controversy is but the tip of the iceberg!

E. F. McCRUM
Victoria Barracks
Melbourne

The Four Colonels
Dear Sir,
The article on “The Manifesto of the Four Colonels 1938” in Defence Force Journal No. 68 mentions that “the military careers of the four had now ended”.
It is relevant to note that Colonel N. L. Macky, MC subsequently served in Greece in 1941, As Lieutenant Colonel Commanding 21 NZ Battalion. Colonel A. S. Wilder, DSO, MC also served in Greece as Lieutenant Colonel Commanding 25 NZ Battalion, later commanding 5 NZ Brigade and 5 and 1 NZ Divisions, retiring as a Major General.

J. C. McALLESTER
Major RL

Author Responds
Dear Sir,
My intention is neither to criticise the review nor to embark in a ‘tit-for-tat’ series of claims.
and counter-claims between the parties, but instead to set the record straight on some of the more critical points of the book review.

To begin with, I must thank Group Captain Isaacs for illustrating a number of my inaccuracies of text and captions. To quote the reviewer himself, "I know we all make mistakes — I have been making them all my life". In the book review there are a number of errors; if these are the fault of the Journal management, the Group Captain may understand the problems of typesetting and proofing. The book and review are, like all manuscripts, subject to error by the author, editor, typesetter and proof-reader. Another ever-present problem is the time factor, whether it be a large or small publisher.

The layout of any book is the responsibility of the publisher, despite what this writer may or may not think. Originally the book was designed around aircraft roles and thence chronologically. As well the binding of a book has nothing whatsoever to do with an author. The review also criticises the classification of various aircraft. Again, an author can present a book in a proper format, but what happens in the design stage is out of his jurisdiction.

The reviewer mentions that I have used information from a previously published aircraft series. A number of well-respected publications and journals were used in the compilation of the book, including the "Historical Series" in RAAF News. However, the official RAAF Historian was the primary source of technical and general information for the various entries. The Historical Series was consulted, (a prudent author must examine a range of sources) but it was not the sole or the major source.

Thank you for the opportunity to answer some of the claims made in the review of Australia's Military Aircraft. For your readers' information the book has sold very well, with to date only one letter of criticism; that's one in 8,000 books.

ROSS GILLETT

SPECIAL OFFER
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Conventional Deterrence and Australian Military Strategy

By Lieutenant Colonel M.G. Smith, RA Inf

... deterrence works some of the time, but our confidence in it is misplaced. The key contribution of a theory of deterrence should be ... ultimately to encourage efforts to move away from reliance on deterrence.

Patrick M. Morgan, 1977

In his Review of Australia's Defence Capabilities in March 1986, Paul Dibb dismissed conventional deterrence as a suitable military strategy for Australia. Dibb did not analyse conventional deterrence in detail, but he noted that it was:

'... not a basis for detailed force structure decisions although it can be a useful element of our general defence strategy.'

The thrust of the Dibb Report was largely accepted by Government. It was not surprising, therefore, that conventional deterrence did not feature as a military strategy in Defence Minister Beazley's White Paper, titled Defence of Australia 1987. In that document the Government articulated a military strategy of 'defence in depth', rather than the 'strategy of denial' as suggested by Dibb. However, what was clear was that conventional deterrence was no longer considered a feasible military option for Australia.

This had not previously been the case. Throughout the late 1970s and early 1980s the notion of conventional deterrence held considerable weight in the formulation of Australia's military strategy. As late as 1984 the Department of Defence stated to the Parliamentary Joint Committee on Foreign Affairs and Defence that:

'The common function of the Australian Defence force is ... to ... deter aggression.'

This 'common function' of deterrence had become enshrined in Australian Joint Service Doctrine in the late 1970s; and in 1982 the CGS restated to the Army the requirement for deterrence in a small but widely circulated booklet called The Army in the 1980s.

This article explains the unsuitability of conventional deterrence as a military strategy to satisfy Australia's national objectives. These objectives have been articulated in a number of forums, but insofar as they affect military strategy could be summarised as: the nation's ability to secure and maintain its territorial sovereignty and its vital interests by the threat or use of military force when and where required by government.

The theme of this article is that (in Australia's current and foreseen threat environment) conventional deterrence is a poor military strategy to adopt. This is because the meaning of deterrence is ambiguous and imprecise; that based on historical evidence its application is ill-fated; and that to base force structure decisions (ie types and quantities of forces and equipments) primarily on deterrence may well dilute the defence capabilities of the nation.

This is not to say that conventional deterrence is irrelevant as an objective of national policy: quite clearly it is better to deter war than to conduct it. However, it is wrong to believe that non-nuclear deterrence can be translated into a military strategy that is both coherent and capable of implementation.

The Nature of Deterrence

Nuclear and Conventional Deterrence

As a discrete military strategy deterrence is a recent phenomenon which belongs to the nuclear age. This is not only because of the destructive capacity of nuclear weapons: more importantly it is because for the first time nuclear warfare has '... made it possible for a state under attack to do great harm to the attacker even without really defending itself.'

In other words, the ability to ensure the destruction of the enemy even after incurring a first strike, has given nuclear warfare a deterrent characteristic of hitherto unknown proportion. Unlike contemporary nuclear strategy which is based largely on the concepts of mutual and extended deterrence, classical strategy
makes little reference to deterrence. Stephen Maxwell was correct when he noted that
'Classical strategy was chiefly concerned with the means of military action. The political context of war was considered irrelevant to the choice of means.'

The use of deterrence in contemporary conventional strategy has very largely been borrowed from nuclear strategy, often without proper thought. This is not to suggest that deterrence has never been (or cannot be) used as a method or ploy as part of conventional military strategy. For a variety of reasons nations may be deterred from resorting to military force or from taking certain military actions on the battlefield once war has started. But deterrence in these instances is subordinate to other more important elements of strategy, such as:

• to gain time,
• to regroup or acquire additional capabilities,
• to ease pressure on one front so as to reinforce another,
• to deceive and surprise the enemy,
• to enhance public opinion,
• to conform with allies, or
• to pre-empt a future unfavourable situation.

Thus, because of the differences in consequence, there is a real distinction between deterrence at the nuclear level and deterrence at the conventional level. *This is the first and essential lesson about deterrence that Australian military strategists need to be reminded of: viz, that in terms of policy and strategy, deterrence has effective meaning only at the nuclear level.*

At the conventional level deterrence may be a hopeful resultant — a gleam in the eye — but it is an unrealistic objective around which to formulate military strategy. As Morgan has noted,

'... nuclear deterrence is far more stable, far more likely to work in any crisis, than deterrence via conventional forces.'

It is possible to argue that technology has reduced the gap between nuclear and conventional war. The development of precision guided munitions, fuel air explosives, strategic transport aircraft, remotely piloted vehicles, night-fighting capabilities, long range and remote surveillance devices, real time information — to name but a few — may have made it possible for deterrence in some situations to be extended to the conventional level. For example, 'as the 1973 Arab-Israeli war demonstrated, the accuracy and destructiveness of conventional weapons has made it possible to gobble-up lives and equipment at an incredibly costly pace, while the conventional seizure of territory or the destruction of it has been so much enhanced that national survival can be readily threatened.'

This trend in conventional capabilities cannot be denied, but in relation to Australia’s military strategy two important points need to be kept in mind. The first is that the consequences of nuclear war remain still, and for the foreseeable future, far graver than do those of conventional war, particularly since the latter is more likely to be restricted geographically. The second is that Australia’s force structure, neither presently nor in the near future, reflects the characteristics of these modern conventional weapons systems in any where near the numbers required to provide a credible strategy of deterrence. Unless the strategic environment was to change substantially, the cost of acquiring these capabilities in significant numbers will remain unattractive to any major political party in Australia.

**Meaning of Deterrence**

One of the problems with the word deterrence is that it is often used imprecisely to convey an idea rather than a specific meaning. The phrase ‘to deter aggression’ is rather like ‘preventive medicine’: it has meaning only when the potential ailment has been isolated. Definitions and descriptions of deterrence abound, the more notable of which are at Annex A. Though each of the examples is Annex A differ in some respect there is nonetheless a commonness about them. Probably the two most useful definitions for Australian military strategy are:

• Deterrence is ‘the prevention from action by fear of the consequences. Deterrence is a state of mind brought about by the existence of a credible threat or unacceptable counter action.’

  *Australian Joint Service Glossary (JSP(AS) 101)*

• General deterrence ‘... is the primary objective of military preparedness (when a state has no aggressive intent). The idea is to convince other states that, in principle, to use force against that state would not be congenial or rewarding.’

  Patrick Morgan
The JSP definition is particularly relevant to the Australian Defence Force (ADF) because it is the official and accepted definition. One should be able to assume, therefore, that deterrence has been used to convey this meaning in Departmental and Government papers. The JSP definition is also useful because it highlights that deterrence is fundamentally psychological in nature, and also because it is 'threat-oriented' rather than 'adversary-oriented' (that is, it does not specify the protagonists involved).

Morgan's definition is particularly useful because it introduces the notion of 'general deterrence'. This notion differs from the classic theory of deterrence which is concerned with the threats and actions of specific adversaries in specific risk situations. Taking these definitions together, deterrence has the following characteristics relevant to Australia's strategic circumstances: it is general rather than specific, it is threat-oriented rather than adversary-oriented, and it is psychologically aimed at manipulating the mind(s) of any would-be aggressors.

To apply these characteristics as a usable military strategy Australia would have to prepare and practice its forces against an infinite number of unspecified contingencies, in the most general way possible, and at the same time psychologically convince an unidentified but potential enemy to desist from contemplating aggressive action. Such an interpretation may seem extreme — even foolish — but when one attempts to translate the meaning of deterrence into Australian conventional military strategy the result is equally unusable. This, perhaps, explains why D.K. Palit once commented that 'from a military point of view, deterrence as a policy is at best relative and at worst sterile.'

This, then, is the second lesson about deterrence for Australian military strategists: viz, that deterrence currently conveys no usable meaning in determining conventional military strategy and force structure options. Moreover, deterrence is not an achievable military objective: not only is it impossible to be certain that an adversary's mind always can be manipulated to think in the way Australia would want, but Australia is not at all sure whose mind it should be manipulating.

An escape from this dilemma has been suggested by Langtry and Ball in their short monograph, Controlling Australia's Threat En-vironment. Langtry and Ball have contributed constructively to the deterrence debate by suggesting that Australia's deterrent posture could be enhanced by selecting force capabilities that would cause a corresponding disproportionate response (in time, capability and money) from any regional adversary. For example, the relatively cost-effective acquisition by Australia of more submarines may at best deter an enemy from acquiring the necessary but more expensive anti-submarine warfare capabilities, or at worst increase the capabilities and time needed by a potential aggressor, thus providing extended time for Australian defence preparation. In force structuring for deterrence Langtry and Ball have pointed out that quantity and quality are important, but not necessarily decisive.

'Other means such as hardening, dispersal, camouflage and deception, and force mobility and flexibility are generally more cost-effective... Intelligence and early-warning capabilities, both strategic and tactical, are also essential to effective deterrence.'

As valid as these force structure proposals might be (and this author subscribes to many of them), it is illogical to suggest that 'disproportionate response' and 'deterrence' are necessarily related. The notion of disproportionate response is not new, perhaps other than in name: its antecedents are to be found in a host of tactical and strategic concepts throughout the history of warfare. Simply put, the aim is as it has always been: to enhance one's own position by selecting strategems, weaponry, and tactics which place the opponent at a relative disadvantage. However, being in such a position does not necessarily deter an opponent. Much depends on the opponent's perception of the situation; and historical evidence indicates that far from being deterred from conflict, a position of inferiority may actually provide the catalyst for military action. Langtry and Ball provide useful guidance for Australian force structuring, but they fail to give realistic meaning to the concept of conventional deterrence as it applies to the Australian threat environment.

Determinants of Classic Deterrence

It has already been explained that general deterrence, rather than classic or specific deterrence, is most appropriate to Australia's strategic circumstances. However, is it possible that in using deterrence, Australian military strate-
gists have mixed these types, or are actually suggesting that Australia should move toward acquiring a classic deterrence strategy? What then are the determinants of classic deterrence, and could Australia realistically adopt such a strategy?

The first determinant of classic deterrence is the combination of what Raymond Aron once called ‘material means’ and ‘resolution’. More popularly these have become known as ‘capability’ and ‘credibility’, but regardless of terminology four conditions must be present for classic deterrence to exist:

- there must be a clear and unequivocal threat of action, normally in the form of reprisal, given by the deterer;
- the deterer must believe that without this threat military action would most probably be directed against it;
- the country being deterred must believe the threat to be credible;
- regardless of credibility, the country being deterred must still decide not to take military action.

The second determinant concerns the perceptions of the potential antagonists. These perceptions are seldom static because they involve unquantifiable psychological factors — bluff, fear, risk, cost, gain etc. This is precisely why Aron noted that ‘each crisis is a test of wills in which bluff plays an incredible role.’

For the same reasons Morgan later explained that deterrence may be analysed in different ways by considering the fears, risks, costs and gains of the parties involved. Because perceptions are fluid and imprecise ‘it is hard to find cases of even mild international conflict in which both sides fully grasp the other’s views.’

Adversaries may signal their intentions with varying degrees of success, and may posture their forces as part of this signalling process; but there can never be any guarantee that these signals will be perceived in the way they are intended, or indeed that different signals will not over time be generated from the same source.

The third determinant of classic deterrence (which is itself an extension of perception) is the assumption that rationality prevails in decision-making. The literature on this subject is immense, but simply put, deterrence works on the assumption that adversaries will act rationally to avoid armed conflict because of the consequence involved. Morgan has noted that deterrence theory takes a set of psychological and emotive variables and reduces deterrence ‘to the interaction of a set of rational decision-makers’. According to theory, the ‘rationally calculating opponent will always choose not to attack’ because of the threat of ‘a large negative pay-off delivered with significant probability’.

However, one of the problems with rational decision-making is that although credibility is important ‘scholars know remarkably little about how these judgements are formed and altered’. Robert Jervis has identified four possible barriers to rational decision-making, and Stephen Maxwell has explained the co-existence of rationality and irrationality in the same decision process — that is, it may be irrational to go to war, but the decision to do so may be reached reasonably. The point to be noted is not whether rational decision-making is possible or reliable, but rather that deterrence depends on rational decisions for its existence.

The fourth determinant of classic deterrence is what Andre Beaufre has called ‘the co-existence of deterrence and action’. Deterrence can exist only if military forces are ‘constantly primed for action’. The existence of military capabilities on paper and/or in lengthy mobilisation plans has little effect in deterring aggression, particularly if limited political and military objectives can be secured rapidly by an enemy using bold action.

The fifth, and last determinant of classic deterrence is the necessity of the deterer to guarantee the retention of a strong and viable reserve in the event of an enemy first strike. Because deterrence is a strategy of retaliation and not pre-emption ‘it is only this residual force that is relevant to the deterrent calculus.’ Not only must there exist potent forces which are invulnerable to first strike attacks, but the enemy must be convinced of this in order to deter him from striking.

Given these determinants it is implausible to believe that classic deterrence theory would prove a sensible military strategy for Australia to adopt. The theory is riddled with uncertainties. The determinants of credibility, perception, and rationality could never provide even adequate assuredness of peace; and those of capability, readiness, and survivability would require a massive increase in force capability...
far greater than this country has ever experienced. Even assuming that a force could be assembled that was invulnerable to a (non-nuclear) first strike and maintainable at high operational readiness, and assuming further that the Australian public would agree to finance such a force, how would it be possible to ensure that the potential aggressor(s) would remain deterred? Morgan was correct when he observed that

‘deterrence is a ‘hair of the dog’ cure for war, arming to preserve us from clashes of arms, and in the long view makes just about as much sense.’

This, then, is the third lesson about deterrence for Australian military strategists: viz, if general deterrence seems inadequate in meaning, then classic deterrence is no better. Far from providing a coherent military strategy for the future, classic deterrence is the harbinger of military expansion and political uncertainty.

Deterrence and Defence
Differences and Choices?

Influenced largely by the writings of Glenn Snyder in the late 1950s and early 1960s, a school of thought exists which believes that certain forces have strong deterrent characteristics and others have strong defence characteristics. According to Snyder,

‘...we must measure the value of our military forces on two yardsticks, and we must find some way of combining their value on both yardsticks...’

This reasoning rests on the persuasive notion that forces designed to inflict massive punishment (deterrence) are quite different from those designed to alleviate damage and deny victory (defence). Or, to express this in Beaufre’s terms, that forces required to prevent war (deterrence) are different from those required to force the enemy to act on unfavourable terms (defence).

However, Snyder did not have conventional military strategy in mind when he spoke of deterrence. He explains:

‘The need to choose between deterrence and defence is largely the result of the development of nuclear and thermonuclear weapons and long range airpower (as a nuclear delivery system). Prior to those developments, the three primary functions of military force — to punish the enemy, to deny him territory (or to take it from him), and to mitigate damage to oneself — were embodied, more or less in the same weapons... Moreover, these same forces were also the instruments of defence if deterrence failed.’

These pre-nuclear characteristics to which Snyder referred remain relevant to Australian conventional military strategy today, and will continue to be valid in the foreseeable future. Australia does not possess sufficient military power to threaten punishment on an adversary so severely as to deter that adversary from action. Furthermore, it is erroneous to suggest that conventional weapons systems can be chosen specifically for either deterrence or defence. Because most systems have both offensive and defensive capabilities they can be used with effect in a variety of military operations.

It is true that certain non-nuclear systems are more cost-effective than others, and that some systems cause a greater disproportionate response to overcome than others, but this does not make them weapons of deterrence. The development of submarines has not deterred the development of surface combatants; the development of air defence weapons has not deterred the development of strike aircraft; and the development of anti-tank missiles has not deterred the development of tanks. In fact, in these examples each set of opposing weapons has caused mutual development rather than deterrence. The same logic that assumes that a large number of Australian submarines, air defence weapons and anti-tank missiles would primarily deter (rather than defend against) an invasion, fails to accept the reality that the absence within Australia’s region of an opposing large navy, air force, or tank army has not deterred Australia’s perceived need to possess submarines, air defence weapons and anti-tank missiles.

Therefore, it seems difficult to disagree with Morgan when he concludes that there is very little distinction between deterrence and defence at the conventional level, other than

‘...to suggest it may be the sort academicians delight in detecting which is of little relevance to the real world.’

This, then, is the fourth lesson for Australian military strategists: viz, look after defence and let conventional deterrence take care of itself. It may always be hoped that conflict will be avoided; but this is primarily the role of diplomacy (in which military forces may sometimes
be required to assist). The ADF has the responsibility to conduct military operations when and where required by government, but it does not have the responsibility to deter conflict from occurring. In terms of military strategy Australia would do better to concentrate on defence rather than deterrence. By combining this strategy with good diplomacy, it could be hoped (but never presumed) that some measure of deterrence against armed conflict in the region might ensue.

Preparing for Conflict

Since there is no practical difference between conventional deterrence and defence it cannot be argued legitimately that scarce resources can be diverted from war fighting to deterrence. It would be easier to find other areas where non-military activities have divested the defence budget of finance — the Defence Co-operation Program and military assistance to the civil community are examples (perhaps also peacekeeping and counter-terrorist operations?). However, it could be argued with more validity that a strategy of deterrence may hinder preparation for war in a different way — by undermining the morale and fighting ethic of the ADF.

Gregory Foster has noted that:

'The fighting ethic is the personification of classical strategic thought; it is fundamentally a concept of victory and defeat in war. [In contrast] Deterrence is inherently non-strategic; it views war as an aberration rather than as a useful political instrument. At best, deterrence has as its objective victory (or at least non-defeat) in peace, but not in war.\(^{(4)}\)

This fighting ethic is an essential element of military capability. It encompasses the methods and skills which will allow for the successful conduct of military operations. In particular, it engenders a spirit and emplants a psychology within servicepeople that motivates them to achieve success in battle. Deterrence on the other hand demands that a high state of readiness be maintained not to achieve victory on the battlefield, but to avoid ever having to go to battle. The psychological complexion of deterrent forces is therefore the antithesis of war fighting forces. In deterrence the forces may be primed for action, but the fighting ethic is not only unimportant it is positively obliterated.

We are now in the important area of military sociology, but an area beyond the scope of this essay to explore. However, it is important to make two points in relation to deterrence and its effect on the preparation of the ADF for conflict. The first is that it is essential that the fighting ethic be retained and nurtured if the ADF is to optimise its chances of success in battle. This means that emphasis should be given to developing strategies of defence rather than strategies of deterrence. The latter will not assist the ADF’s preparation for conflict and may actually serve to undermine the fighting ethic which remains fundamental to the ADF’s operational efficiency. The second is that the ADF must train for war, not peace. Although the ADF increasingly is taking-on the role of a constabulary force,\(^{(2)}\) it must retain the capability to conduct effective military operations. War fighting techniques can be modified to fit particular constabulary situations, but the reverse is unlikely to apply. In the ‘no threat’ environment that has for so long dogged Australia’s defence planning, the acceptance of a strategy of general deterrence — which pays little attention to preparing for conflict, and more to adverting it — is a seductive but ingenuine military strategy that should be avoided.

This, then, is the fifth lesson for Australian military strategists: viz, that deterrence is unlikely to prepare the ADF adequately for conflict because it may undermine the ADF’s fighting ethic.

Conventional Deterrence

Requirements

It has already been shown that the nature of deterrence, when applied to Australia, provides an inappropriate basis on which to formulate military strategy. It has been shown also that deterrence is an unworkable theory on which to base force structuring. But what are the requirements for conventional deterrence; and would these requirements accord with Australia’s current and foreseeable geopolitical circumstances?

Surprisingly perhaps, very little has been written (at least to this author’s knowledge) about the actual military attributes required by a nation to practice conventional deterrence. Andre Beaufre is representative of a small group of
analysts who have addressed this problem. Beaufre has identified three categories of procedures which may permit conventional deterrence to be realised. He explains:

a. The most simple means would seem to be possession of an assured and overwhelming aerial superiority, even in case of surprise. This policy leads to an onerous course of aerial armaments and is without effect against an opponent deploying an equally powerful air force.

b. A second policy, with considerable operational yield (as has been seen in Vietnam), is to threaten invading conventional forces with the use of a popular guerilla war. This policy presupposes the existence of a popular will, viably prepared to withstand the sacrifices entailed by this form of warfare, as well as of a terrain whose ruggedness and size favours the guerilla

c. A third policy consists of menacing invading conventional forces with the use of tactical atomic weapons...

Although it would not be beyond the capability of Australia to develop or acquire any of these three categories, it is unlikely that Australia would do so, and questionable whether such acquisition would help promote peace within the region. The ADF neither has ‘overwhelming aerial superiority’, nor is the ADF likely to acquire it. Australia has no ‘tactical atomic weapons’ and has eschewed that option consistently for the last 20 years. Only in relation to guerilla warfare may Australia be thought to possess some deterrent capability. However, Australia currently is not well prepared — politically, militarily or psychologically — to conduct a campaign of guerilla warfare. The country has only small armed forces, trained and equipped to fight conventional war, hopefully with allies, and supported by Reserves which are few in number, which are trained in the same fashion as the Regulars, and which are designed to provide the expansion base for higher level conventional war. There exists no national service or conscription, and there exists no contingency mobilisation plans by which guerilla war has even been contemplated let alone could be conducted. This should not be construed as an argument that such a capability is necessarily required by Australia, but rather that the lack of this capability means that conventional deterrence — at least in Beaufre’s terms — does not apply to Australia.

John Mearsheimer has probably analysed conventional deterrence more thoroughly than most. Mearsheimer concludes persuasively that conventional deterrence depends neither on the numerical advantage of forces, nor on whether offensive or defensive weapons dominate. Rather, conventional deterrence depends on the ‘function of the specific strategy available...’ This strategy can be one of three kinds:

- the attrition, which consists of numerous set piece battles of annihilation with doubtful results;
- the blitzkrieg, which consists of rapid military actions of mobility to achieve quick and decisive results; and
- the limited aims strategy, which also consists of rapid military action, but in this case to achieve only limited military and political objectives.

Based on historical case studies Mearsheimer contends that the attrition strategy provides the strongest, but not guaranteed, deterrent value. The blitzkrieg strategy has little deterrent value because the possibility of quick and decisive results provides decision-makers with too tempting a choice to resolve (or pre-empt) disagreement and disputes. And the limited aims strategy has similar characteristics to blitzkrieg, but in terms of military strategy (and deterrence) is less popular because results are seldom decisive.

Applying these three strategies to the current and foreseeable force structure of the ADF it is difficult not to conclude that Australia is moving more and more towards the strategies of limited aims and blitzkrieg. The force-in-being is not designed to fight a war of attrition. Its elements would require the injection of significant manpower and material over a considerable period to allow the expansion necessary to fight a war of attrition. And currently no national mobilisation plans have been formulated or tested to make attrition a viable strategy. As with guerilla warfare, this is not to argue that Australia must necessarily prepare for a war of attrition, but rather to demonstrate that on the evidence available deterrent does not apply to the ADF.

This, then, is the sixth lesson for Australian military strategists: viz, that the requirements necessary for conventional deterrence to exist
are not (and will not be) present in the ADF, and are not relevant to Australia’s current and foreseeable strategic circumstances.

Track Record
In 1978 the United States Defence Secretary, Donald Rumsfield, commented that ‘the burden of deterrence has once again fallen on the conventional forces’. In many countries this idea has gained support mainly because of the increasing uncertainty as to the utility of nuclear weapons, particularly in regional conflicts involving none or only one of the superpowers. Conventional warfare, thought by some to have been rendered obsolete by nuclear weapons, has actually proliferated since the first atomic test at Alamgordo in July 1945.

Australian military strategists have long realised this fact, but until the Dibb Report many also accepted the Rumsfield belief that conventional deterrence was both possible and desirable. Countries like Sweden and Switzerland have been hailed as models of successful conventional deterrence, and Australian military doctrine has been laced with the objective ‘to deter aggression’. However, countries like Sweden and Switzerland have certain factors in common which Australia does not. The first is that each faces (or has faced) potential and perceived threats, far more clearly defined than Australia’s. In other words these countries are in situations of specific deterrence whereas Australia is in a situation of general deterrence. The second is that these countries are extremely self-reliant in military capability; their contingency plans are well prepared and aspects of them are rehearsed periodically; and they are all able to wage total conventional war within a very short time period. Australia, on the other hand, is not self-reliant in anything other than low level conflict, and does not have even rudimentary mobilisation plans. The third factor is that, unlike Australia, each of these countries has the military capability to act unilaterally if and when required. To their potential adversaries these countries are able to present a formidable military posture which Australia is unable to present. Finally, there can be no guarantee that Swiss or Swedish military deterrence has actually caused the longevity of peace that these countries have enjoyed — other factors may have been more important.

Sufficient analysis has now been completed to suggest that conventional deterrence is a fragile condition. For example, Richard Rosecrance has examined three situations where conventional deterrence should have prevailed, but did not. Moreover in each of Rosecrance’s studies, deterrence failed not because the stronger military power acted, but because the weaker military power perceived that it could not afford not to act. Germany in 1914, Britain (over Poland) in 1939, and Germany (against France and Britain) in 1940, are all examples where deterrence failed because the alternative risks of not going to war were judged to be worse. Rosecrance’s conclusion is illuminating but not new. Writing much earlier this century G.F. Hudson pointed out that ‘there is perhaps no factor which drives a state into war so inexorably as a steady loss of relative power. Sooner or later a desperate now-or-never need overcomes the calculations of prudence, and the belief that a war may be won today, but cannot be won tomorrow, becomes the most convincing of all arguments for an appeal to the sword.’

Thus, military superiority and deterrence is no panacea for peace.

In her account of the events leading to the Yom Kippur War in 1973, Janice Gross Stein has analysed five major approaches to conventional deterrence to determine why Egypt decided to use military force against Israel. Stein concluded that Israel’s deterrent posture was overcome by Egypt accepting a limited aims strategy and by Egypt using deception and surprise. The Yom Kippur War thus provides another example of how conventional deterrence failed. In comparison to nuclear conflict Morgan has explained that: ‘when only conventional ... forces will be used, it is plainly easier for a sensible government to bring itself to go to war in the expectation either that the outcome will be satisfactory or that the costs, even if it is not, will be bearable. Therefore, it is easier for such governments to instigate crises and confrontations where the risk of war is substantial.’

Not only is this comment supported by historical evidence, it is likely to be particularly true in Australia’s non-nuclear region where
... the side which is able to commit its military forces first has the advantage... This, then, is the seventh and last lesson for Australian military strategists: viz, that conventional deterrence has a poor track record, largely because deterrence by denial (ie conventional warfare) is not nearly as effective in terms of risks as is deterrence by punishment (ie nuclear warfare).

Conclusion
It is certainty true that deterrence is a laudable national objective in preserving peace. However, for the ADF it is not possible currently to translate this national objective into a military strategy that has meaning or is usable. This article has explained the limitations of a military strategy based on conventional deterrence. In particular the essay has identified seven lessons about which Australian military strategists should be reminded whenever they use the term deterrence. These strategists should especially be careful if they are going to ascribe to the ADF ‘common functions’ and ‘military objectives’ which are abstract and unachievable. In determining force structure options the concept of disproportionate response may be used with justification to improve Australia’s relative advantage in selected contingencies, but this concept cannot be used as a synonym for, or corollary to, conventional deterrence. The latter demands a commitment to national security beyond current expectations, and then can remain valid only as long as the perceptions and actions of an adversary allow it.

Raymond Aron has remarked that one of the conditions required for the avoidance of thermonuclear war is ‘... that of a strategy-diplomacy reducing the role of deterrence and reinforcing that of defence.’

In terms of avoiding conventional war this condition appears even more necessary. Indeed, deterrence, as it has been used in the Australian idiom, is the straw-man of conventional military strategy. It is difficult to disagree with Hodda when he concludes that:

‘The nation would be better served if the verb ‘deter’ was used less frequently, and, where possible, the word defend used in its place.’

In this respect Paul Dibb and Kim Beazley should be congratulated in turning their backs on adopting a military strategy for Australia based on conventional deterrence.

ANNEX A

Deterrence — Descriptions and Definitions

Robert J. Art and Kenneth Waltz
‘To deter literally means to stop someone from doing something by frightening him... discussion by deterrence operates by frightening a state out of attacking, not because of the difficulty of launching an attack and carrying it home, but because the expected reaction of the opponent will result in one’s own severe punishment.’ In a simple two-party situation, state A’s deterrent force accomplishes its purpose by frightening state B out of making the military strike that it would have made had the deterrent threat been ineffective.

Australian Joint Service Glossary
‘The prevention from action by fear of the consequences. Deterrence is a state of mind brought about by the existence of a credible threat or unacceptable counter action.’

Andre Beaufre
‘It is the dialectic of opposing destruction capacities that has given rise to the phenomenon of deterrence.’ The object of deterrence is to prevent an enemy taking the decision to use armed force; put in more general terms this means compelling him, when faced with a given situation, to act or react in the light of the existence of a set of dispositions which constitute an effective threat. The result which it is designed to achieve is therefore a psychological one and it is sought by means of a threat.

Richard Brody
‘Deterrence refers to the attempt by decision makers in one nation or group of nations to restructure the set of alternatives available to decision makers in another nation or group of nations by posing a threat to their key values. The restructuring is an attempt to exclude armed aggression (resort to war), from consideration.’

‘The fundamental deterrence hypothesis is: If the threat to values is sufficiently large, the exclusion of armed aggression from consideration is probable.’
Hedley Bull
'To say that Country A deters Country B from doing something is to imply the following:

a. That Country A conveys to Country B a threat to inflict punishment or deprivation of values if it embarks on a certain course of action;
b. That Country B might otherwise embark on that course of action;
c. That Country B believes that Country A has the capacity and the will to carry out the threat, and decides for this reason that the course of action is not worthwhile.

All three of these conditions have to be fulfilled if we are to speak of deterrence.'

Gregory D. Foster
'Fundamentally, deterrence equals the absence of war, in the formally recognized sense of state-managed violence . . . As a condition, deterrence manifests several nominal attributes: (1) the nonuse of force; (2) the maintenance of a relatively large constabulary; and (3) institutionalized threat-making (either tacit or open). Such threat-making constitutes a continuing process of political/military action and reaction.'

Morton Halperin
'The most pervasive notion (in strategy today) is that of 'deterrence': that the military function of military force should be to prevent the use of military force by one's opponents.'

U. Harkabi
'Deterrence is the inducement of another party . . . to refrain from a certain action by means of a threat that this action will lead the threatener . . . to inflict retaliation or punishment . . . In other words deterrence is persuading the deterred that his own interest compels him to desist from committing a certain act.'

Robert Jervis
'One actor deters another by convincing him that the expected value of a certain action is outweighed by the expected punishment. The latter is composed of two elements: the perceived cost of the punishments that the actor can inflict and the perceived probabilities that he will inflict them. Deterrence can misfire if the two sides have different beliefs about either factor.'

Roy E. Jones
'A policy of deterrence is a calculated attempt to induce an adversary to do something, or refrain from doing something, by threatening a penalty for non-compliance. A deterrence situation, or system, is one where conflict is contained within a boundary of threats which are neither executed nor tested.'

William Kaufmann
'Essentially, deterrence means preventing certain types of contingencies from arising. To achieve this objective it becomes necessary to communicate in some way to a prospective antagonist what is likely to happen to him should he create the contingency in question. The expectation is that, confronted with this prospect, he will be deterred from moving in directions that are regarded as inimical, at least so long as other less tolerable alternatives are open to him.

A deterrence policy thus constitutes a special kind of forecast: a forecast about the costs and risks that will be run by the party to the deterred, if certain actions are taken, and about the advantage he will gain if those actions are avoided.'

J.O. Langtry and Desmond J. Ball
'... the practical application of the concept (of deterrence) depends upon . . . empirical factors — such as the type and level of contingency which is to be deterred, the resources available for the deterrent force, the geographic environment in which it is to take place, etc.'

Stephen Maxwell
'... deterrence theory is . . . a theory of rational decision. Its explanatory value does not lie in any power to give casual explanations but in its power to explain the logic of strategic decisions.'

John Mearsheimer
'Deterrence, in its broadest sense, means persuading an opponent not to initiate a specific action because the perceived benefits do not justify the estimated costs and risks.'

Patrick Morgan
'Deterrence involves manipulating someone's behaviour by threatening him with harm. The behaviour of concern to the deterrer is an attack; hence, deterrence involves the threat to use force in response as a way of preventing the first use of force by someone else. Manipulation via threat captures the
essence of deterrence." Deterrence is a hair of the dog cure for war, arming to preserve us from clashes of arms, and in the long view makes just about as much sense. Deterrence theory takes threat and reaction, a complex psychological phenomenon with obvious roots in the emotional equipment of man, and reduces it to the interaction of a set of rational decision makers." General deterrence relates to opponents who maintain armed forces to regulate their relationship even though neither is anywhere near mounting an attack. General deterrence ... is the primary objective of military preparedness (when a state has no aggressive intent). The idea is to convince other states that, in principle, to use force against that state would not be congenial or rewarding.

Eugene Rosi

'Simply put, deterrence means that State A seeks to prevent State B from doing Z by threatening B with unacceptable costs if it does Z.'

Glenn H. Snyder

'Essentially, deterrence means discouraging the enemy from taking military action by posing for him a prospect of cost and risk outweighing his prospective gain.' Deterrence means ' ... the discouragement of the initiation of military aggression by the threat (implicit or explicit) of applying military force in response to the aggression.'

John Steinbruner

'Deterrence consists in one player's threatening his opponent with such severe retaliation to attack (ie a large negative pay-off delivered with significant probability) that the rationally calculating opponent will always chose not to attack. Mutual deterrence exists when both players exercise such a threat against each other.'

NOTES

3. ibid, p 36.
7. These objectives have been restated most recently in Kim Beazley Defence of Australia 1987 (AGPS, March 1987), p 22.
10. For simplicity, the word 'rational' is used throughout this essay in the sense suggested by Andre Beaufre. That is, to describe non-nuclear policy strategy, warfare etc. It includes conventional warfare, guerrilla warfare, terrorism, and all acts of aggression where nuclear weapons are not used or threatened. Refer Andre Beaufre Strategy for Tomorrow, (Macdonald and James, London, 1974), p 26.
14. For example, as seen in Annex A, Snyder stresses 'costs', Morgan stresses 'manipulation', Beaufre stresses the 'psychological' aspects, etc.
15. JSP(AJS)101, Glossary, p 1-74.
16. Morgan, op cit, p 47.
17. This point would seem to be supported by most of the scholarly writing on deterrence. For example, Morgan (op cit) decided to 'discuss deterrence as it applies to relations among governments that involve threats of military retaliation to prevent a military attack', p 203. Beaufre (op cit) regarded deterrence as 'the dialectic of opposing destruction capacities', p 7. And John Mearsheimer, Richard Rosecrance, and Janice Gross Stein, all concentrated their (independent) analyses of deterrence on case studies of actual conflict between adversaries; refer John J. Mearsheimer, Conventional Deterrence, (Cornell University Press, Ithaca and London, 1993); Richard Rosecrance, 'Deterrence and Vulnerability in the Pre-Nuclear Era', Adelphi Papers, No. 160, IFS, London, Autumn 1986; Janice Gross Stein, 'Military Deception, Strategic Surprise, and Conventional Deterrence: A Political Analysis of Egypt and Israel, 1971-73', The Journal of Strategic Studies, Vol. 5, No 1, March 1982.
20. ibid, p 14.
24. Rosecrance, op cit, p 24. Rosecrance explains that although countries may be in a position of weakness they may perceive that their longer term prospects will be even worse if they do not strike.
31. ibid, pp19-29. These barriers are: 'overconfidence', 'not-seeing value trade-offs', 'assimilation of new information to pre-existing beliefs', and 'defensive avoidance'.
32. Beaufre, op cit, p 69.
33. Morgan, op cit, p 11.
34. Langtry and Ball op cit, p 13.
37. Snyder, Deterrence and Defense . . . op cit, p 5.
39. Snyder, Deterrence and Defense . . . op cit, p 8. The emphasis is Snyder's.
40. Morgan, op cit, p 21.
44. Mearsheimer, op cit, pp25-28, 203.
45. ibid, p 203.
46. ibid, pp28-30.
47. US Department of Defense, Fiscal Year 1978 Posture Statement, p 85; cited in Mearsheimer, op cit, p 188. It is not suggested that Rumsfeld activated a 'conventional deterrence school', but rather that his statement was indicative of how deterrence has been applied to conventional forces.
49. Switzerland's importance as the neutral financial centre of Europe, and Sweden's ability to 'bargain' politically, may be more important factors than military deterrence.
51. Cited in Martin Wight, Power Politics (Penguin, 1979), p 139.
52. Stein, op cit, pp99-104. The five steps analysed by Stein were a. evaluation of challenger's interests, b. examination of plausible alternatives, c. estimation of probability of military success, d. attitudes of allies and military suppliers, and e. comparative calculation of loss.
53. Morgan, op cit, p 212.
54. Snyder, Deterrence By Denial . . . op cit, p 22.
55. Aron, op cit, p 637.
57. Cited in Morgan, op cit, p 20
58. ibid.
59. See note 15.
63. Bull, op cit, p 118.
64. Foster, op cit, p 278.
66. ibid, p 22.
68. Cited in Morgan, op cit, p 18.
69. Cited in Langtry and Ball, op cit, pp10-11.
70. ibid, p 12.
71. Maxwell, op cit, pp3-4.
73. Morgan, op cit, p 9.
74. ibid, p 13.
75. ibid, p 28.
76. ibid, p 47.
77. ibid, p 19.
78. Snyder, Deterrence and Defense . . . op cit p 3.
79. ibid, p 11.
80. Steinbruner, op cit, p 225.

Lieutenant Colonel Smith was commissioned from RMC Duntroon in 1971 and has served in both the Australian Intelligence Corps and the Royal Australian Infantry. He has had regimental service with the 2nd Battalion, Royal Pacific Islands Regiment and the 3rd Battalion, Royal Australian Regiment; a United Nations secondment to Kashmir; staff appointments in the Joint Intelligence Organisation and in Operations Branch in Army Office; and was Brigade Major of the 3rd Brigade (ODF) in 1985-86. He is a graduate of the Army Command and Staff College (1983) and is currently serving as an instructor at that College. Lieutenant Colonel Smith holds a Master of Arts in International Relations from the Australian National University and has contributed previously to both the DFJ and its predecessor, the Army Journal.
How Best to Produce an Officer with Education

By Captain J. E. Huston, Australian Intelligence Corps

‘He must be able to grasp issues and problems, to distinguish significant from unimportant elements, perceive inter-relationships of different factors and think imaginatively about possible solutions. These intellectual skills can be developed in any area of knowledge whether English literature or Electrical Engineering’.

‘There is a need to produce for the upper echelons of defence administration military men capable of making full and effective contributions to the matters of major defence policy if the shift in balance to the civilian is to be arrested’.

The correct method of selecting and educating Australia’s Army officers is crucial to the development of the Military. The ability of the officers to deal with the future challenges of the service is dependent upon the methodology of the current commissioning process. In short, the officers of the present age and beyond need to be more than “gentlemen warriors”, the technical requirements are so great and the civil expectations so high, that the need for tertiary educated officers has never been more pronounced.

Proposition

This article will argue that officers need a tertiary education and that it need not necessarily be gained at a military university.

Why Tertiary Educated Officers?

The nature of Officer Education both in Australia and overseas has been a predominant agenda item in general military debate since the mid-1960s. Interestingly the nature by which various countries have attempted to solve the problem has been diverse. Australia has been reasonably successful in recognising a need for some officers to have a tertiary background. Currently about 1 in 6 Army Officers has a degree of some nature. A majority of these, or about 20% of Army Officers, graduated from the Royal Military College, Duntroon. One of the aims of the new Australian Defence Force Academy (ADFA) will be to double the ratio of tertiary educated officers to 1 in 3 in the medium term. The unfortunate fact of the matter is that it could be argued that ADFA is failing to attract those young persons to the Army that will provide the military academia for the future. Central to this problem is the potential cadet’s perception that he will attain no career advantage by attendance at ADFA, given that for a much less period of time he can achieve an equal status with no penalty at the new Royal Military College. Over time it could be argued this loophole will lead to diminution of the numbers and status of tertiary educated officers in the Army. The diminution would eventually lead to a deterioration of the status of the Army as a professional organization, not to mention the effect on the command and staff procedures within it.

The need for tertiary educated officers then is brought into question. A school of thought exists within the Army that argues strongly against the need for tertiary educated officers. However the weight of military and civil comment would argue against the belief that all that is required are “gentlemen warriors.” In fact, a study of the debate since the 1960s will reveal general consensus from outside the military as to the need for more educated officers. The generally comprehensive Martin Report stated ‘We have no doubt that there is a genuine and increasing need in the services for officers who have followed appropriate courses of tertiary education leading to a recognised academic qualification they must have an educated understanding of the ideas, phenomena and vocabulary of service. To the execution of noted defence and security policies, they must have an educated understanding of the political and governmental systems . . . They must be articulate and be able to communicate and collaborate with specialists, at home and abroad, in such fields as Foreign Affairs, Economics, Industry, Science, Labour and Finance’.

In 1965 a RNZAC Instructor posted to RMC, Major J. Brown, also noted ‘The Army must compete with the professions of Law, Medicine,
Teaching and Engineering as well as with Big Business for the best brains in the country. Unless a course of adequate scope is offered, we will not attract enough recruits of the right standard... It is clear that there is an increasing need for the professional officer to have more elaborate technical training and a more intensive study of the humanities. 

It would seem apparent there is a need for high grade tertiary educated officers. The arguments stated will be even more reinforced in the next decades as the monetary value of major Army projects increases significantly, (e.g. AUSTACC, RAVEN, WALER). Such projects may fail dismally if not in the custody of officers of suitable technical and executive skill. Indeed without the gradual expansion of the numbers of tertiary educated officers, the entire concept of the military as a 'profession' becomes highly questionable. In a time of prolonged peace, the notion of the 'Profession of Arms' will become and may already be perceived as military self-aggrandizement. The status of the military as a profession is dependent upon recruiting and educating its officers from the same socio-economic group as the more recognised professions such as Law, Medicine or Accounting. Samual Huntington, the great saviour of the military profession, states in his famous work that the officer was a professional because he 'exhibited expertise, corporateness and responsibility'. However whether this proposition still holds true is doubtful, given the loss over time of the monopoly of knowledge relevant to the performance of a particular arm or service. It could be argued that an internal and external denial of competence has occurred which has lead to a degeneration of authority and a loss of access to decision-making. Cathy Downes in her study of the relative systems of Sandhurst and West Point also throws new light on the Huntington thesis, "trends towards civilianisation tend to deepen the division between the fighting man and the support specialists. A weakening of the distinctions between civil and military also strains the traditionally high levels of corporateness and exclusively of the military". 

The fact of the matter is that given the ever increasing education requirements of civilian professions, the military faces the prospect of becoming intellectually antiquated and thus anything but a professional body. Clearly then there is a requirement for large numbers of officers to attain tertiary degrees to arrest the intellectual slide and to provide state of the art managerial skill. In addition the future study of the techniques of warfare will continue if conducted by a body of men seasoned to the mental disciplines of deductive thinking and modern expression.

**The Military Environment: A Fragile Argument**

Far from being opposed to the need for tertiary educated officers, the Army itself has supported the need for such officers since the end of the Second World War. The concept of a Tri-Service University was in fact postulated by the Wade Report of the mid 1950s. Of particular note however, was the almost continual parameter imposed upon such studies that any such education should occur in a 'military environment'. This was certainly the case for the resultant academic reforms to the Royal Military College in 1968 and then ADFA itself. However both the meaning, justification and relevance of the military environment to academic education is blurred to say the least. Hugh Smith makes the same criticism of the Martin Inquiry when he states that because of the imposed "Military Environment" clause in the Terms of Reference, the question studied was "How best to educate Officers", not as it should have been "How best to produce an officer with education". Though never defined clearly, the military environment is best typified wherein are practised those measures to instil the qualities, ethics and codes of the military profession. The environment is perceived to be controlled by a staff dedicated to the purpose of laying a foundation to establish and sustain a commitment to service life. Such vehicles for the enforcing of the military environment as parades, flag-raising, messes and a daily routine. Smith writes that "the Services argue that they need to recruit at least some of the officer corps at an early age in order to embue them with military values and a sense of professionalism."

While the need for a military environment is not without foundation, what is still required is an explanation why such conditioning needs to occur simultaneously with tertiary education. Unfortunately no such explanation is forthcoming. Indeed, to put the argument to test, it could be reasoned, (ridiculously!) that if the need for
academic study in a military environment is so imperative and valuable then graduate officers (put through such an institution) must be more loyal and ethical than those who have done military training only. If the military university model has any impact, the answer must be "yes". This hypothesis has been tested in reality. Graduate and non-graduate officers have been commissioned from both the Officer Cadet School, Portsea, and as Direct Entry Officers with no certified gap in officer ethics or professionalism.

The conclusion must be that the military environment which is vital to an officer's training, may not need to occur during education but before or after.

In effect, the above argument brings to light the total question of the need for military university. A short study will reveal enormous advantages for the military if graduates were recruited from existing civil universities. Firstly, the Defence Department would incur an enormous cost saving from not having to finance the construction, upkeep and tuition expenses of a military university. Secondly, the range of graduate officers educational background would be as broad as the national educational spectrum, rather than the current restrictive range of courses available at ADFA. In addition, the Army would receive graduate officers of age and maturity equal to the civil workplace. There would, of course, be no suspicion as to the status of the officer's degree (as currently exists) because the degree would be generally unrelated to the military. This in itself would not be to the detriment of the service. General Hackett, former Commandant of the Royal Military College of Science, expressed the view that "the study itself does not matter. What is wanted is rigorous discipline and it need not necessarily be concerned with the military profession... A rigorous academic discipline is the only way of producing the sort of minds we want."

Hackett's argument seeks to quell a relatively well developed claim by some renowned servicemen for the formulation of a Bachelor Degree in Military Studies. Interestingly one of the greatest supporters of the concept of a Military Science Degree has been HRH, The Duke of Edinburgh.

Academics in Britain, however, opposed the idea on the basis that such a pure degree would not be a "self contained subject comparable to law, engineering or medicine. It would consist of fragments of other people's subjects: international politics, history, sociology, military history etc. There is no 'core' of purely military studies that can be taught in a university." Indeed the co-location and simultaneous conduct of military training and academic education is fraught with danger. It is at this point that the entire subject of education versus training and common analogies of Athens and Sparta come to bear. This article does not seek to address this issue in detail, except to say that in the context of a military university, there is a fundamental conflict of interest. The Academy must marry the two potentially conflicting values; one has the spirit of intellectual pursuit with its by-products of inquiry and rejection of deference to authority unless rationally supported, and on the other hand, the spirit of military loyalty and discipline, which at times demands deference to authority without rational justification.

The danger is the inflammatory internal politics such an arrangement can fuel and the confusing position in which it places the students. Importantly this proposition does not aim for a moment to denigrate the value of officer training or the need for such regimental values, but rather seeks to highlight the problems of co-existence.

Graduate Officers — A Possible Alternative

The hypothesis this article has aimed to prove is that due to the increasing technological/managerial requirements of the services, civil expectations and the need to attract quality recruits that there is a need for the officers to be tertiary educated. The secondary proposition is that given the above that such education should occur outside (preferably before) officer training. This is supported on the basis of the cost savings to the Army, the range of education qualification available to the service, and the destructive effect that the military environment may have during study.

The requirement then would be to have officers who are intellectual, think before they act, yet obey and conform to a corporate code of ethics. The antidote is not attainable and in fact lies in the shadows of current World Systems. The Standard Graduate Course conducted at Victory College, RMAS, Sandhurst is such a scheme. A course of 44 weeks, the cadets are selected from the best of Britain's
universities and receive regular commissions on graduation. Similarly the United States Army annually commissions half its officers from university graduates.

A scheme could be devised in Australia where secondary school students could be sponsored through university or recruited fresh from graduate ranks, then processed through a 12 to 18 month military training institution within the military environment. In addition those officers who did join without degrees should be actively encouraged, if not programmed to undertake tertiary study as soon as possible at an appropriate civil course. Of course these officers could be directed to those courses for which the Army had a particular need, ie computing, surveying and communication skills.

It is hoped this article has proposed an alternative method of educating Australia’s Army officers. It was written in full knowledge, but undeterred, by the investment recently placed in ADFA. Whichever course the Defence Planners choose for the future, this paper has aimed to add to the debate. The author poses the possibility of the institution of the scheme described and the conversion of ADFA to a Command and Staff College, Joint Service Staff College, Language School and College of War (similar to RCDS). Such a change to Australia’s Officer Education would, over time, arrest the transfer of influence to the civilian bureaucracy and importantly raise the academic esteem of the service.

NOTES
(1) Dr W.H. Smith, 'The Education of Service Officers: Academy or University', Australian Quarterly, Volume 46, Number 3, September 1974, P 23.
(3) 'Report by the Tertiary Education (Services Cadet Colleges Committee)', dated 27 January 1970, P 12. The committee papers will be referred to henceforth as "The Martin Report!".
(9) GEN Sir John Hackett, 'The Education of the Officer', quoted by MAJ I.H. Cahill in his paper 'Tertiary Education for Staff Corps Officers', 16 September 1974, Fort Queenscliff Papers, P 15.
US Counter Insurgency Initiatives in South Vietnam during the administration of J. F. Kennedy 1961-63

By Major Martin Hamilton-Smith, RA Inf

“WHAT are we doing about Guerilla Warfare”, was one of the first questions John F. Kennedy asked his aides when he became President. He had come to the White House at a time when “wars of national liberation” (as the communist bloc described them) had matured as one more instrument to be ranged into the East-West struggle which had since World War II seen America emerge as the champion of a new world social and economic order. The expansive interests of post-war US capitalism, still shadowed by the depression of the 1930s, had developed an economy with specific structural needs that were to determine the direction of US foreign and economic policy well after 1945. The US was opposed to profound social change and economic independence in Europe and the third world, which it saw as the antithesis of an “open door” as an obstacle to US investment.

The USSR and its eastern bloc satellites combined with the newly moulded communist China to deny US markets and influence. The “iron curtain” myth emerged not only as a political anathema, but as a barrier to all American economic, military and social enterprise. The emotiveness of the US position was made clear during President Truman’s parting speech to congress with its “Paranoid images of Communist chieftans building a vast war potential in their camp, dragging masses of deluded followers throughout the world to insurrection, sabotage, and aggression — of cynical Communist identification with the forces of nationalism and economic change throughout the world merely to enslave more millions of human souls”.

American support for Chiang Kai Shek and its surplanting of Britain in Greece, Turkey and the Middle East, involvement in Korea and support to the French in Indo-China, all formed part of an aggressive foreign posture designed to contain malignant communism. The reconstruction of Japan and Germany, together with the massive military built up of the 1950s were further steps by which Washington was to attain its increasingly elusive goals. Power and capitalism rather than ideology or idealism were at the basis of US foreign policy at the time. The election of Kennedy meant “a break in the generation of rule by men who first made their marks in World War II,” in lieu of those whose attitudes and position were more the result of the east-west perspectives of later years.

The foreign policies and undertakings of the Eisenhower Administration during the 1950s largely predetermined the Kennedy initiatives. Eisenhower was an older and experienced statesman, with a sound military background and a cautioned, reasonable outlook. He claims in his memoirs that he realised in 1954 that “American aid could not cure the defect in the French Vietnamese relationship and therefore was of only limited value” and goes on to state that, “Had the circumstances lent themselves to a logical use of military force, the task of explaining to the American public the necessity for sacrifice would have been an acceptable one.” He clearly understood such intervention was not viable. The young Senator Kennedy agreed when during a speech on the floor in April 1954 he stated:

“...To pour money, materiel and men into the jungles of Indo-China without at least a remote prospect of victory would be dangerously futile and self destructive...”

The 1954 Geneva accords heralded a new era in West-SE Asian relations which was to see the formation of the South East Asian Treaty Organisation (SEATO), the advent of the US Military Advisory Assistance Group (MAAG) in Vietnam, and the emergence of Ngo Dinh Diem as the US backed leader of newly independent South Vietnam (SVN). Although convinced that had the promised elections in SVN been held within two years of Geneva, 80% of voters would have backed Ho Chi Minh, Eisenhower took the initial steps which were to make SE Asia a testing ground for the containment of Communism. US assistance to SVN had been about $US1700 million from 1954-63. Comprising nearly 900 men, MAAG had
set about creating a Republic of Vietnam Armed Forces (RVNAF) along the lines of the US blueprint. The aggressive Russian posture which followed SPUTNICK in Oct 1957, together with Kruschev's famous speech in support of wars of national liberation on 6 Jan 1961, further strengthened American resolve.

It was in fact the situation in Laos rather than SVN which preoccupied Eisenhower. The coolness of his response to the Hungarian crisis\[12\] and Suez in Nov 1956\[13\] was stilted when, referring to the Pathet Lao in Dec 1961 he felt that:

"We cannot let Laos fall to the Communists even if we have to fight . . . with our allies or without them."

It was apparent that events in SE Asia had led, by the end of 1960, to a point where firm action and positive decision-making was necessary.

It was really the leaders of the Vietnamese revolutionary movement who provided the stimuli to which Eisenhower, and later Kennedy, would respond. The importance of the first Indo-China war (1946-54) as a determinant of things to come is conclusive. Though stronger in the North than the South the revolutionary movement's propaganda, political technique, administration and military science were all at a peak in 1954. The sense of betrayal and deception amongst the Viet Minh after Geneva was immense, and the partition of Vietnam provided for under the terms of the agreement was seen as a temporary measure\[15\] to be followed by a renewed campaign in the South.

The strategy of protracted revolutionary war as Mao Tse Tung saw it would progress logically through three stages.\[16\]

Phase one was a period of strategic defence during which the enemy held the strategic offensive. Using the tactics of guerrilla warfare, the revolutionary forces were advised during this phase to trade ground for time, population resources and industrial areas for survival, all the time gathering strength. Phase two saw a halt as the enemy's lines of communication, resources and morale became stretched, leading to phase three when the revolutionary forces would seize the strategic offensive and attack incessantly, wearing the enemy down into defeat.
The Vietnamese General Vo Nguyen Giap summarised these phases as defensive, equilibrium and offensive. He and the other Vietnamese exponents generally accepted Mao’s doctrine but sought to expand upon and “Vietnamese” his teachings. Giap, for example, was less certain about the drawing of clear lines between the phases, believing in the conduct of large scale offensive actions during the preparations for phase three, based on local conditions. Most importantly the Vietnamese leaders were clear on their respective of the struggle as primary political and social in nature. Victory could be achieved only by motivating moral, social, political and economic forces within a framework of nationalism, “The communist social strategy was an integrated programme to ‘motivate’ forces: the communist military strategy was an integrated programme to ‘apply’ forces. Logically the former is fundamental to and governs the latter.”

To the Vietnamese guerrilla warfare was the tactic by which forces were to be applied, and the protracted warfare strategy achieved. Giap described it as:

“the way of fighting the revolutionary war which relies on the heroic spirit to triumph over modern weapons, avoiding the enemy when he is stronger and attacking him when he is weaker, now scattering, now regrouping ones forces, now wearing out, now exterminating the enemy, determined to fight him everywhere, so that wherever the enemy goes he would be submerged in a sea of armed people who hit back at him, thus undermining his spirit and exhausting his forces”.

The American response to this type of war was, like the French, to oppose the tactics and to fail to meet the revolutionary strategy.

Although the Vietminh underground structure was never dismantled in South Vietnam after 1954 there is little evidence of a concerted effort to continue the armed struggle there between 1954-59. The North apparently beset by its own domestic problems was prepared to await the promised elections and the “inevitable” collapse of the Diem regime through its own self contradictions. A communist document captured in 1957 entitled, The Path of the Revolution in the South confirms a strategy of consolidation and political activity, in lieu of large scale armed activity. By 1959 it was apparent that this strategy was failing and local cadres, increasingly opposed to Hanoi’s soft line, came to see “the choices were surrender or death or a new policy”. The strategy moved forward from strategic defence to equilibrium and strategic offensive, during a renewed communist onslaught from 1959 to 1963. A US White Paper was to claim the number of confirmed VC infiltrated to the South increased from 1800 in 1959-60 to 3750 in 1961 and 5400 in 1962.

Reports from defectors and a captured Regional Committee annual strategy document confirm that the 15th conference of the Party Central Committee in Hanoi had set forth a new line, and Kennedy announced with concern in May 1961 that the number of people killed by the communists in the preceding twelve months had jumped (from 138 in 1959) to 4000 and that enough weapons had been captured to equip twenty or more VC Battalions (150-300 men each). A new phase in the battle for SVN had clearly begun at the same time as the 1960 US election campaign. Kennedy was to face a totally new scenario to that of his predecessor.

At the outset it was apparent during the 1960 election campaign that whether a Republican or a Democrat gained the victory, the enormous power concentration in Washington was destined to pass into the hands of a new and more vigorous generation. All polls showed foreign policy to be a major concern to the nation’s voters, if not their major concern, and Que-moy, Mutsu and Cuba were predominant during the debates. Vietnam was apparently a small cloud on the horizon at the time, with Cuba, Laos and the Congo appearing more important. It is of interest to note that, not only was there no great dispute between Nixon and Kennedy on foreign policy during the election, but the index to Kennedy’s campaign speeches (Aug 1st to election day) shows Vietnam appearing only twice and the whole of Indo-China only nine times. It would appear Vietnam was at the time, a non issue. This was soon to change.

Eisenhower, in the second volume of his memoirs, barely mentions Vietnam but does explain in detail his policies on Laos, the New York Times index for 1961 has eight columns on SVN and twenty six on Laos. It is subsequently understandable that the Kennedy team of Rusk, McNamara, Stevenson, Hillsmann and Bowles continued at first, to see SVN as largely a peripheral crisis. There were no fundamental or far reaching decisions until the Buddhist
crisis in mid-1963, policy before that time gingerly evolving in response to the steadily deteriorating situation in that country. It was the collapse of the US position in Laos which led to the National Security Council (NSC) 28 Apr 1961 decision, to consider bolstering Diem’s forces, and which determined the SVN would be the place where the US would make its stand against communist expansion.

The starting point for the Kennedy Administration was a Counter-Insurgency Plan (CIP) initiated by the Eisenhower Administration which, having taken eight months to reach the White House, was approved by Kennedy on 28 Jan 1961. Under the plan Diem was offered equipment and supplies to outfit a 20,000 man increase to the RVNAF and the 32,000 men of the Civil Guard at a cost of $12.7 million. An increment of $42 million to the normal annual aid package of $220 million would establish Diem with an RVNAF of 170,000 and a Civil Guard of 68,000 men. In return Diem, who had deliberately divided and confused provincial, regional military and operational military command structures (as a device against coup attempts) and expected to rationalise the system of command and control, agree on a joint plan of operations and strategy, and institute civic action and political reforms, aimed at establishing an open and united front of political parties against the Viet Cong.

Negotiations with Diem, who opposed reform, dragged on inconclusively. Ambassador Dubrow was to cable Washington on 8 Mar 1961 to the effect that:

"... despite pressure of Embassy and MAAG the Government of Vietnam (GVN) has not decreed the required measures and will continue to delay unless highly pressurized to act."

Events were to prove that an effective counter-insurgency (COIN) strategy, and survival of the personalised dictorial regime of Diem, and his brother Nhu, were incompatible. On the other hand, in defence of Diem, it must be remembered that he had stood alone back in 1954-55 with only a few supporters.

He knew US policy would always reflect the practicalities of American vested interests and he had, on 11 Nov 1960, narrowly survived a coup attempt. It is perhaps not surprising that he saw, with the advent of Kennedy, no basic shift in real American goals in SE Asia.

Brigadier General E. Lansdale, then Assistant to the Secretary of Defense for Special Operations and a key figure in former US activities in both SVN and the Philippines, visited SVN in Jan 1961 and reported to Kennedy that:
"We must support Ngo Dinh Diem until another strong executive can replace him legally. President Diem feels that Americans have attacked him almost as viciously as the Communists . . . . If the 11 November coup had been successful, I believe that a number of highly selfish and mediocre people would be squabbling among themselves for power while the Communists took over . . . ." \(^{42}\)

The period which Homer Bigart of the *New York Times* aptly described as the time of "sink or swim with Ngo Dinh Diem", \(^{43}\) was beginning.

By April 1961 it was apparent Ambassador Dubrow's inability to prompt concessions from Diem, and the subsequent delays to implementation of CIP had brought US initiatives to an impasse. The worsening military situation in SVN, the apparent futility and divisiveness of the Dubrow (pressure) tactics for dealing with Diem, the weakness of US policy in Laos (and the subsequent strongly felt need for a signal of firm policy in Vietnam) all narrowed the range of options realistically open to the Administration, which was developing a special interest in counter insurgency. \(^{44}\) "MAAG (and eventually, the joint Chiefs of Staff (JCS) in Washington) grew increasingly impatient with Dubrow's insistence on further holding up the 'green light'. They wanted to get on with the war." \(^{45}\) When Lansdale, on 26 April 1961, proposed a new programme to accelerate the January CIP submitted on 27 April 1961 as Gilpatric's Task Force Report), what eventually came to be known as the "Presidential Programme for Vietnam" emerged. Kennedy's 29 April 1961 decisions included a 100 man increase to MAAG\(^{46}\) and a number of materiel and training support steps representing a willingness to go beyond the 685 man limit on the size of the US military mission in Saigon. Taken at the time of the Bay of Pigs debacle, these steps were significant in that they changed the emphasis from new approaches to implementation of the old plan, to development of a new programme. At about this time (10 May) Gilpatric asked JSC to consider the feasibility of US combat troops in SVN.\(^{47}\)

Vice President Johnson visited SVN on 9-15 May 1961 to report on the situation there and to reassure Asian Leaders that despite Laos, the United States could be counted on to support them.\(^{48}\) without proposing any concrete course of action, Johnson reported that the US should restore confidence and make a firm stand in Saigon. He pointed out that the possibility of costly escalation should be faced (prophetic words for later years) and that America should meet the challenge or "throw in the towel". \(^{49}\) Though the introduction of ground troops was discussed, Diem did not want them. A new economic plan and a re-evaluation of the South East Asian Treaty Organisation (SEATO) was urged. Shaplen reports that one effect of Johnson's visit was to exasperate the newly appointed US Ambassador Frederick Nolting,\(^{50}\) as it reassured Diem of continued US backing to a point where the prospect of any further concession and reforms from the GVN became at best, remote.\(^{51}\)

As the Vice President's visit was underway, re-assessment of the Task Force Report and the Presidential Programme, led to National Security Action Memorandum (NSAM) No 52 of 11 May 1961 which authorised the Ambassador in Saigon to open negotiations about a bilateral treaty with SVN, increased assistance to GVN for border patrol and COIN operations (including aircraft and modern technology) as-
sisted health, welfare and public works aid and most importantly, approved the deployment of a 400 man US Special Forces group, to Nha Trang to accelerate Army of Republic of Vietnam (ARVN) Special Forces Training. JCS, MAAG and Commander in Chief of Pacific (CINCPAC) were to assess the utility of expanding the RVNAF from 170 000 to 200 000 (two extra Divisions). These decisions received no publicity. More importantly it is clear from the Pentagon Papers that these heralded an extensive covert operation, coordinated by the CIA, designed to subvert Laos and North Vietnam and to "... form networks of resistance, covert bases and teams for sabotage and light harassment . . . to conduct ranger raids and similar military actions . . .".

In July 1961 Lansdale submitted a memo to General Taylor (Kennedy's personal military adviser) on unconventional warfare which reveals that the First Observation Group at Nha Trang was directed primarily at "denied areas" in Laos and North Vietnam. Expanded on 6 July 1961 from 340 to 805 (including many North Vietnamese) the unit was the main covert operation in SVN. South Vietnamese soldiers, 60 montagnard tribesmen and 70 civilians were formed into additional volunteer groups, apart from the First Observation Group, for similar operations. Lansdale states that 50 Americans (35 from Defence, 15 from CIA) engaged in training these groups and preparing other South Vietnamese intelligence and psychological warfare operations.

According to the Pentagon study, these were to be augmented by some of the 400 special Forces soldiers Kennedy ordered to the field on 11 May 1961. Civilian aircrew flying aircraft operated by the CIA sponsored Civil Air Transport Company (CAT) based out of Taiwan, flew in support of such operations throughout SE Asia.

Organised into 15 man combat teams and 24 man support teams one such sub-unit was shot down (or crashed) near Ninh Binh (180 miles north of the 17th parallel) in July 1961. Hanoi radio carried several English language broadcasts of the incident, announcing plans to place on trial three survivors on charges of sabotage and espionage. It is apparent from these accounts that this period saw a marked expansion of the US commitment in SVN, the extent of which may not be apparent until further primary sources are made available.

Johnson's visit and NSAM 52 were followed on 9 June 1961 by a letter from Diem to Kennedy seeking US support for a 100 000 man increase to the RVNAF, and the Eugene Staley visit, which led to a decision by the President to accept a force level increase to 200 000 men. Shortly afterwards Theodore White reported, following his visit to SVN in late August that the situation was getting worse almost week by week. An old China hand he was reminded of Chungking in WW II, complete with Madame Nhu as Madame Chiang Kai Shek. An upsurge in Viet Cong (VC) attacks in September 1961 (450 attacks compared to 150 in preceding months), culminated with a bold VC attack in Phuoc Thanh Province, where they publicly beheaded the Diem appointed Province Chief.

On 1 October 1961 Diem was sufficiently alarmed to request a bilateral treaty with the U.S. Kennedy's response was to send General Taylor and Walt Rostow on a fact finding mission (18-24 Oct 1961) to examine the range of possible US options, form bold intervention of up to three US Divisions on the one hand, to fewer troops and greater political pressure on the other. At about this time a new proposal drafted by Alexis Johnson (Deputy Secretary of State) entitled "Concept of Intervention in Vietnam" had emerged, which followed the Rostow/JCS view that a joint SEATO force of about 25 000 men (up to 128 000 if China or North Vietnam intervened) should be deployed to close the SVN border, win control of the central highlands around Pleiku and set about locating and destroying the VC by use of US "net and spear" tactics. Although there was some disagreement in Washington over the viability of this plan, its significance at this time is that it represented a widely held view that drastic action was required in SVN; that the VC were progressing to the strategic offensive and that a hard commitment on the ground in 1961 might save the day. As William Bundy (Assistant Secretary of Defense) put it:

"An early and hard hitting operation has a good chance (70% would be my guess) of arresting things and giving Diem a chance to do better and clean up . . . It all depends on Diem's effectiveness, which is very problematical. The 30% chance is that we would wind up like the French in 1954; white men can't win this kind of fight . . . On a 70-30 basis, I would myself favour going in. But
if we let, say, a month go by before we move, the odds will slide."

The Taylor Report (published 3 Nov 61) emphasised two main points. Firstly that a firm, unambiguous military commitment was required, to remove doubts about US resolve arising out of the Laos negotiations, and second that:

"at all levels Americans must, as friends and partners — not as arms length advisors — show them how the job might be done — not tell them or do it for them".

The Secretary of State subsequently sent a memorandum to the President (dated 11 Nov 1961) recommending a firm commitment to preventing the fall of SVN to communism, that contingency plans for large scale military intervention be prepared and that the US commit units of modest size immediately, to train additional local forces, provide communications, intelligence and surveillance support, helicopter and naval support and to perform administrative and flood relief duties. A diplomatic offensive incorporating the world Press, SEATO, NATO, the OAS and the International Control Commission (ICC) as well as the UN and normal direct diplomatic channels, was also proposed.

Diem was to be put under greater pressure to reform and reorganise. On the 22nd November 1961 NSAM 111 approved this Rusk/McNamarra memorandum which then became policy. On the 12 December 1961 a New York Times dispatch reported the arrival of two US Army helicopter companies (33 H-21C and 400 servicemen) to provide "direct military support" to the RVNAF. A formal exchange of letters between Diem and Kennedy on 15 Dec 1961 formalised the stepped up programme. After eleven months, numerous visits by high ranking officials to Saigon, and endless meetings, a strategy was beginning to emerge.

The Advisory Team build up was well underway by mid 1962 when R. Shaplen the correspondent, reported 6 000 US troops and 100 helicopters were at the front, and that planes were being shot at regularly. Roger Hillsman of the State Department (whose own experiences as a guerilla in Burma during World War II had taught him that the way to fight the guerilla is to adopt the tactics of the guerilla), had visited SVN in early 1962 and developed a plan which took into account the theories of R.G.K. Thompson's British Advisory Mission and the contemporary exponents of COIN strategies and tactics. Entitled "A Strategic Concept for Vietnam" it was supported by Kennedy and disseminated widely in an effort to sway the conventionally minded US military establish-
ment away from the orthodox military strategy and tactics of the type observed by Hillsman at Binh Hoa on 21 Jan 1962.78 Diem’s Strategic Hamlets programme was similarly inspired, as an original and innovative step towards breaking the VC life line to the local population and resources. Launched with Operation Sunrise (Ben Cat district) the programme got off to a bad start: “The government was able to persuade only seventy families to volunteer for resettlement. The 135 other families in the half dozen settlements were herded forcibly from their homes ...”

Poor quality defences, forced change to the pattern of rural life and poor follow up action to care for the needs of resettled peasants, all combined to alienate those the measures were designed to protect.79 As Calbraith (Ambassador to India) noted following his visit to Saigon, “The Viet Cong comes back and puts the arm on all who have collaborated”. By Oct 1962 the GVN had announced the Hamlets as the, “unifying concept of its pacification and counter insurgency effort”, but propaganda in the absence of security was not enough. The programme became essential to Diem and Nhu and though it met with some initial success it went with them and the “personalist revolution”, in the Nov 1963 coup.

A significant step was taken in NSAM 124 on 18 Jan 1962, when Kennedy formed a Special Group on counter-insurgency comprising key senior Defence, State and Intelligence Agency personnel.80 Schlesinger points out that Kennedy brought to the White House a keen personal interest in unconventional warfare and counter-insurgency.81 He examined Army doctrine and equipment, read Guevara, Marx and Mao Tse Tung and expanded US Special Forces (personally directing that they wear a distinctive green beret) forming centres at Fort Bragg, West Germany, Panama and Okinawa. Roger Hillsman and Walt Rostow carried the message to the State Department. Foreign service officers (including the new Ambassador in SVN, Cabot Lodge appointed in June 1963) were put through COIN courses, “Indeed it requires Presidential backing; for the Army had fallen into the hands of ‘organisation generals’ after the departure of Ridgway, Taylor and Gavin, who looked on the counter insurgency business as a faddish distraction from the main responsibility of training for conventional assault”.82 Infatuated by high technology and eager to strike major blows the old school deeply disliked the thought of reversion to the rude weapons, amateur tactics, hard life and marginal effects of guerilla warfare.

NSAM 162 dated 19 June on the “Development of US and Indigenous Police, Paramilitary and Military Resources” implemented aspects of the new doctrine by coordinating internal defence plans, improving personnel programmes of agencies involved in unconventional warfare (including career streaming for specialists) and incorporating the use of third country personnel on operations.85 It went on to confirm the division of responsibility between Defence and CIA (already stated in NSAM 57) allotting wholly covert and deniable operations to the CIA, and those which were only partly covert and which required larger numbers of military personnel and greater amounts of equipment to Defence, with CIA in a supporting role. Australians were to become involved in both types of operations. NSAM 182 dated 24 August 1962 directed all branches to formulate policy, internal doctrine, tactics and technique on the basis of an approved COIN document entitled “US overseas Internal Defence Policy”.86 As this strategy developed it was continuously frustrated by Diem. The problem became increasingly, one of implementation rather than design.

Galbraith had warned in Nov 1961 that, “... there is no solution that does not involve a change in government ...” By mid-1963, Diem’s refusal to offer genuine reforms, his inability to effectively focus the war effort, his dependence upon brother Nhu and his rampant duplicity reached a new height when in the face of open US protest a series of repressive clashes with Buddhists led to the 21 August 1963 attack upon the Pagodas.88 A few days later a normally restrained Kennedy stated on a CBS television interview that:

“I don’t think that unless a greater effort is made by the Government to win popular support that the war can be won out there ... they are the ones who have to win or lose it.”

It was further apparent that the GVN war effort was floundering. Demoralised by Diem’s divide and rule policies, overshadowed by corruption and fear, humiliated and poorly led by officers chosen on the basis of loyalty to Diem rather than ability, the RVNAF and the Civil
Coup De Grace — Vietnamese militiamen try to strangle a wounded farmer by stamping a stake across his throat. Suspected of being a VC auxiliary, the strangling efforts failed, but the man died of wounds later.
Guard were frustrated by the regime's mean-derings.

The 1 November 1963 coup, which finally saw the death of the Diem brothers, was the instrument of broad unrest directed: “against the hierarchal structure of traditional Vietnamese society — against the older generation of Vietnamese nationalist who, like Diem and Nhu, were upper class, Catholic, French Speaking; in favour of a new nationalist generation, drawn largely from the middle and lower classes, anti-western, radical, impassioned; it was in effect the angry young men massing to overthrow the mandarines.”

It is apparent from cablegrams between Washington and the US Ambassador, that as early as August 1963 Kennedy had favoured a coup, and that Lodge had been given a virtually open licence to encourage, or at least acquiesce should it occur.

Although there is evidence to suggest that the September/October period saw a return to a pro-Diem position (i.e., in October 1963 the Taylor/McNamara visit recommended that US discourage a coup) it is unlikely Diem was sadly missed in November, despite the uncertainties of subsequent military rule. Had Kennedy not been assassinated on the 22 November 1963 the new political order may have assisted the successful implementation of his COIN strategy.

In summary, it is clear that the main thrust of the Kennedy strategy is SVN was determined between January and November of 1961 based upon the starting point provided by the Eisenhower CIP. The Administration chose Diem at that time, not Vietnamese nationalism, which it really not understand, seeing in its place the ag© not primarily for their beneficent reforms but primarily for their beneficent reforms and the steady involvement of US aircrew and ground advisors in the fighting. By 1963 it was apparent that Diem must either go, or drastically modify his approach. If a strategy capable of defeating the increasingly active VC was to be found, Kennedy appeared to understand that protracted war was a political and social battle for the minds of men, rather than a simple military technique. As Schlesinger claims:

“I do not think (Kennedy) ever forgot what was clear above all else... was that civic police, social and military measures had to be combined and carefully coordinated in an overall counter guerilla programme...”

According to this view there must be a heart felt cause to which the legitimate government is pledged and which makes a stronger appeal than the Communist cause. When Kennedy sent Taylor and Rusk to SVN in October 1961, he and Rusk made a conscious decision to turn the problem over to the Defense Department. In this way, they hoped to ensure that the advisory build up as a means of getting US military involvement did not come at the expense of the advisory effort. The decision to build up the advisory effort in early 1962 saw the Strategic Hamlet and covert action strategy emerge, along with the steady involvement of US aircrew and ground advisors in the “shooting war.” By 1963 it was apparent that Diem must either go, or drastically modify his approach. If a strategy capable of defeating the increasingly active VC was to be found, Kennedy appeared to understand that protracted war was a political and social battle for the minds of men, rather than a simple military technique. As Schlesinger claims:

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Gia Vuc — A typical defended village in the highlands. At the time this photograph was taken (1964) the Viet Cong controlled the road to the camp which was frequently subject to night attacks. Note the trenches, fields defences and mortar craters within the village perimeter (Photo — National Geographic).
to the tactics of guerilla warfare, only one aspect of the communist battle plan. \(^{106}\) Kennedy’s Press Conference claim that: “I am operating on the basis of, really, the unanimous views and opinions expressed by the most experienced Americans there . . .”\(^{98}\) seems doubtful. Sorensen’s observation that: “There were bitter disputes, with each side often trying to commit the President in the others absence”\(^{99}\) would seem more probable. In any event, the very basis of the American ethos was at play. A refusal to “quit”, a wish to get in and get the job done, and an emotional commitment to duty and loyalty so evident in US anti communism, all contributed in what may have appeared to some as a cavalry like dash to defend the defenceless Vietnamese homesteaders, complete with the VC as marauding Indians.

As Hillsman explains: “The Kennedy Administration had developed a strategic concept for fighting guerilla warfare, an idea for a political programme into which military measures were meshed, but he had failed to convince the Diem regime or even the top levels of the Pentagon to give it a fair trial.”\(^{100}\)

It is of interest to hypothesise what direction the war might have taken had Kennedy not been assassinated. Kennedy avoided (and was not forced by events to make) any commitment to escalate the war into the land battle it was to become under L.B. Johnson, preferring to direct efforts towards an advisory build up and unconventional operations. Despite these Steps, the Diem/Kennedy alliance was unable to successfully develop a broad political and military strategy, more compelling than that of the VC. Such a response could not attain a decisive result. The policy of escalation that followed Kennedy sought to crush the enemy by military force but failed, as had previous efforts, to address the broad political and sociological problem of South Vietnam responding instead to the tactics of guerilla warfare, only one aspect of the communist battle plan.

Notes

1. HILLSMAN, R., To Move a Nation; The Politics of Foreign Policy in the Administration of John F. Kennedy, Doubleday, USA, 1967, p 413.
44. PENTAGON PAPERS (Senator Gravel Edition) *op cit*, p 32
45. *ibid*, p 31
46. *ibid*, p 39
47. *ibid*, p 48
48. *ibid*, p 59
49. *ibid*, p 59
50. WALTON, R.J., *op cit*, p 153
51. SHAPLEN, R., *op cit*, p 153
52. PENTAGON PAPERS (Senator Gravel Edition) *op cit*, p 64
53. PENTAGON PAPERS (As Published by The New York Times), Quadrangle, N.Y., 1971. p 87
54. loc cit
55. *ibid*, p 135-137. (Landsdale Memo for Taylor on Unconventional Warfare)
56. loc cit
57. *ibid*, p 97
58. *ibid*, p 142
59. *ibid*, p 97-98
60. PENTAGON PAPERS (Senator Gravel Edition) *op cit*, p 61-62
61. loc cit
62. *ibid*, p 70
63. loc cit
64. *ibid*, p 70
65. PENTAGON PAPERS (As Published by the NYT), *op cit*, p 104
66. PENTAGON PAPERS (Senator Gravel Edition), *op cit*, p 74
67. *ibid*, p 77-78 (Special National Intelligence Estimate Disagrees with the Concept)
68. *ibid*, p 79 (Bundy Memorandum to McNamara)
69. *ibid*, p 92
70. *ibid*, p 94
71. *ibid*, p 110-116 (Memorandum Secretary of State for President)
72. *ibid*, p 17
73. *ibid*, p 126 (NY Times dispatch)
74. *ibid*, p 127
75. SHAPLEN, R., *op cit*, p 162
76. HILLSMAN, R., *op cit*, p 435
77. *ibid*, p 438
78. *ibid*, p 43 (During this action conventional weapons and tactics were used in an airborne assault on to a VC position. A number of civilians were killed while the VC slipped into the jungle. Kennedy's comment upon hearing of the action was: “I've been President over a year, how can things like this go on happening?”)
79. PENTAGON PAPERS (Senator Gravel Edition), *op cit*, p 149
80. *ibid*, p 131
81. *ibid*, p 124
82. *ibid*, p 660
83. SCHLESINGER, A.M., *op cit*, p 341
84. *ibid*, p 340
85. PENTAGON PAPERS (Senator Gravel Edition), *op cit*, p 687
86. *ibid*, p 689
87. *ibid*, p 121 (Galbraith's opinions were highly regarded by Kennedy. He was a reasonably cynical hard liner on Diem)
88. HILLSMAN, R., *op cit*, p 272
91. SCHLESINGER, A.M., *op cit*, p 887
92. PENTAGON PAPERS (Senator Gravel Edition) *op cit*, p 734 (Sound evidence here to suggest a double handed policy on removal of Diem)
93. *ibid*, p 751-66 (Memorandum from McNamara and Taylor for President)
95. HILLSMAN, R., *op cit*, p 426 (Statement by General E.G. Wheeler)
96. SCHLESINGER, A.M., *op cit*, p 984
97. HILLSMAN, R., *op cit*, p 435 and p 442
98. THE KENNEDY PRESIDENTIAL PRESS CONFERENCE, Coleman, N.Y., 1976, p 358
99. SORENSEN, T.H., *op cit*, p 729
100. HILLSMAN, R., *op cit*, p 512

The Author graduated from RMC, Duntroon and has served with 6 RAR, HQ 3 Bde and SASR. Other postings include S03 Training Systems Development, HQ Field Force Command, O.C. 1 Command Company and HQ Training Command.

Major Hamilton-Smith holds a Master of Arts degree from the University of NSW. He has contributed to the journal on several occasions.

The Author wishes to thank LCPL K. Veijalainen for his technical assistance with photographs and maps.
The Application of ‘Critical Incidents’ to a Training System

By Major Bruce Copeland, BA, BEdSt, RAAEC

Introduction

Over the last ten years, I have been dissatisfied with the training systems adopted within the Australian Defence Force. From my point of view, there was always an important component missing.

The missing link was the phase that enabled the training personnel to produce extended sequences of scenarios to be solved by the student through application of the skills of Decision-Making.

The production of objectives and preparation of course packages seemed to be insufficient. Preparation of the appropriate scenarios was the way to go if the instructor and students were to be supported towards systematic application of Decision-Making within the job context.

This view seemed to have no impact within the Defence Force. The pervading view was expressed that the Training Systems were working well enough and should be left well enough alone. In 1984, an article was printed in the Defence Force Journal entitled ‘Fault Points in the Training System’ in which I suggested that the system could be enriched and made more effective by skilled preparation of scenarios and systematic manipulation of variables.

Only recently, the final piece of the jigsaw fell into place. A group of policemen attended the Pidgin course at the RAAF School of Languages prior to posting to the Royal Papua New Guinea Constabulary. All took part in the familiarization component in which they were exposed to aspects of course design and development together with instructional techniques appropriate to training in Papua New Guinea. One of the students of this course explained that in the Western Australian Police Training System, an integral phase is that of producing ‘critical incidents’. These were real incidents that had occurred within given contexts of police work, categorized into sequences and provided to the instructor for the use as the basic framework of courses to be prepared.

Aim

The aim of this article is to show the importance of ‘critical incidents’ to implementation of a training system.

Background

This article has been written in conjunction with three (3) articles that have appeared in the Defence Force Journal. These are:

• ‘Think Systems’ DFJ No. 41 Jul/Aug 83
  In this article, a scale for categorization of systems was suggested. All systems may be categorized in terms of the range of variables involved. The ‘Determined System’ is demonstrated by a machine that displays a constant set of variables that govern a quite predictable series of ‘cause’ and ‘effect’. The ‘Probabilistic System’ operated with a person in control of a machine or regulated by an administrative or tactical process. With the introduction of the human mind, a new range of variables operated in conjunction with those related to the machine itself. The ‘Self-Organizing System’ consists of a myriad of variables and operates within the networks of human relations. Such systems may be explored through courses in management and leadership.

• ‘A Systems Approach to Mastery Learning’ DFJ No. 44 Jan/Feb 84
  In this article, the basic approach to mastery learning was explained and related to preparation of sequences of exercises for student activity. There is certain confusion as to just what mastery learning really is. It is not an activity that merely involves the student getting a skill right. It involves preparation of sequences for the student to master through completion of tasks that provide the basis for the next skill and so on. Sufficient parallel sequences exist to enable revision and remedial exercises.
• Fault Points in the Training System' DEJ No. 46 May/Jun 84

In this article, the view was expressed that a basic flaw existed in training with the absence of those phases that would facilitate the preparation of ‘critical incidents’ to be developed as mastery exercises.

The process was seen to involve establishment of the operating system to be studied. This would be followed by identification of the points at which faults may occur, together with the scenarios in which the faults may occur and the variables that would operate within the scenarios.

These articles have been cited not as references but as supplementary texts for those readers who may wish to pursue the topic further.

At the RAAF School of Languages, much work has been done in the presentation of those aspects of instructional techniques together with course design and development appropriate to training foreign students. The ‘Critical Incident’ is integral to this work and is relevant to technical, tactical and administrative systems.

The Pidgin Familiarization Course for instructors of Papua New Guinea students is a meeting place for instructors of the three services. The recent attendance of police officers has added new insights.

A Programme in Problem Solving

My first involvement with ‘critical incidents’ occurred at the then Joint Services College of Papua New Guinea in 1976-77. Faced with the task of preparing courses for officer cadets, I felt the need to base the work in realistic scenarios.

The period that followed found me searching for ‘critical incidents’ that involved the Papua New Guinea Defence Force, the Royal Papua New Guinea Constabulary and the Correction Institution Services. At this time, the three services sent officer cadets to the college.

I saw the objectives of the course to be only the starting point for a much more extensive search for the scenarios upon which to base the practical aspects of the course.

As the months went by, scenarios started to increase in number. Each was a ‘critical incident’ in that an error had occurred at the hand of one or more service members and an unfortunate result had occurred. The following were established:

• The Duty Officer had neglected to follow correct procedure in checking the water supply system, with the result that the camp had run out of water.
• A police constable had gone to a danger area without informing the station about where he was going, with the result that he had been brutally attacked and not located for several hours.
• The Duty Officer had failed to check an incident reported over the phone as he believed without checking that the call was a hoax, with the result that a disaster had occurred.
• Bar monies had not been counted correctly, with the apparent result that money was missing.

In this search, the ‘critical incidents’ were obtained from other sources. Police incidents were obtained by questionnaire, from news reports and through general knowledge.

The following ‘critical incident’ was obtained recently from the Papua New Guinea National newspaper and used recently on the familiarization course attended by the police officers.

“At half-time at the Lae theatre, the patrons were standing outside on the footpath. Suddenly, a police vehicle arrived at great speed. A constable jumped from the vehicle armed with a shotgun.

He aimed the weapon at a young man standing with a group. He fired, killing the young man instantly. The constable had thought that the young man was a criminal, whereas he was a church leader taking a youth group to the movies.”

• What errors did the constable make?
• What should he have done?
• How might the police force act to reduce the possibility of future such incidents?

Such an exercise would form the basis of several activities to be completed by the police cadets.

• Report Writing,
• Decision Making,
• Preparation of a Minute,
• Telephone Procedure,
• Lecturette, and
• Simulated Briefing.

Critical Incidents

The concept of ‘critical incidents’ is not new. Every form investigation involves examination of incidents that have occurred. Every in-
cident becomes ‘critical’ if damage or injury is involved.

Within each Service is a safety team with the mandate to examine incidents and to promulgate advice on safety procedures. After many years of collation, such teams should be able to furnish hundreds of ‘critical incidents’ to cover a wide range of fault points within any given technical system.

The question would arise as to whether or not the safety personnel in each Service should make a practice of providing ‘critical incidents’ for use on appropriate training courses.

‘Critical incidents’ are basic to any given course that involves technical, tactical or administrative systems. For the Royal Australian Air Force, the range of ‘critical incidents’ for a given aircraft would underlie the programmes of an aircraft simulator.

To prepare a course, we would need to establish the systems at the task analysis stage. From study of the working systems, we would establish the scenarios and variables. At the course design and development stages, we would develop the mastery exercises which would be used in the conduct of courses. Such a practical approach would facilitate ease of validation.

The Western Australia Police Training System

The Western Australia Police Training System is basically similar to those of the Australian Defence Force. The main difference lies in the ‘critical incident’ phase.

The process involves reducing what is called a ‘job relatedness analysis report’ and the production of criteria for assessing a given rank/specialization level. In the report on the training of Constables, the procedure is apparent from examination of the table of contents. The following stages are set down:

- Target Population (Constables),
- Definition of Job Dimension,
- Study Design,
- Review of Professional Literature,
- Incumbent Interviews,
- Incumbent Questionnaires,
- Critical Incidents,
- Critical Incident Meetings,
- Critical Incidents — Other Sources,
- Dimension Rating and Ranking Questionnaire, and
- Final Dimensions.

On the basis of this process, the training and operational personnel produce criteria and ‘critical incidents’. When incorporated into a course, these components would be used in conjunction with the objectives and form an integral part of the course package.

The criteria are performance oriented and refer to qualities to be exhibited by the proficient constable. The list of criteria would include the following:

- Integrity,
- Adherence to Authority,
- Attention to Detail,
- Problem Confrontation,
- Vigilance, and
- Perseverance . . . 16 more criteria.

My approach has always been to proceed from the basic skills of Decision-Making. A combination of the two approaches may well provide a more comprehensive framework for the scenarios. Having collated the ‘critical incidents’ according to the criteria above, I would
then recategorize these in terms of the following component skills:

- Establish conclusions from evidence.
- Establish evidence necessary for given conclusions.
- Establish causes of a given situation.
- Establish effects of a given action.
- Establish probability.
- Check and double-check.
- Locate faults.
- Make decisions.

Such an overlay of skills would provide the framework for precise analysis of skills to be applied to any given scenario. Every scenario involves a decision. Every decision maker is capable of error. All errors involve the skills above.

The approach used by the Western Australian Police Curriculum Development Unit would facilitate an accumulation of experience and wisdom. The inexperienced instructor would have at his/her disposal a richness of background. The Defence Force instructor, by contrast, may find limited resources at his/her disposal except what may be found in the course package. Perhaps the Defence Force has lessons to learn from the Western Australian Police Curriculum Unit on how to provide 'critical incidents' that may be applied to the classroom.

Other Courses

There will be courses that require precise definition of scenarios involving 'critical incidents'.

Vehicle Maintenance. Let us select the fuel system as an area of study. Within this system we may define 9 Fault Points at which 'critical incidents' may occur.

Problems may occur at the following Fault Points:

- in the fuel,
- in the tank,
- in the pipe,
- in the fuel filter,
- in the carburettor,
- in the intake manifold,
- in the cylinder, and
- in the associated electrical system.

From each of these Fault Points the training personnel may be able to establish up to 15-20 scenarios to practise the students in the basic skills of Fault Finding which involve causes, effects, conclusions from evidence, checking and double checking.

From the 15-20 scenarios, it should be possible to produce a sequence of up to 40-60 mastery exercises. The students complete these exercises over a set period of time with the support of the instructor and the course is finished. If an engine were available to the instructor for faults to be inserted, then in terms of what has been written above, it would be possible to produce 15-20 scenarios involving 40-60 mastery exercises.

A Management Course. In preparation of the course, a range of criteria/factors may be established as follows:

- planning,
- selecton,
- discipline,
- motivation,
- counselling, and
- security . . . and others.

Within this framework, it may be possible to establish up to 10 scenarios for each criterion. With an overlay of Decision-Making skills it should be possible to produce an extended sequence of mastery exercises to be completed by students.

One problem facing training personnel is the assignment of standards. Such an approach simplifies the task. If 120 exercises are available, the decision may be made that the students will complete 80 to the standard of 100% correct. This means that they keep working until they do. The more capable students may need to complete 87 until they reach the standard. The less capable students may need to attempt 110 exercises before they reach the required standard.

Conclusion

The Training Systems of the Australian Defence Force need to be examined to determine the importance of a 'critical incident' phase that will provide considerable support to the instructors and students.

The Curriculum Development Unit of the Western Australia Police has implemented a strategy that holds promise of improving course design and development together with instructional strategy.

Development of 'critical incidents' requires co-operation of training and operational personnel, including the Safety and Accident Investigation groups.
Recommendations

It is recommended that:
the 'critical incident' phase be introduced formally to the Service Training Systems.

Notes

Major Copeland has worked at the RAAF School of Languages for eight years. During that time, he has conducted courses to prepare Australian Defence Force and Foreign Affairs personnel for posting to Papua New Guinea. He is also involved with the Pidgin Familiarization Courses for Instructors. These courses prepare Australian Defence Force Instructors for the task of training service personnel of Papua New Guinea.

He was involved with preparation of personnel from Indonesia, Malaysia, Singapore, Pakistan and Thailand when the mandate was given to the Army Language School at Kapooka in 1978.

Major Copeland has demonstrated skill in Indonesian, Pidgin and Bislama languages.

Cadre Bulletin

Readers may find the following articles of interest. The journals in which they appear are available at the libraries on most Defence establishments.

The Structure of Industry for Future Defense Procurement. Kiely, D. G. Defense Analysis; Dec 86: 327-331 The key to successful transfer from the Procurement Executive of the UK MoD to the private sector of responsibilities in weapon procurement is the establishment by industry of Ship Weapon Systems Authorities as major subcontractors.

ICBM Indecision. Jacobs, G. Combat Weapons; Winter 87: 62+113p) There is a growing body of intelligence that the Soviet Union is developing and deploying a fifth generation of strategic ICBMs — the SS-25 and the rail-mobile SS-X-24. At the same time the US continues in indecision over the development and deployment of a new system. The major issues being raised regarding the deployment of a small ICBM are high life cycle costs, manning requirements, and land area needed. Mentions the Peacekeeper, and Midgetman mobile small ICBM. Contains photographs.

Held on a Tight Rein: Thailand's Armed Forces are Girded for Battle. Jacobs, G. Armada International; 1/87: 58+(5p) An overview of the Thai Armed Forces which are currently involved in a number of modernization programs designed to upgrade the overall capabilities of the services. The Thai military are also the most politically stable power in the country. Looks at internal and external threats, Army and Naval aviation, budgetary constraints and the domestic arms industry.

Maritime Strategy and the Pacific: the Implications for NATO. Gray, Colin S. Naval War College Review; Winter 87: 8-19 Explores the implications for NATO of US and Soviet manoeuvrings in the Pacific region both near term and far term, in peace and war. Concludes that East Asia (particularly China and Japan) will have the economic strength in Asia; that Japan will drift away from the US orbit, and US influence in the western Pacific will gradually decline to a low level; a Sino — Japanese coalition will oppose USSR hegemony in East Asia; that the US and NATO should stop depending on nuclear threat as a deterrence measure and seek deterrence by conventional means; and that the Soviets should be encouraged to realize that nuclear use would be self defeating.

Successful Naval Strategy in the Pacific: How are We achieving It How Can We Afford It. Lehman, John Naval War College Review; Winter 87: 20-27 The author says no other region in the world has harboured so much economic, military and political upheaval and that today more than ever the security of America is bound up with not only Alliances in Europe but growing relationships in the Pacific area. Discusses the value of the naval facilities in the Philippines, US Naval policy towards the People's Republic of China, and the costs of a successful naval strategy.

Africa: Militarisation or Development? Goncharov, Vladimir International Affairs (Moscow); Feb 87: 89+(8p) African nations have at last become aware of the threat that nuclear warfare poses for them as well as to the rest of the world. The arms race in African countries, aided and abetted by Western imperialism, negatively affects both the economic and political situation in Africa — their foreign debt has greatly increased and moreover to obtain arms, African nations have to make serious political concessions to their Western creditors. Hence the militarisation of developing countries is exacerbating the economic crises.

Technology and Maritime Strategy — Radical Change or External Principle? Ruse, W. F. Journal of the Australian Naval Institute; Feb 87: 13+(6p) Examines the nature of strategy and of technological change as it influences maritime warfare, and then considers Australia's maritime strategy, tactics, and technology, particularly in the light of the Dibb Report. Concludes that Australian maritime strategy is evolutionary in nature — from reliance on the UK and US pre and post war to self reliance from the 1970s onwards.
Space Activities: Peaceful Uses of the International Aerospace Club

By Lyndal Thorburn and Christine Astley-Boden
CSIRO Office of Space Science and Applications (COSSA)

Introduction: The Australian Aerospace Industry

JUST what is meant by aerospace? The aerospace “Club” includes a group of organisations concerned with the design, development and manufacture of parts for or complete units of aircraft, spacecraft, missiles, propulsion and guidance systems, and tracking equipment. (Aerospace Industry Council, 1986’').

The Australian aerospace industry is largely a service industry, concentrated around civil air transport. The repair, maintenance and overhaul of civil aircraft fleets results in 50% of domestic sales; and similar services for military fleets net 16% of total sales (Table 1). (Bureau of Industry Economics, 1986).

The manufacturing arm of the Australian aerospace industry has the potential to become involved in the production of space-related technologies. Over half of its sales arise from domestic or international defence manufacturing (Bureau of Industry Economics, op cit p43). Some examples of this include manufacturing input into the FA/18 Hornet program, manufacture of the Bell 206B-1 helicopters, and electronics for the Lockheed P3C maritime reconnaissance aircraft. Large turnkey defence systems completed in Australia and SE Asia include a national high frequency radio network for the Australian army, and satellite communications for the Department of Defence (Department of Trade, 1985). The cluster of aerospace companies surrounding the Defence Science and Technology Organisation at Salisbury, on the outskirts of Adelaide, is evidence of the close relationship many aerospace companies have with the Australian defence program.

Another significant grouping with potential in relation to space activities are the systems engineering firms. Their capabilities include ground systems, communication facilities, navigational aids, avionics, systems integration and particularly systems software. (Aerospace Industry Council, op cit, Ch 3).

The Role of Government

Australia was one of the early leaders in the space race. In the mid-1960s we were the third nation to launch a satellite from our own soil, and our launch area at Woomera was significant in the world space scene. Since that time, however, Australia has been overtaken by many developed nations, and now rarely rates a mention in international assessments of space capabilities, either military or civilian.

In between the late 1960s (after the closure of Woomera) and the early 1980s, Australia had no formal space policy to speak of. Although Australian involvement in space continued, in remote sensing through the commissioning of the Australian Landsat Station (now called the Australian Centre for Remote Sensing) in the mid-70s; and in communications through the formation of Aussat Pty Ltd in the early 80s, Government policy did not recognise the opportunities that involvement in space-related technologies could provide for Australia.

A few Australian aerospace companies were involved in some space activities, but for the majority it was the military defence programs which provided the bread and butter of their existence. While Australian companies in the aerospace arena were able to survive on defence contracts, there was little need to consider options for growth through access to the non-defence space programs of either Australia or other nations. In the 1980s, however, the future growth and even survival of the industry requires a major shift in emphasis toward civil programs, based on products and services which take account of Australian strengths and interests, and which recognise our potential to develop appropriate technologies of the next century.

In the early 1980s, Australia’s awareness of the role that involvement in civil space programs might play began to change. CSIRO established
COSSA, the CSIRO Office of Space Science and Applications, in late 1984, following a study which recommended among other things that the CSIRO space science and technology program "should be directed toward achieving a high level of participation by Australian industry through a combination of contracting out, joint ventures, and contracting in research and development". (CSIRO Space Science and Technology Study Group, 1984).

Then came the Madigan report, *A Space Policy for Australia*, which also identified an industrial development objective for an Australian space program. The report referred to the space industry's "high quality standards, ability to produce to stringent specifications, the local capability to undertake systems design and manufacture as essential elements of successful industrial competition in the high technology market" (Australian Academy of Technological Sciences, 1985, p46). The Madigan Working Party felt that involvement in space-related technologies would enable Australian industry to achieve the capabilities, confidence and experience which would characterise the developed world's industrial strengths in the 1990s and beyond (AATS, op cit, p25). At the same time as the Madigan Report was being considered by Government, the aerospace industry itself recognised that there were opportunities, but that these lay in specialist areas (Aerospace Industry Council, 1986).

Establishment in 1986 of the Australian Space Board reporting to the Minister for Industry Technology and Commerce, as part of the Government's response to Madigan, signalled increased Government recognition of the benefits of involvement in civil space programs.

Concurrent with the industry policy developments, trade policy also began to show awareness of the value of civil space programs. In 1987 Austrade released a report of the Tripartite Working Group on an Export Development Strategy for the Aerospace Industry. The Working Group was established in 1984 to examine the future development of the aerospace industry, and the difficulties it faced through reliance on Defence contracts for a substantial proportion of its output.

The Tripartite Working Group suggested that Australian aerospace opportunities lie in specialist, or niche, product and service markets and co-production with overseas prime contractors. In the space sector, launch and space vehicles and associated communications, control and ground systems, together with remote sensing and other space-related equipment from such R&D efforts as occurring within CSIRO, are identified as providing export potential. (Austrade, 1987).

The importance of the export market to the future of the entire aerospace industry was further stressed by a Recommendation II of the report, calling for the appointment of a specialist Aerospace Trade Commissioner. A Commissioner has since been appointed, funded jointly by the Association of Australian Aerospace Industries and Austrade. This demonstrates the shared commitment by Government and industry to improving the export effectiveness, and growth, of the aerospace industry. Further support from Government has been demonstrated by the proposed secondment from the Department of Industry, Technology and Commerce of a coordinator. This person will assist the industry association in its formulation of strategy, particularly in relation to exports.

Despite the limited funding available from Government sources, when compared with overseas programs, the development of a civil space program in Australia is already showing benefits for Australian industry.

These benefits are accruing in three major areas:

1. The development of an Australian capability in contributing to the commercial satellite market through AUSSAT;
2. Commercialisation of space-related technology from R&D bodies such as the CSIRO; and
3. Contracts arising directly from Australian participation in international scientific space and space-related programs;

A few examples of this provide a clear indicator of the role that industrial participation in such non-military programs is playing in rejuvenating Australian industry. Our local military dependent companies have the capacity to prosper in this new commercially oriented field.

**AUSSAT: The Australian Communications Satellite System**

The first series of AUSSAT satellites, launched between August 1985 and September 1987, distribute television, voice and computer signals throughout Australia, and have transformed communications across the country.
These first AUSSAT satellites, series A numbers 1, 2 & 3, were all built by the U.S. Hughes Aircraft Company, and Australian content was limited to two areas: the Australian-based company STC manufactured the wiring harness, and AWA designed and manufactured the communications monitoring system for the satellite control facilities. These two contracts, however, were still significant on the Australian scale: the AWA contract was worth US$5.6 million, and the STC contract was valued at US$0.5 million. The latter included other Hughes spacecraft as well as AUSSAT (Bureau of Industry Economics, op cit, p193).

The Request for Tenders for the second series of Aussat satellites, to be launched in 1991 and 1992, was released in September 1987. The tender provides opportunities for Australian industry to be involved in both development and manufacture of space-qualified items. The tender includes requirements for overseas suppliers to place subcontracts with Australian industry, to ensure that the value-added component is at least 8% of the contract pricework in Australia.

A substantial proportion of this must be related to the spacecraft itself, and at the minimum must include work for the Ka band beacon and laser retroreflector, and their ancillary ground equipment. These items are experimental in nature and are not part of the "main" payload for the spacecraft. Subcontracts for other equipment must meet the Government's objectives for development of niche areas, involving development of capabilities in design, manufacture, fabrication or test of space-qualified items. (Aussat Pty Ltd, 1987).

While the prime contractor will be an overseas company, subcontracted work in Australia is expected to be worth in excess of $200 million (including offsets). This may include the ground segment of AUSSAT's L-band mobile service, which will progressively replace current HF radio systems. The opportunity is available for further Australian participation in the ground-based hardware for the mobile service, using state-of-the-art technology developed in Australia.

Two companies, AWA and British Aerospace Australia, have already recognised the potential, and in March 1988 announced they would embark upon a study to determine the feasibility of the L-band mobile system, its market potential, and opportunities for Australian industry (The Corporate Storyteller, 1988).

**Commercialisation of Australian Space-Related Research and Development.**

CSIRO has always stressed close links between R&D and industry. This is exemplified in the commercialisation of CSIRO research, a process whereby a CSIRO "invention" is licensed to a (usually) Australian company for production, marketing and/or further development. (McCracken, 1986).

(a) PCM Electronics Pty Ltd

The PCM Electronics SAT-TRAC System is an example of the successful commercialisation of CSIRO research from the Division of Atmospheric Research. PCM Electronics Pty Ltd is an Australian-owned company based in Melbourne, and is involved in design and manufacture of electrical, electronic and electro-mechanical equipment for government and semi-government areas, particularly defence (Wills, 1987). PCM won the right to develop and market SAT-TRAC which is a ground station for the automated reception and storage of data from the NOAA meteorological satellites. The system has four main subsystems: antenna mount and motor control; RF front end; instrument control rack; and a control computer.

The move for PCM from the defence field into this type of data reception has provided significant opportunities for both expansion of the company's skills, and a move to a new market area. In the latter case, this market, though specialised and somewhat limited, is internationally based. As a result, PCM is investigating similar systems for other satellites, and has succeeded, in conjunction with the Queensland-based MITEC, in selling component systems to a Canadian company that manufactures the ground stations for the SARSAT/COSPAS Search and Rescue satellite system. PCM has also recently won a contract to upgrade the Bureau of Meteorology's equipment to receive "stretched VISSR" digital signals from the Japanese GMS satellite, which provides Australia's daily weather photographs.

In this case, the Australian market has been stimulated at the same time as the technology has been developed, through CSIRO's involvement in the establishment of remote sensing consortia in Western Australia and Queensland.
These consortia have pooled resources, from CSIRO, and from State and Federal government agencies, to enable them to place orders for the SAT-TRAC system from PCM. The West Australian Satellite Technology and Application Consortium (WASTAC), located at Curtin University in Perth, officially commissioned its SAT-TRAC NOAA receiving and processing facility in July 1987.

(b) Austek Microsystems Pty Ltd

The CSIRO Division of Radiophysics has actively pursued the opportunities offered by Very Large Scale Integrated (VLSI) chips. Austek Microsystems Pty Ltd, an Australian semiconductor systems company dedicated to the design and manufacture of VLSI logic products, is collaborating with the Division on the development of two such chips: a Fast Fourier Transform or FFT chip (with Government assistance through GIRD funds), and a correlator chip. The correlator chips are required for the Australia Telescope, an array of telescopes in western NSW, which will be able to operate as a single telescope as large as the distance between the furthest antennas. The Division of Radiophysics is host institution for the Telescope, which is to be officially opened later this year.

The digital correlator for the Telescope is a special purpose computer which carries out the first step of processing required to produce a map of the sky. The correlator must perform over 6000 simultaneous multiplications for each set of signal samples from all antennas. Each chip in the correlator consists of approximately 46,000 transistors on a thin slice of silicon 6.5mm square. Over 3000 such chips are required for the compact array correlation alone. Silicon wafers for the correlator chips were jointly designed by the CSIRO Division of Radiophysics and Austek. The chips were then fabricated in the U.S.A., and packaged and tested by Austek using techniques including wafer sorting, wafer saving, die attaching, wire bonding and sealing (CSIRO Division of Radiophysics, 1986).

The FFT chip in HMOS proof-of-concept form and now being developed in CMOS, was designed by the Division of Radiophysics in conjunction with Austek. It will perform a fast fourier transform process a hundred times faster than when implemented in software on a Digital VAX computer. Such a chip has applications in many fields, including medical diagnosis, telecommunications, audio systems, voice image and signal processing, and most importantly for the present discussion, will enable near real-time processing and handling of data from radar instruments on satellites such as ERS-1, due for launch in the early 1990's. CSIRO and Computer Sciences of Australia have completed a feasibility study of a Synthetic Aperture Radar processor based on the FFT chip (Albrey, 1987), the world market for which would be in the several hundreds and perhaps even thousands range.

(c) Trippett Shedden Pty Ltd

The CSIRO over the recent years has carried out significant research and development into image processing and display of systems for satellite and airborne remote sensing applications. Trippett Shedden Pty Ltd, an aerospace and systems engineering management and marketing company, has taken a joint venture approach with the CSIRO Division of Mathematics and Statistics. This Division has developed a new low cost-image processing system called A-Image, which is designed to run on (initially) Commodore Amiga computer hardware.

As the key to business success in this field in early market entry and support, two marketing entities have been set up. Image Tech Australia and Image Tech International. Nearly 20 systems have been sold even prior to the release of the product, and a joint industry/CSIRO approach to funded ongoing product development is envisaged. Regional joint ventures for introduction of the technology into the Asian/Pacific market have also been established (J. Trippett, personal communication, 1988).

Participation In Experimental Satellite Programs

Experimental satellite programs also provide valuable opportunities for the aerospace industry in achieving "space qualification", and they fill in the peaks and troughs of the more traditional defence contracts. The European Earth Resources Satellite (ERS-1) program provides an excellent example of this.

The ERS-1 satellite, to be launched by the European Space Agency in 1990, will carry a number of sophisticated instruments which will have particular applications for examination of the oceans, the cryosphere and air-sea interactions.
At the time that the UK was seeking Australian collaborative support for its participation and interest in ERS-1, the industrial implications of any involvement were not obvious. After many discussions — between Australian companies, government officials, CSIRO scientists — it became apparent that this invitation to participate was a significant industrial opportunity, arising at least partly because of an Australian scientist’s prior design input to a UK instrument, the Along Track Scanning Radiometer (ATSR), to be flown on ERS-1 (Barton, 1987).

The Department of Industry, Technology and Commerce funded an Australian company to provide electronics subsystems for the UK instrument. The CSIRO contributed financial and scientific resources to the overall instrument program, underpinning this direct industrial involvement. The Department also initiated a feasibility study for reception and processing facilities in Australia in order to position Australian industry to participate in providing such ground sector technologies in years to come (McCracken, 1986).

A number of Australian companies have benefited as a result of this and other scientific projects.

(a) British Aerospace Australia

As a result of the scientific interest expressed in ERS-1, and the recognised value of the data it will collect, the Australian Space Board let a contract to a consortium including British Aerospace Australia, Computer Sciences of Australia and MacDonald Dettwiler for the upgrading of the data acquisition facility and the development of an advanced data processing facility to include a fast delivery processor.

British Aerospace is also providing the digital electronics unit, a flight component used in processing ATSR and Microwave sounder signals. The unit is designed and built to ESA space quality standards.

In addition the company is working with the ANU and the University of Queensland in the application of their shock tunnel facilities in support of a number of hypervelocity space vehicle programs e.g. HOTOL, SANGER, HERMES, AFE. Proposals have been tabled for the development of a Re-entry Air Data System (READS) suitable for use with such vehicles to facilitate the re-entry process.

British Aerospace Australia is also active in the ground segment. It is developing an advanced digital, TDMA, KU band earth station for use with the AUSSAT A and B series of satellites. In addition, a joint venture with AWA has been established to develop transceiver systems for use with the L-Band mobile transponder on AUSSAT-B.

(b) Hawker de Havilland

Hawker de Havilland is Australia’s largest and most diversified aerospace production organisation. The design and manufacturing capabilities of HDH embrace a very wide spectrum of design and analysis as well as manufacturing, process, assembly and test requirements for advanced aerospace projects.

The manufacturing activities include use of advanced materials such as titanium, graphite epoxy composites, very high strength maraging steels and exotic high temperature alloys for gas turbines. HDH’s involvement with space goes back many years to when several hundred personnel were involved in support of the BLUE STREAK and ELDO programmes in the 1960’s. It is developing its expertise in the space sector through seconding experienced engineers to work at major international space organisations such as Hughes Aircraft Company and SPAR Aerospace (Hawker de Havilland, 1987).

Hawker de Havilland was instrumental in forming Auspace (60% ownership) in conjunction with MATRA S.A. of France but sold its shareholding to them in December 1985. Auspace was the lead industrial contractor for the Starlab project, and HDH had major technical involvement at system and sub-system level for structures, mechanisms and thermal design and analysis, including system level product assurance, safety and assembly integration and verification plans.

HDH was also responsible for the design of the Project Endeavour Can-2 support structure for Auspace, including packaging, structural analysis, some thermal analysis, manufacture and acceptance vibration testing. This equipment was manufactured to flight hardware product assurance standards and was completed in March 1987.

In order to co-ordinate its space activities, HDH formed a Space Office under the Technical Director which brings together a group of space experienced personnel covering the fields of technical management, systems engineering, product assurance and space manufacturing. Hawker de Havilland has been closely involved in all recent Australian space projects.
HDH has used its design and manufacturing expertise in a number of significant Australian projects: (i) co-ordination of design integration and packaging of the Aggregation of Red Cells experiment which flew on the NASA Shuttle in January 1985. HDH is currently responsible for technical management, NASA interface, electronic and software modification in preparation for the second flight of the experiment scheduled for August 1988; (ii) in collaboration with a consortium led by the University of Tasmania, HDH completed design studies into their High Energy Detector and the X-Ray MIRRA-BOOKA instrument package to interface with the SPARTAN bus; (iii) HDH is currently pursuing major involvement in space projects ranging from build-to-print offset components for AUSSAT ‘B’ to priming several science and application instrument proposals in collaboration with the CSIRO.

HDH is also involved in data reception studies: it received a small contract to undertake a study into data reception from the ESA Remote Sensing (ERS-1) satellite, and completed a major study for COSSA on satellite data reception in Antarctica (Jeremy, 1987); (ii)

HDH was originator and major participant in a study group formed by the Institution of Engineers, Australia, to study the issues and requirements for establishing an international space launch facility in the Cape York Peninsula. The final report was handed over to the Queensland Premier in February 1987.

HDH also led a consortium of organisations and was the major participant in a study for the Australian Space Board to assess the need, requirements and costs of spacecraft which could service the potential Australian payloads and act as a catalyst for developing the local space industry. This project, called the Australian Science and Applications Spacecraft (ASAS), is in abeyance pending further consideration by the Australian Space Board.

(c) Computer Sciences of Australia (CSA)

The software industry in Australia has been praised for its effective use of personnel and potential for strong links between industry and government programs. However, it too is an area that has been dependent on defence contracts, to the detriment of the potential for development and particularly commercialisation/marketing of Australian design expertise (Aerospace Industry Council (1) op cit).

The involvement of Computer Sciences of Australia (CSA) in space projects is a natural evolution of its long standing involvement in the Australian aerospace industry. Initial space project work came from involvement in the STARLAB project, and has progressed into other tasks associated with ERS-1, the ABC’s use of AUSSAT and the proposed Australian Science and Applications Spacecraft (ASAS). Consequently, CSA’s space related experience already spans to the major areas of satellite communications and remote sensing, and other applications are now being investigated. CSA’s commitment to space projects is driven by commercial interest; technology development; and development of regional links.

CSA has committed significant resources to the development of space business.

In particular:

(i) The Systems Engineering Division has appointed a manager to be responsible for Space Business Development;

(ii) CSA has wholly or partially funded its own involvement in studies such as ERS-1 Phase B, LYMAN, ASAS;

(iii) CSA has undertaken internal studies with a view to developing its expertise in this area;

(iv) In 1986, CSA established an R & D project to investigate spinoffs from its space-related work.

CSA’s predominant interest is in the ground segment, be it for satellite communications, remote sensing or space science. It is, however, increasingly becoming involved in systems requiring high reliability software. This is of obvious interest to the space flight segment.

Work performed to date has covered a wide range of systems and software engineering tasks in the following areas: (i) systems architecture analysis, design, cost estimation and implementation; (ii) systems specification including program performance, interface definition, data processing and other technical aspects for a satellite communications network control system, processors for remote sensing data including data from Synthetic Aperture Radar (SAR), and ground station facilities control; software development for hardware undergoing space qualification; (iv) satellite ground stations for satellite communications networks, space science and remote sensing satellites.
Summary

Military technologies are a traditional driver of the aerospace industry. However, defence contracts exhibit troughs and peaks of profitability for firms, with very few purchasers on the defence market to provide flow on work.

Space Programs are providing a smoothing effect on these business profiles, particularly in Europe and America. They are also extending international linkages between aerospace companies, enhancing understanding and permitting a sharing of technologies around the developed and developing world.

Australia now has the opportunity to build up its space activities and to challenge its aerospace industry with state-of-the-art technical demands. It can then participate in this international aerospace club where the main motivator is technology applications for civilian use, rather than military development.

Australia has the technical competence, and the national characteristic of resourcefulness, to enable it to move its aerospace industry away from a reliance on defence hardware purchase programs, towards membership of the global space club.

References


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CSIRO Division of Radiophysics, AT Countdown, Number 5 January 1986.


Department of Trade, Australian Aerospace, AGPS, 1985.


Table 1

Structure of the aerospace industry, Australia, 1983-84

<table>
<thead>
<tr>
<th>Source of demand</th>
<th>Share of manufacturing sales (%)</th>
<th>Share of services sales (%)</th>
<th>Share of total sales (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic civil</td>
<td>28.4</td>
<td>n.a.</td>
<td>7.9</td>
</tr>
<tr>
<td>Domestic defence</td>
<td>36.6</td>
<td>n.a.</td>
<td>10.2</td>
</tr>
<tr>
<td>Export civil</td>
<td>23.3</td>
<td>n.a.</td>
<td>6.5</td>
</tr>
<tr>
<td>Export defence</td>
<td>11.7</td>
<td>n.a.</td>
<td>3.3</td>
</tr>
<tr>
<td>Total manufacturing</td>
<td>100.0</td>
<td>n.a.</td>
<td>27.9</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic civil</td>
<td>n.a.</td>
<td>68.4</td>
<td>49.3</td>
</tr>
<tr>
<td>Domestic defence</td>
<td>n.a.</td>
<td>21.8</td>
<td>15.8</td>
</tr>
<tr>
<td>Export civil</td>
<td>n.a.</td>
<td>8.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Export defence</td>
<td>n.a.</td>
<td>1.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Total Services</td>
<td>n.a.</td>
<td>100.0</td>
<td>72.1</td>
</tr>
<tr>
<td>Total</td>
<td>n.a.</td>
<td>n.a.</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: BIE Survey of aerospace firms 1985. Based on responses from 58 firms who accounted for 97 per cent of total sales.

n.a.: not applicable.

Impressions from SESKOAD

By Martin O’Hare

General

NINETY-ONE students attended the 1986-87 Indonesian Army Command and Staff College (SESKOAD) course. Of this number eleven were foreign students. The eleven-month course is conducted in the Indonesian language. Students worked six days a week, commencing with PT at 0500 hrs and finishing with compulsory assignments at around 2300 hrs.

Attendance at SESKOAD is a prerequisite for the highest appointments in the Indonesian Army. The primary aim of the course is to produce an officer who understands and accepts willingly Indonesia’s national philosophy and the values of the Armed Forces. The secondary aim is to give students the professional knowledge for staff appointments at brigade level or brigade equivalent in the territorial apparatus.

The Indonesian Students

The students were generally self-confident, enthusiastic, friendly, nationalistic, and good at public speaking. Their average age was 38 years. 60% were Javanese and 80% were Moslem. The students worked very well together and a high esprit de corps was maintained throughout the course. They were well motivated and worked long hours without complaint. The students generally believed that Indonesia would collapse without the continued guidance of the Indonesian Armed Forces (ABRI).

The Course

Much of the syllabus concerned ideological, political and territorial matters. About a third of the course material involved purely military subjects. A great deal of the course syllabus centred around the Army’s role in Indonesian society as both a ‘stabilising’ force and a ‘dynamic’ force. As a stabiliser, ABRI is tasked with guaranteeing the security and unity of Indonesia. This is the framework in which development can occur. As a dynamic force, ABRI is tasked with motivating the populace to achieve development goals.

In exercise scenarios, the main threats to Indonesian unity and stability came from within Indonesia. Communism, fundamental Islam and to a lesser extent, liberalism, were seen as the main internal threats. The external military threat was China. The usual scenario for map exercises involved extreme left and right-wing groups fomenting internal instability, followed by an invasion from the north. ABRI would fight a series of delaying defensive operations against an enemy superior in manpower and equipment. In the face of conventional defeat, ABRI and the Indonesian people would fight a guerilla war and never surrender. In theory, the enemy would be worn down in a protracted guerilla war and finally defeated in a conventional counter-offensive.

The students’ role in these exercises was to produce the various staff appreciations leading to the formulations of an operation order. In this planning process, considerable weight was given to ideological, political, economic, social and cultural matters.

Apart from major staff papers, there was little assessment of individual work. After lectures to the student body, problems were usually solved in sub-syndicates of three to four students or as a syndicate of 10 students. All subjects were discussed from a general, theoretical viewpoint by both staff and students. There was a marked tendency to stress abstract concepts rather than concrete examples. There was also a tendency to regard a difference of opinion as a criticism. Because of the reluctance to criticise and the practice of solving problems in a group, problems and solutions varied little from previous years. The needs of the group were regarded as of far greater importance than the needs of the individual. Individual eccentricities were not tolerated. Individual flair met with disapproval. Having the correct attitude was a greater importance than academic achievement or professional ability. Decision-making at SESKOAD was concentrated at the highest level and staff in key appointments appeared not to have the authority to act in seem-
ingly routine matters. For all these reasons, initiative, critical thought and new ideas were indirectly discouraged.

The environment and education system at SESKOAD mirror Indonesian society and the Indonesian education system in general. Individuality and liberalism are foreign, western concepts. Indonesians have their own unique values. Such values have enabled Indonesia to achieve 'unity in diversity' in a remarkably short period of time. Nevertheless, some of these values will tend to reduce ABRI's effectiveness in assisting Indonesia to achieve its development goals. SESKOAD students were well prepared to act as 'Stabilisers', but not as well prepared for their role as 'dynamisers' in Indonesian society.

The staff and students made the foreign students very welcome. They went to considerable lengths to involve the foreign wives and families in various social and cultural activities role. They had weekly activities such as sport and lectures, and attended a compulsory two-weeks course at SESKOAD. The wives wore uniforms on these occasions.

**Attitude Towards Australia**

About 10% of the students had undertaken short-term courses in Australia. Those who had visited Australia were favourably disposed towards Australia. Those students who had not travelled overseas tended to think of Australia in terms of broad comparisons between Indonesia and western countries. For example:

- Indonesia is a developing country; Australia is a developed country.
- Indonesia is a democracy; Australia has a liberal system of government.
- Indonesia emphasises national interests; Australia is concerned with individual rights.
- Indonesia's press is free and responsible; Australia's press is free and irresponsible.

The tension between Australia and Indonesia that arose from the David Jenkins article critical of the financial dealings of the President and his family was rarely raised by students or staff, mainly because of their innate politeness. However, it is difficult for Indonesians to understand that the media can be free of government control. There was thus some feeling that Australian press articles critical of Indonesia were a deliberate attempt by the Australian Government to meddle in Indonesia's internal affairs. Those students who had visited Australia or other western countries however, could not understand what the fuss was all about. On the matter of Indonesia representing a military threat to Australia, the preamble to the Indonesian Constitution was offered as proof that Indonesia could never invade another country. The Preamble states, *inter alia*, that 'independence is the right of all nations', that 'colonial domination must be wiped out' and that Indonesia will 'take part in trying to achieve a world order based on independence and eternal peace'. Despite these matters, most of the students were pro-Australian. Radio Australia was popular, and the Australian television serial *Return to Eden* had a large following.

**Conclusion**

The SESKOAD course offers the Australian student a unique insight into the mindset of the Indonesian Armed Forces. The value of the course needs to be measured in terms of improving mutual understanding rather than in terms of the level of professional military knowledge gained from the course. The impressions of a future generation of Indonesian leaders about Australia will be influenced considerably by the Australian student and his family.

**NOTES**

1. 23 Australian students have attended SESKOAD since 1964.
2. This includes the five basic principles of the Republic of Indonesia (Pancasila), the Seven Pledges given by military personnel (Saptamarga), the Soldier's Oath (Sumpah Prajurit), and the values of the 1945 generation of freedom-fighters.
3. Military sub-area command (KOREM) level. Indonesia is divided into 10 military area commands. This is the territorial apparatus. These commands are tasked with the development of operational readiness, territorial development, and security and defence operations as required. The bulk of the Army is allocated to these commands.
4. The main other ethnic groups were Sundanese and Misingkabau (both 6.25%), and Batak (5%). 17.5% of the Indonesian students were Christian.
5. ABRI's role is closely linked to Indonesia's threat perceptions and the achievement of national development goals. ABRI is both a military force and a social-political force in Indonesian society.
6. Indonesia does not see an external threat arising within the next decade. In the longer term, Indonesia considers external threats could develop from China, Japan or the Soviet Union. (Jusuf Wanandi, *Kompas*, 5 October 1986, p.1.)
7. These matters were presented by a panel of foreign students in April 1987 at a joint staff college seminar entitled ‘Army Leadership in the Implementation of ABRI’s Function as a Social Force’. The presentation was well received.

8. Some were disappointed with the small number of group social activities organised for them.

9. The Preamble to the Constitution can be recited by many Indonesians and the Constitution is held in great respect.

Martin O’Hare is currently studying at the Strategic and Defence Studies Centre, Australian National University. He has previously contributed to the DFJ.

The destroyer escort HMAS STUART seen in Cockburn Sound, Western Australia.
Causes of War and Peace

The Blamey Oration — Victoria — 1987
Delivered by Professor Geoffrey Blainey, AO,
Professor of History, Dean of Faculty of
Arts, University of Melbourne at the U.S.I.
of Victoria.

AFTER paying tribute to Field Marshal Sir Thomas Blamey, Professor Blainey said:

Late in 1941, shortly before Pearl Harbor, General Blamey returned briefly to Australia from the battlefields of the Middle East and, after watching Australians at work and play, observed that they were like gazelles grazing on the edge of a dangerous jungle. They were in danger but did not know it. Much of Blamey’s effort in 1942, as Commander-in-Chief of the Australian Army, was devoted to trying to remedy the military weaknesses in an endangered nation. This phase of our history should be remembered, because it could well be repeated.

A nation, in order to defend itself, needs able leadership, adequate forces, and the best equipment. It also needs, especially if it is a democracy, a sense of national cohesion, patriotism in the great majority of its citizens, and a public understanding of the perils which can occasionally face a nation. Strong armed forces in themselves are not enough. Public opinion and morale are equally vital. I wish to speak about these mental components of national security, partly because they are rarely discussed in Australia and indeed are no longer seen as vital in certain influential circles.

Many adult Australians show an innocence towards any potential threat from the outside world. They are so happy-go-lucky towards the future that they place their own future in jeopardy. The main political parties, through several of their major policies, positively proclaim their naivety. Similarly most of the younger Australian intellectuals probably find it inconceivable that in their lifetime the country will be in peril. My own view is that at some time in the next fifty years Australia — unless it becomes far more alert — could be conquered, or humiliated militarily. On the basis of existing trends I would be inclined to place the risk of military defeat or disaster at one in four or even two in four. I say this on the basis of existing trends, but the trends could be altered.

Australia is made vulnerable partly by its geography. Possessing a mass of land, a great resource-bowl of minerals and foods and fibres, and a high though declining standard of living, it lies in a part of the world where the more populous nations possess relatively little land and natural resources. Thus Indonesia has about ten times as many people as Australia, occupying islands which together are only a fraction of the size of Australia. Moreover Irian Jaya and Timor are only a short distance from our coast.

I am not suggesting that population pressures — whether in Indonesia, Vietnam, India, China or Japan — will inevitably lead to the conquest of meagrely-defended lands lying nearby. Overpopulation theories, when invoked as the main cause of war, rarely stand up to historical tests. Nor am I pointing specifically to Indonesia.

Australia can also be converted into a target for international crusades simply because it is a predominantly white nation far from Europe, because its early settlers disposessed most of the Aboriginals, and because it occupies vast areas of land which it cannot populate. It will not matter that most of Australia’s interior is dry or desert. The desert will be no excuse if a self-righteous international crusade like that led by the United Nations against Israel or by the British Commonwealth against South Africa is eventually mounted against Australia. You may rightly say that a moral crusade against South Africa has more justification than one directed against Australia. Today, however, ‘race’ is such a flexible, and often such a hypocritical, concept that it can be used as an automatic weapon against a variety of enemies. Many nations which clamour to overthrow white rule in South Africa are themselves the exemplars of “racism” or “tribalism” within their own territories.

While Australia does not sit in one of the most hazardous positions in the world, it certainly does not occupy one of the safest. To retain its land, Australia must be able to defend it. I can think of no nation which in the last
two centuries, was unable to defend itself adequately but managed to retain possession of a large resource bowl lying within a region of want. The Aboriginals in 1788 had owned a large resource bowl but, peopling it sparsely, were unable to defend it. Ironically, today there is intense interest in the unfortunate fate of the Aboriginals, but little thought is given to the fact that modern Australia could conceivably re-enact that story of bewildered retreat and defeat.

The first commandment of national sovereignty, indeed of national policy, should be an ability to defend one’s own territory and independence. Amongst politicians in Australia today, that is almost certainly not the first commandment. Indeed many career politicians have not even heard of that Commandment, such as the air of complacency.

National alertness and apprehension rise and fall, and it may be that at present Australia relaxes in a temporary mood of security or inertia. There was more fear in the twenty years 1945-65 than in the subsequent two decades. Perhaps the fear during the earlier period was overstated or was simply not realized, and so a form of complacency set in as a reaction. In no sense should our complacency be seen as unalterable. The danger is that it might be altered too late.

Back in 1942, when the Japanese advanced swiftly across the Indonesian archipelago and reached Timor and New Guinea, threatening to cut off Australia, there was intense alarm. The generation which felt that alarm, however, is now a visibly-ageing minority and less influential in national life. The media too is largely the voice of a younger generation for whom Vietnam is Australia’s best known war. To them Vietnam is seen as an unnecessary and futile war. Whereas the Australian generation who saw the Fall of Singapore saw defence as a matter of urgency, those who, a generation later, saw the Fall of Saigon tend to see defence as a delusion: a game for politicians and generals.

Isolationism is now a strong Australian strand of thinking. Perhaps it should be called less a way of thinking than a way of dreaming. The isolationists believe that Australia can cut itself off from the world and, in the event of conflict, raise the white flag of peace and gain instant immunity. While isolationism is stronger in New Zealand, perhaps because that nation is more isolated, the Australian version of isolationism is widespread. Many of or isolationists hold the delusion that during a war their nation can safely remain neutral by an act of deliberate choice. But the history of Sweden, Switzerland and other European nations which were neutral during a major war, offers a sharp, unnoticed lesson. A nation can remain neutral only if its enemies allow it to remain neutral. Australia should already know that simple lesson. After all, Portugal proclaimed its neutrality during the Second World War but that did not prevent Australia from ignoring the white flag on Portuguese territories and invading Portuguese Timor in order to prevent a Japanese occupation.

The present policy of multiculturalism is another sign of wishful thinking about national security. If that word of many meanings simply suggested that we should be as tolerant as possible towards other peoples’ cultures, religions and languages within Australia, it would be a worthwhile concept. But multiculturalism, as pursued by the Federal and most State Governments, is an invitation to national disunity. Neither the Labor nor Liberal parties at the last election positively stressed loyalty to Australia above loyalties to old homelands. Indeed Canberra now pursues a ghetto policy, using subsidies to encourage groups of migrants to retain a separate cultural and political existence. When it was suggested recently that the Federal Government should make a simple statement setting out those issues where loyalty to Australia must take precedence over loyalty to a migrant’s homeland, a Greek newspaper in Melbourne denounced the idea as outrageous and “racist”.

If Australia were to face an outside threat, multiculturalism in its present form would be abandoned overnight. Meanwhile there might be an exodus of migrants who carry two passports, and that in itself would be a blow to the nation’s morale.

The disunity which multiculturalism is encouraging could make Australia very difficult to defend. But I can recall no Federal politician who has been bold enough to say in public: “Is this policy consistent with long-term national security?” Nor can I recall hearing any ethnic leaders actually advocate for their own homeland this divisive policy which they helped to foist on Australia.

Today, Australia’s hold on its own territory is also weakened by an entwined set of dubious beliefs held not only on the left. Amongst those
beliefs are the view that neutrality and isolationism are practicable policies for Australia; the conviction that Australia has no moral right to an independent existence because it captured territory from Aboriginals; and the conviction that the next war should be neither joined in nor encouraged because it is likely to be a nuclear war.

These four intertwined beliefs are held widely by the young and those who teach them. That they are widely held by the young does not necessarily mean that they will be the prevailing views of the future. Fashions change in ideas. New events and circumstances can suddenly apply a blowtorch to accepted ideas. Meanwhile it is probable that several million adult Australians see defence as immoral or largely futile and a waste of money.

An opposite school of thought believes, on the basis of very different assumptions, that the nation is fairly secure. The Labor, Liberal and National Parties rely on American support in a crisis, and believe they can rely on that support because America operates vital communications bases in outback Australia. They believe — and rightly so — that if the Soviet Union endangers Australia, America is almost certain to support Australia. American support, however, might be less certain and might even be hesitant if Australia or its trade routes are attacked not by Russia but by an ally or halfally of the United States. Moreover, an alliance — like bank credit — is reliable only if it can be relied upon in the month of need. Australia could be in great trouble if it received no support or only slow and hesitant support from the United States in the crucial month.

Our entire history in the twentieth century has been one of close military dependence. When Japan launched its attack on the European colonies and on Pearl Harbor in December 1941, Australia relied heavily on Britain as an ally. Britain, however, was over-extended and could provide little help. Australia is now forgetting that lesson. At the same time the USA quickly became an ally, thus initiating a new era of dependence. But there could come a time when Australia faces a military threat but finds that the USA is over-extended or impeded by isolationist opinion at home.

The survival of a small or middle-ranking nation depends much on how the dice of war happens to fall. Australia might well survive in the next half century. But if the dice falls un­luckily, when Australia is divided mentally and is not prepared militarily, it could go the way of Czechoslovakia, Poland, South Vietnam and many other nations. As such a possibility is not mentioned in the Australian media or in parliamentary debates, its likelihood is increased. The national crises which are not foreseen become treble crises. The shock and the erroneous responses to the shock compound the danger.

In the media the common response to a suggestion that Australia might one day be threatened or attacked is: “But which nation would conceivably attack us?” If the commentators cannot name or refuse to name a possible aggressor, their warning tends to be largely dismissed. Such a dialogue is yet another sign of our lack of maturity and experience as an independent nation.

Indeed, there are valid reasons for not specifying the probable source of the threat. Firstly, it is often self-defeating and antagonistic to suggest the likely source of threat. Secondly, many wars are difficult to predict even five years before they occur, and therefore it is unwise to argue that there will be no war simply because a specific war is not visible on the horizon: surprise is one of the crucial ingredients of warfare and so warlike plans and options are often concealed. Thirdly, there is an innocent belief in Australia that a war on our soil will only be thrust upon us and will never be instigated by Australian actions. In fact, our own policies might unintentionally precipitate a war or increase the likelihood of its coming. Thus Australia, by warning an outside power not to interfere in say Fiji or Papua New Guinea, and by placing Australian forces on standby, might quickly find that it is riding an escalator of events which lead quickly to military attacks on Australian shipping, bases or towns.

I am not speaking about a military crisis which is bound to happen but rather a possibility. If it happens, it will be all the more devastating because it comes as a surprise. To be alert to the danger will lessen the danger. In Australia, however, it is almost sacrilege to point to national hazards because so many national policies are based on dreamy views of the world and on an utter ignorance of the price of national independence.
AUSTRALIAN DEFENCE HERITAGE. Text by: Frank Doak. Illustrations by: Jeff Isaacs. Published by: The Fairfax Library — Price $25.95 (includes postage)

Reviewed by: John Buckley, OBE

I have reviewed over 150 military and Defence history books in the past 6 years. None has given me more pleasure and interest than Australian Defence Heritage.

The narrative written by Frank Doak is excellent. It indicates the terrific amount of research involved in putting together all the interesting stories about the historical defence buildings and establishments. Frank is a talented writer.

The illustrations, many in colour, depict the beauty of the old forts and buildings. Jeff Isaacs is a gifted artist. In particular the water colour sketches of Victoria Barracks, Paddington and Melbourne; the glorious sketch of “Fortuna”, Bendigo; and Fort Queenscliff can only be described as first class. The book reminds us that the Services have been the most dedicated conservationists in Australia, since the first settlement. Just look at the Defence waterfront in Sydney from the Heads through North Head, Middle Head, Georges Heights on the northside and South Head. Likewise, look at Queenscliff and Portsea in Victoria — in fact look at any of the many service establishments in Australia — all have been well looked after and safeguarded by proud servicemen. Conservation at its best!

With the demand by some hungry State Governments for transfer of this heritage for their own use, I hesitate to imagine what it will look like in the future.

“Fortuna”, the Lansell home in Bendigo illustrates what the Army can do to convert a historical derelict mansion (about to be demolished in 1942) into a masterpiece of tasteful restoration. In 1942, the Army Survey Corps were searching central Victoria for a site to do their large map production program. They saw “Fortuna” and decided it was the ideal place. They were amazed to find out that the then Chief of the General Staff, Lieut General Vernon Sturdee had played with the Lansell children at “Fortuna” about the turn of the century. Sturdee hastily approved the acquisition and gave firm orders to the first C.O. that the place had to be restored to its former glory and kept that way. It has remained so to this day — a great credit to the Army — it should be called Sturdee Barracks.

Victoria Barracks, Sydney and the many Army establishments in N.S.W. display the great interest and drive of the late General Sir Frank Berryman, when he was GOC Eastern Command in the post World War 11 years. He even converted the Army Detention Barracks at Holdsworthy into a Nursery, where the prisoners were required to grow thousands of trees for N.S.W. establishments. I know 600 were planted in Victoria Barracks in 1947, because as Chairman of the Grounds Improvement Committee, I was directed to arrange the planting forthwith by the General.

Sir Frank (nicknamed Frank the Florist) was only one of the many Generals who insisted on the establishments being cared for posterity. The Army leaders were the first of the conservationists and they started 200 years ago.

Victoria Barracks, Melbourne is described as the birthplace of National Defence and so it is! Frank Doak tells us why.

The Barracks has been a special part of my life. I first served there in December 1938. In 1949 I went there as an Assistant Secretary in the Department of Defence and after the move of the Headquarters to Canberra in 1958 I became the senior civilian officer (First Assistant Secretary) until I retired in 1973. (24 years continuous service there).

Like most of the people of Melbourne, I believe Victoria Barracks has a special place in Victorian and National history. It would be dreadful if it was disposed of as has been done, or about to be done with some other installations.

I could write pages of commendation of the work done by Doak and Isaacs. Hopefully a further volume will be prepared as there is still plenty to write about on the Australian Defence Heritage.
I hope all the “Greenies”, “Conservationists and Governments” read this book — they have much to learn about the protection of our heritage by the Armed Forces. Likewise the general public having read the book may raise their voices in protest about any proposed plunder by State Governments of our priceless historical buildings and facilities.

My congratulations to the Minister and Department of Defence for producing this outstanding record of the Australian Defence Heritage. Please hasten with the second volume.


Reviewed by Dr Frank Pederick

The genesis of a technological explosion 50 years ago which continues to affect our lives today is the subject of this book. The future industrial well-being of Australia is in part dependent upon technical innovation. Bowen provides lessons for innovative managers, especially those concerned with defence issues.

Dr Bowen is uniquely qualified to tell the story of radar. He developed an obsessive interest in radio as a child and after completing his PhD under Professor Appleton, a pioneer of ionospheric research, Bowen joined Sir Robert Watson Watt’s radar development team in 1935 at the age of twenty-four. In 1946 Dr Bowen became chief of the Division of Radiophysics, CSIRO, responsible for the development of the Australian DME (distance measuring equipment) and the Parkes radio telescope. He later chaired the organisations responsible for the Anglo-Australian telescope.

Undoubtedly radar would not have been developed so quickly and as effectively in Great Britain without the genius of Sir Henry Tizard, who in 1934 foresaw in detail the problems of air defence in a forthcoming war with Germany. Tizard put his considerable powers to the task of devising solutions. Watson Watt was the key figure controlling the initial developments in England, but Bowen sets the whole process in context, discussing earlier observations, research and development. He recalls the work of A. F. Wilkins, who conducted trials proving that reflected radio waves from aircraft could be detected. Wilkins went on to control all aspects of the construction of the first Home Chain stations which became the heart of the RAF’s air defence system.

Responsible for site selection, Wilkins was instructed by Air Ministry not to locate stations where they might interfere with grouse shooting. Someone had his priorities right! Bowen himself took up Tizard’s challenge to develop radar for night-fighters. In the process of achieving this Bowen became the father of all airborne radar systems. He air tested all of the early prototype systems. Many of the developments for aircraft interception were applied to the detection of ships and submarines. The same basic systems developed for aircraft were adapted for ships and ashore for gunnery control and navigation. Not all of the bright ideas came from scientists. Sqn Ldr Lugg suggested the installation of a modified IFF transceiver in control towers to act as a radar beacon. This provided the crews of radar equipped aircraft with continuous accurate range and bearing information in all weathers. Sqn Ldr Leigh conceived the use of a high powered light by aircraft to illuminate surfaced submarines in the final phases of a radar guided attack.

The core of the story concerns the resonant cavity magnetron which made efficient high powered centimetric wave generation and hence highly directional antennas practical. This advance gave greater target discrimination and enabled map-like representation of terrain and targets. The magnetron was the most important single item taken to the USA by the Tizard Mission in September 1940. Dr Bowen was the radar specialist in the seven member team. Tizard had made the suggestion early in 1940 that Britain should disclose her secrets to the USA in return for help on technical and production tasks. The exchange came about through the intervention of Churchill. Thus a magnetron with production specifications was delivered to US scientists and engineers only seven months after the first laboratory trials and barely weeks after the first delivery of production models in England. The Tizard Mission probably did more to improve British-US relations than any single event before or since. It provided impetus to US defence preparations. The infusion of operational experience and relevant technical information provided solutions to many problems encountered in US defence projects in that era. Bowen not only took a major role in the success
of the Mission, he stayed on for three years at the Radiation Laboratory formed at the Massachusetts Institute of Technology to implement the development of all forms of radar for the US services.

Much of the interest in the book derives from the development of solutions to particular operational and technical problems using a combination of scientific concepts, the experience and expertise of individuals and firms by making use of existing components and equipment or by the development of new items. Dr Bowen's very personal account should be of interest to all concerned with management of defence projects and the operational use of radar today. For the specialists there are fascinating insights into the factors constraining the design and construction of early radar equipment. Much of this information has been forgotten or shrouded by security restrictions. The last book of Dr Bowen's that I read was his "Textbook of Radar". Some 35 years later I now realise why it was so clearly and authoritatively written.

FLANDERS, THEN AND NOW — THE YPRES SALIENT AND PASSCHENEALE.

Reviewed by Colonel John Buckley, RL

For centuries Flanders has suffered bloody war, but none more inhuman and devastating than the four tragic years of 1914-1918 when so much of the carnage and horrendous destruction of human life was at its peak. Gas was used for the first time.

This book tells the story in a picturesque narrative and excellent photographs of the destruction during the fighting around the ancient city of Ypres. Contemporary photographs juxtaposed with those taken during the war show how the rehabilitation of this famous landscape has been achieved.

My first journey to Europe during World War II started in early October 1944, when we landed with engine trouble at Ypres. I had time to get transport to visit many of the places made famous by the battles of World War I. My unforgettable memories will always be coloured by the huge and numerous war cemeteries of the British Commonwealth countries in Flanders. That night, I joined 21 Army Group in Brussels.

Several of my favourite boyhood poems are included in the book. Rupert Brookes' "The Soldier" — "If I should die, think only this of me:

That there's some corner of a foreign field
That is for ever England...

Also, John McCrae's "In Flanders Fields"

"In Flanders fields the poppies blow
Between the crosses, row on row,
That mark our place;...
We are the dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved; and now we lie
In Flanders fields;...

... We shall not sleep, though poppies grow
In Flanders fields."

The stories surrounding the great battles fought in Flanders are well illustrated by excellent pen pictures and well selected photographs.

Some included are the following: Gheluvelt, Menin, Hooge, St. Jean, St. Julien, Zillebeke, Hill 60, Poperinge, Messines, Kemmel, Zonnebeke, Polygon Wood, Passchendaele, Lys (Fourth Battles of Ypres) and others.

Losses in the Fourth Battle for Ypres were staggering — nearly 240,000 British casualties in six weeks, whilst the Germans lost over 348,000. Fourth Ypres ended without Ludendorff achieving his planned objective of a final thrust through Flanders against the British. Before his plans could be put into effect, Foch struck back and the Germans slowly gave way during what was known as the Second Battle of the Marne. Then, on the 8th August (the black day of the German Army) Haig commenced the operations which paved the way to final victory.

This is a very easy book to read — I have no criticism of the narrative, the photographs or the quality of the publication. They all blend in to produce a first class book. The foreword is written by the late Lieutenant-General Sir John Glubb, who many members of the A.I.F. will remember was Commander of the Arab Legion during the Syrian Campaign in 1941.

I strongly recommend this book.
CHURCHILL TANK Vehicle History and Specifications by The Tank Museum. Published by Her Majesty’s Stationery Office first published 1983 140 Pages Cost $20.00

CROMWELL TANK Vehicle History and Specifications By The Tank Museum. Published by Her Majesty’s Stationery Office First Published 1983. 95 Pages. Cost $20.00

Reviewed by Lieutenant D.A. Biglands, Royal Australian Electrical and Mechanical Engineers

The evolution of the tank from a heavy armoured infantry support vehicle to a fast aggressive cavalry vehicle is well depicted by British Tank development from 1939 to 1943. Both the Churchill Tank and the Cromwell Tank vehicle histories explain in detail the variation of a standard tank to meet the requirements of the fast developing methods of warfare, and how they combatted the problems of time and limited resources of the period.

The Churchill Tank was introduced due to the requirement to produce a large, heavily armed, heavy armour tank to support slow moving infantry. By comparison, the Cromwell was introduced to provide a fast, mobile, medium armoured tank capable of quick penetration of enemy weak points; more like the action of cavalry. In the British Army it is the Cromwell that first utilized armour and firepower as an aggressive fighting element.

The UK Tank Museum has described the evolution of the Churchill Tank, with its variety of armament modified to meet the changing use of the tank and the economic situation of the time. The continuous work to provide a tank capable of producing an acceptable range and weight of fire and adequate defence resulted in seven variations to the first production tank, none of which exceeded a top speed of 18 miles per hour. 3500 Churchill Tanks were produced from May 1941 to July 1942. The armament varied from the original two pound gun mounted in a caster turret to a six pound gun initially mounted in a welded turret and finally a casted turret, due to the unavailability of the metal used for the welded turrets. The Churchill was phased out in 1942 because it was no longer capable of being developed to meet the technical advances of its German equivalent.

The history of the Cromwell Tank describes the modifications made to the tank and explores the background behind such modifications. The Cromwell Tank was developed in conjunction with the recently developed Christie suspension system and was coupled with a Meteor (Rolls Royce/Leyland) V12 engine which provided speeds of up to 40 miles per hour. At this stage the six pounder gun range was inadequate and a 75 mm gun was used for the current main armament, replaced with a 95 mm gun in later models. The first production of the Cromwell was in 1942, the first of the fast, mobile, medium armour tanks.

Both books are divided into two distinct elements, the history of the tank and the specifications of the tank. The history element is written in such a manner that it would be of interest to both an historian and also someone with a general interest in war machines of the past.

The two books read in conjunction illustrate some of the fundamental causes of change, such as changing doctrine or unavailability of materials and improvements in technology. The reasoning behind the requirement for a heavy battle tank and the changes in warfare which resulted in the evolution of a more mobile armoured vehicle are clearly explained, and include a mix of such areas as politics, production deadlines and the requirement to produce an unconventional tank to meet the German Panzers on equal terms.

The specifications section is identical to a technical manual combined with an operators guide. The detail of the documents is of a high standard and would provide a tradesman with adequate information to repair or restore either of the two tanks. The Tank Museum has included photographs from the museum tanks to provide greater definition for the reader. The specifications would only interest museums, collectors or those with a deep technical interest. However they also provide a basis for comparison of the development of such components such as drive trains, vehicle suspensions and armament; all of which advanced greatly in the armour vehicles of the period and may prove interesting to vehicle designers.

The overall standard of the publications and of the technical data, enhanced by Tank Museum photographs, when combined with the brief but accurate tank history is enough to provide a tank enthusiast with a better understanding of both the why and how of tank production at the early stages of its development during WW II.
Defence Force Journal

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

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