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Members of A Company 17th Battalion Royal New South Wales Regiment patrolling on exercise "Open Plains". The exercise conducted in the Singleton/Goulburn Valley area of N.S.W. formed part of the RNSWR Annual Camp held in February and March 1978.
This issue has demonstrated the need for more space in the Defence Force Journal. A most satisfactory number of letters has tended to push an unusual quantity of book reviews out of the back of the Journal. In addition, some letters, admittedly received as this issue was being made up, will have to wait for the next issue, two long months away. These include a reply by Lieutenant R. M. Smith to criticism of his article by Major Avery in this issue. I can only apologise to him, his fellow letter writers, authors, book reviewers and publishers, and ask them to bear with me.

On the question of deadlines, and this applies particularly to letters—the issue is sent to the printer in the last week of the first month of the preceding issue. In other words, this issue (May/June) was sent at the end of March in a pasted-up form. The printer will rush galley proofs (the column-wide strips of print from which the paste-up is made) within a week or two if he is asked, but space for a short letter or book review can be judged by counting the words in the manuscript should this become necessary.

Articles are a different matter. Usually they require artwork (heading and graphs etc.) and may have photographs to be made into blocks. This process, naturally, takes longer, and I must have the galley and, where possible, the blocks at paste-up time. There is, in addition, the problem of balance of content, length, and other design factors which may put one article above another in order of precedence. Historical articles, unless commemorating an anniversary, suffer particularly in this respect, since articles on current problems may have to appear as soon as possible or lose their currency.

A member of the AIF, Captain M. T. Lewis, wrote from Eastwood, NSW, “One of the functions of the Journal must surely be, through its readers, to influence public opinion towards an awareness of our defence needs, and an acceptance of their costs.” I agree with him. I would like to see a wider dissemination of the Journal. This can only be achieved by making certain that every copy is seen by as many people as possible and does not languish in stores depots, book cases, on desks or in waste paper baskets. The Journal is produced at public expense, and it is up to us all to see that the public, and that includes us, gets its money’s worth.

We have received back an encouraging amount of comment on the questionnaire, which was sent to most service establishments. It is obvious from some answers that people do not understand the role of each of the service journals and newspapers, together with outside journals such as that of the Australian Naval Institute. There is bound to be some overlap, but I think that you would find that it is less than you might expect. More of that and a detailed analysis of the questionnaire in a later issue.
RAN AMPHIBIOUS BATTALION

I HAVE read with a certain degree of amazement the article ‘The Formation of an RAN Amphibious Battalion’ by Lieutenant R. M. Smith (DFJ No 8, Jan/Feb 78). I have no disagreement with the author on the principle of employment of a ready-reaction type force base on RAN transported military units. Whether these be Army, RAN or an Australian Marine Corps is merely an organizational matter of importance only to the pedant. What worries me is that the author has displayed a very poor understanding of the land battle before undertaking a paper of this nature, and he has also included some questionable premises on Australia’s strategic realities.

Perhaps the author, to give him some credit, wrote with his tongue in his cheek at times, but his paper does have many errors of fact and some doubtful conclusions. As an article to provoke professional discussion and comment, it should serve as an admirable vehicle.

Strategic Implications

Probably the first question that must be asked after reading this article is ‘What is the threat?’ If the task is to secure a vulnerable installation against small scale raids, or restore control in the case of minor insurrection (Norfolk Island secedes — Courier Mail, 13 May 1987), then his marine battalion may cope with the mission. But if the threat is from overt landings in force by an external power, then we are sending a boy on a man’s errand. The survivability of the force is low; its ability to perform any task requiring combat power is negligible.

Strategic Mobility

Assuming that a sudden landing on Australia’s unprotected northern coastline took place, depending on the exact location, it could take up to seven days for a unit stationed in Sydney to embark, steam to the area of operations and then disembark. Regardless of the

Training and Manning

Like many people (and including quite a few Army officers) the author is under the misapprehension that the Australian citizen is automatically the epitome of fighting skill as soon as he dons a uniform. It takes many years to acquire the professionalism to command at unit or sub-unit level. Where is a Seaman Branch officer going to acquire the fifteen or so years experience of the professional infantry officer needed to command such a force? The author mentions the difficulties the Navy has with the current training of Naval Landing Parties, and yet he proposes stationing the battalion at HMAS Penguin. Where is the unit going to acquire and maintain its fighting skill? Granted the battalion would need to be available to embark quickly, but does it need to be so close to the ship? Why not thirty kilometres away?

Manpower Considerations

The author concedes that a marine unit would probably be formed from existing units but this would mean reducing available man-power elsewhere. Given the maximum ceiling of our defence forces (approx. 70,000) I do not believe that one can afford to have 400 men tied up in a unit of such limited use. The scenario for this unit’s employment is so limited in fact, its creation would not be cost effective. An existing Army unit could be allotted these tasks as secondary roles. A battalion of the Royal Australian Regiment stationed in Hols-
worthy would have most of the advantages of the author’s force, with few of the disadvantages. I note that the author feels that soldiers make poor seamen, but sailors are extremely flexible people! Soldiers also adapt to rapidly changing environments.

**Force Structure**

The battalion structure shown in the article is extremely unbalanced. It could take part only in very limited actions, and would be restricted in its logistic capacity to the extent where operations longer than 24 hours and more than a kilometre or so from its disembarkation point would be impractical. Both the Royal Marines and the United States Marine Corps are experienced at this type of operation, and their forces are balanced. Let me list the major deficiencies:
- There is no organic fire support apart from the mortars (presumably 81mm mortars). Naval Gunfire support is not suitable for close support of infantry in combat.
- There is no provision for engineer support within the force, either field engineers or organic assault pioneers.
- The unit’s communications staff are inadequate for the control of this size force, especially over a prolonged period.
- The logistics staff would not be able to sustain the battalion if engaged in more than internal security duties. Even then, the unit would require vehicles, more cooks, more supply workers. Although stores may be held on the LSH, there must be an adequate distribution system within the battalion. As an example, the battalion’s nine mortars would expend at least twelve tonnes of ammunition just firing one unit’s first line each day.
- Assuming an enemy overt landing, one must expect air attack (in spite of HMAS Melbourne’s presence). Yet the battalion has no active Air Defence capability.

This force is smaller than the one I would envisage—a light-scaled infantry battalion group. Is there a need, as suggested by the author, for this force or at least a position of it, to be always embarked? The Royal Marines and the USMC obviously don’t think so; they embark their landing units only on an ‘as required’ basis.

**Conclusion**

I agree that it is necessary for a part of our military forces to be trained and equipped for rapid deployment by sea. However, the author must remember the unit’s task commences in earnest once it is ASHORE, and like paratroops, the means of insertion is only an introduction to BATTLE. The force must be a balanced force capable of independent action. Last, but not least, can we really expect a country with resources as limited as ours to set aside a completely specialized force with extremely limited usage.

I would commend Lt Smith’s attendance at a course conducted by Tactics Wing of the Land Warfare Centre. He is interested enough; he would gain the knowledge to support his interest.

B. J. Avery

Headquarters I MD, Brisbane, Major Queensland RA Inf

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**THE ARMY — WHAT IS HAPPENING**

I REFER to the article by Warrant Officer 1 D. K. Watts in the November/December 1977 issue No 7 of the Journal entitled “The Army—What is Happening”.

Firstly let me say that to see an article by anyone below commissioned rank both delighted and surprised me. Up till then it appeared that non-commissioned personnel had been excluded either by design or by the standard required—in other words the Journal itself had fallen into the very trap postulated by WO Watts. Such an article is a refreshing change.

WO Watts has raised a number of very significant points. If the Defence Force is to have any standing in the community it is vital that we first look to our own housekeeping. It is necessary for all positions of authority to foster ‘Pride in Service’ and to actively promote an acceptable public relations image of the armed services. However, policy directives will never be enough—we have to rely on our soldiers, sailors and airmen because without them we would have no Defence Force.

This Journal should try to encourage the main body of our men—the enlisted men—
to air their views. While they may well not be versed in the arts of English expression or higher defence strategy, their thoughts, no matter how crudely expressed, should carry some weight with their commanders—it is a poor commander indeed who believes he can achieve his aim without the good will of his men.

Let those of us who have positions of authority remember the sum total of efficiency of our Defence Force is no greater than the efficiency of our men.

It is cold comfort to WO Watts to know that the Army is not the only pebble on the beach of slipping morale and pride in service. Perhaps the Navy may like to comment.

HQ Support Command, C. H. Foster
Melbourne, Victoria Flight Lieutenant

THE ROLE OF THE TANK

I was most interested to read Major Mayes’ and Captain Van Rooyen’s views on the place of the tank on the battlefield in recent letters to the Editor. It is a pity that such a dialogue should take place in Australia so long after the event—the October 1973 War.

Nevertheless, it is fascinating that two officers should draw such diametrically opposite conclusions from the same campaign and, indeed, the same facts. Is there therefore not some middle ground on which the true solution lies?

Before commenting on the factors in dispute, I would like to pass a few remarks on the source document Captain Van Rooyen quotes in his letter. I agree that General Herzog’s book gives an excellent coverage of the campaign from the Israeli point of view. However, he is a former Chief of Military Intelligence and therefore well aware of the impact of information he is disseminating. I would have welcomed quotations from other works so as to diminish any error of bias which might have crept in.

The battering of the Israeli 190 Tank Brigade has been accepted not only by General Herzog, but by a number of independent observers as well. However, the point that Major Mayes made was that the brigade was caught in a Sagger ambush (again General Herzog agrees). It is therefore quite irrelevant to compare this ambush with the tank battles of 14 October.

It is significant, however, to note that General Herzog admits that something less “than 25 per cent of our (Israeli) tanks were hit by missiles”. Even if we take a more conservative figure of something like 16 per cent which I have seen quoted elsewhere, this represents about one hundred per cent increase in the proportion of tanks lost to light infantry anti-tank weapons since Second World War. Captain Van Rooyen must therefore concede that the light infantry anti-tank weapon has made some inroads in the anti-tank arena. And these were first generation anti-tank guided missiles; we are now entering the third generation.

I agree with Captain Van Rooyen that most Israeli tank kills were made by tanks. But we must remember that, as a result of their conclusions drawn from the 1967 War (and now admitted by Israelis to be erroneous), they based their offense and defence almost exclusively on tanks at the expense of other anti-tank systems. The reversal of this philosophy is reflected in their extensive procurement of TOW and in their development of the Merkava tank after the 1973 War.

The Arabs employed a much more balanced range of anti-armour equipment. Their experience has indicated that the proportion of tanks destroyed by tanks had not changed significantly since the Second World War. At about 25 per cent of the total tank kill, I would hardly consider the tank as “the best means of anti-tank defence” in the Second World War let alone subsequently.

Finally, I would like to comment on the high tank losses suffered by both sides (not only by Israelis as erroneously asserted by Captain Van Rooyen). I would conservatively estimate the cost of tank losses in the 18 day war at something like S(US)170-200 million by Israelis and S(US)370-400 million by Arabs. By the end of the present decade, this investment will have tripled. I could hardly regard this as a cost effective investment in anti-tank defence.

I recall stating in 1976* that the 1973 War did not prove or disprove the belief that the tank was the best anti-tank weapon; nor did it conclusively show that the days of the tank on the battlefield were over. It did, however, indicate that the infantryman was able to defend himself more effectively against tanks. Thus I agree with both commentators; with Major
Mayes that today’s infantry anti-tank weapons are quite effective; and with Captain Van Rooyen that the day of the tank does not appear to be over yet.

All this just leaves me with one thought—wasn’t the original concept for the tank the application of mobility and fire power to exploit breakthrough rather than engage in a shooting gallery?

J. Viksne
Lieutenant Colonel
School of Signals, Macleod, Victoria

*In a two part article “The Yom Kippur War—In Retrospect”, Army Journal, Nos 323 and 324 (April and May 1976).

THREAT REACTION AND WARNING TIME

I REGRET that I must take issue with several of the points made in ‘The Trident of Neptune’ (DFJ No 8 of Jan/Feb 78). While I fully support LCDR Speedy’s basic arguments that the defence of Australia is primarily a maritime operation, that maritime preparations in general require longer lead times than the Australian public and politicians have yet accepted, and that threat reaction timing must be linked to the lead time required by force preparations, I believe that LCDR Speedy has made several errors in his statements on threat reaction timing. I fear that those who wish to may cavil at the errors and give themselves excuses to ignore the general thrust of LCDR Speedy’s article.

Warning Time

Given effective leadership, the Australian Defence Forces are quite capable of raising an expeditionary force at a few hours notice, which could ‘capture’, say, the South Island of New Zealand. The preparation to achieve such a relatively limited, short duration, almost tactical objective is, however, quite different to the preparations which Australia would need to make to win a war against New Zealand and, even then, the preparations needed would vary with the precise war aims of the Australian Government. This is why ‘warning time’ is variable—the New Zealanders might not notice the prolonged confusion and chaos attendant upon any operation to insert, say, an Australian Army Corps plus an occupational government. In the latter case, it is quite likely that the New Zealanders would have time to mount a pre-emptive, spoiling attack of their own, on such key points in the Australian preparations as Resch’s Breweries and the Defence EDP centre.

If threat warning time varies with the capability of the threatener and the scale and aim of the threat, then the only proper statistics which can be developed to compare threat warning times are those obtained from threats with comparable origins, aims and scales. Here, I fear, is where LCDR Speedy’s Table 1 is misleading in that it attempts to average the unlike. It was quite possible for Israel and Egypt to be at each other’s throats in three months in 1973 because, prior to Yom Kippur, they had been at war (with occasional truces) since 1948. At the other end of the scale lies World War II, which I find so interesting that I propose to develop the subject further.

World War II—Preparations

In 1933 the German Government approved a major rearmament program of which Plan Z was the Naval component. This rearmament had, as its target date, 1943. By a remarkable and yet seldom-remarked-upon coincidence, 1933 was also the year in which the UK dropped the ‘10 Year Rule’, and it proceeded between 1933 and 1936 to develop its rearmament program, with guess what target date? Why 1943! (For sceptical readers I suggest a check on the date of introduction into service of the major long-lead items of that UK plan—the last of the King George V Class Battleships.)

Now we all know that the UK and Germany went to war on 3 September 1939. What is seldom remarked upon (by military men) is Professor A. J. P. Taylor’s contention that the UK should not have gone to war over Poland—that it was quite illogical and represented a failure of British and French diplomacy. The lesson we should draw from that is not that the UK rearmament started criminally late, but that UK Foreign Policy was not kept in concert with UK Defence Policy. The war in 1939 could have been averted—at what cost or to what long term advantage it is hard to
determine—by accepting a German conquest of Central Europe, and working for the long-term (1943) aim of rearmament.

LCDR Speedy is therefore wrong on two counts in his Table I, when discussing World War II:

a. The perception time was 1933-1939 = 6 years.
b. The warning time was zero or, at best, one day, for the UK and France had no logical cause to deliver their ultimatum to Berlin, and were not forced to act upon it after it expired.

**Threat Reaction**

With limited experience of an independent foreign policy, and no tradition of statesmanship in our politics, Australia may have more problems than some other nations in attempting to translate perception of a threat into armament programs designed to counter that threat. Therefore although, as I have indicated, warning times have historically been far longer than LCDR Speedy has suggested, it is still quite likely that Australia's entry into an armed conflict in the future will, as usual, resemble the activities of a headless chook. It is essential to members of the Armed Forces, who may wish to survive a conflict, that they should use every available means to ensure that the long lead, or Core Force, armaments are maintained in peacetime. We in the RAN know that that is not being done.

R. D. Griffiths

Holt, ACT Lieutenant Commander, RAN

**THE AUTHOR REPLIES**

LCDR GRIFFITHS has missed my point. British politicians even as late as 1938 still had not publicly accepted the German threat and mobilization — the Warning Time phase — did not begin until September 1938 (see Liddell Hart, History of the Second World War, London, 2 ed., B.C.A., 1973, pp. 8-9). The business of launching KGVs has no more likeness to government acknowledgement of a threat than has our government in its approval to buy FFGs or Leopard tanks.

The whole thrust of my argument was that the time from government acceptance of a threat and the mobilization going with it, does not compare favourably with project times for major equipments.

Holder, ACT I. M. Speedy

Lieutenant Commander RAN

See also p. 60 — Editor.

**THE DEATH OF MICK MANNOCK**

YOUR review section of the January/February issue No. 8 refers to Mick Mannock has having died due to pilot error, his judgement clouded by his hatred of Germans. I have read several versions of Mannock's death, but have never heard of pilot error playing a part. According to one version he was following down a damaged German aircraft, and was himself killed by groundfire. According to another, he was still out of effective groundfire when his SE5a began to burn for reasons not entirely clear. There seems to be some evidence that he then shot himself with the revolver he carried because of an obsessive fear of being burnt to death in the air.

As for his judgement being clouded by hatred, there are several references to he himself warning young pilots against this danger. Certainly he was a bitter, solitary man who had been misunderstood by his comrades and others in the early stages of his airforce career. He didn't, it seems, think much of chivalry but he was a first-class fighter pilot . . . and a first-class trainer of fighter pilots (incidentally, Immelmann and Voss were, Richthofen wasn't).

Considering the strain under which Mannock fought, I can well imagine him saying of the Red Baron: "I won't drink a toast to that bastard". He is also quoted as having said: "I hope the bastard roasting all the way down".

Frankly, I believe that wars are won by unchivalrous Mannocks rather than by gentlemanly Voss-es.

As far as I know, only one top British fighter pilot of World War I did die through pilot error . . . James McCudden, a friend and mentor of Mannock, who fatally turned back on take-off after engine failure.

The Sun, Melbourne John A. T. Morgan, Victoria Editor

Letters continued on p. 49
The Requirements of National Strategy

Lieutenant Colonel J. S. Baker,
Royal Australian Engineers

INTRODUCTION

General

Recent events have caused Australia to reassess her outlook on global and regional affairs. The ebb of the US and UK physical presence in the area of strategic concern has compelled Australia, probably for the first time, to adopt a more self-reliant outlook. Certainly, Australia has never before committed her armed forces to significant military operations without the strategic fabric, support and security afforded by the presence of more powerful allies. At least in a military sense, Australia has little heritage of experience in independent strategic activity.

In the formulation of national defence policies and the development of the forces necessary to effectively implement those policies, it is essential that both the policies and the force development be directed towards clearly identified, realistic objectives. These defence objectives need to be derived from the broader national objectives which reflect the aspirations of the Australian people. In the process of deriving those objectives, a number of conflicting influences and requirements must be resolved. This process of derivation and resolution is the formulation of the national strategy. Effective defence policies and force development processes must therefore be derived from and directed towards the satisfaction of the national strategy.

In the lengthy period preceding the enforced change of defence policy, Australia enjoyed a time of remarkable stability free of any great pressure for strategic debate. The Australian Services needed to concentrate their attention only on the achievement of high degrees of tactical competence. The staff training and force development process were directed at the problems of tactics within a stable strategic framework. The change from a military strategy of forward defence, made necessary by policy changes of the major allies on whose presence the strategy relied, thus presented Australia with a relatively novel situation. Our heritage, history, staff training and military experience, all left Australia poorly placed to cope with the new requirements. Now, although those tactical capabilities need to be broadened to encompass a new range of skills, the real problem is that of devising and sustaining a new strategy.
Previously, the high degree of confidence in allies and alliances, had simplified the formulation of a national strategy by reducing the number and significance of the conflicting requirements and influences to be considered. Now, with no reduction in the aspirations of the Australian people, the national strategy has to address the full range of requirements and responsibilities of an independent sovereign power in a position of potential leadership within its region. The national military capacity and capabilities have thus become more significant and more demanding influences on the formulation of a realistic, viable national strategy.

Definition

As with many other terms of military origin, the word 'strategy' has come to find common usage in other than a military context. This has lead to a decline in the precision of interpretation of the meaning of the term. For clarity, strategy, as it is used here, is defined as: "the art and science of developing and using political, economic, psychological and military forces as necessary during peace and war to afford the maximum support for policies, in order to increase the possibilities and favourable consequences of victory and to lessen the chances of defeat". As applied at the national level, this represents national strategy.

As an extension of this definition of national strategy, military strategy is defined as "the art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force on the threat of force".

It is also necessary to distinguish between a strategy and a plan. Applied at the national level, as it is here, strategy embraces all the national aspirations, resources and influences to derive objectives, priorities and broad resource distribution. Plans are concerned with the subsequent actions needed to accomplish each of the objectives. Thus at the total national level, there can be only one strategy, the military strategy which embraces all the influences, possible commitments, resources and limitations. Strategy is concerned with the totality, plans are concerned with the particular.

From these definitions, it is clear that the military contribution to strategy needs to encompass a broader vision of national need than that of undertaking operations in response to government directives. The military strategy must provide for an effective response should the government opt to commit its armed forces to operations, but the option for use of force is likely to be realistic only if the development of those forces has embraced the circumstances leading to their operational use. The military strategy cannot be formulated in isolation. It is likely to be viable only if its requirements and its limitations have been recognized in the national strategy.

Approach

In view of the limited opportunities that have been available for experience in the formulation of national and military strategy and the increased relevance of the military factor, it seems appropriate to consider the general requirements and place of strategy. The particular needs of the Australian national and military strategy can then be established against a common understanding.

STRATEGY

General

Only in times of crisis, where the attention of the entire nation is directed towards one central goal, such as national survival against major aggression, is a clearly defined and articulated national strategy likely to be available to guide the co-ordination of national effort. The freedoms inherent and so highly valued in democratic society do not permit so rigid a routine direction of life. The national strategy normally exists only as an amalgam of policies, programmes, party political platforms and social ambitions open to interpretation by those responsible for the formulation of more specific aspects within it. Only when the public is prepared, in the interest of the nation, to forego some of its democratic freedoms can the government of the day so narrow its broad political platform as to conform precisely to a national strategy. Thus in
the preparation of a military strategy to meet
the national need, the start point will not be
prescribed by government directive but will
need to be derived from the range of factors,
influences and evidence available. After all,
there should be no agency better qualified than
the professional military and departmental
staff, to make such an assessment.

At the national level, the military contribu­
tion to strategy is twofold. It is inadequate to
consider only the direct military aspects. It is
necessary that departmental and military staffs
formulate in parallel both their view of the
national strategy and the complementary mili­
tary strategy. Thus, this examination of the
requirements of strategy at the national level
needs to consider the relevant elements of the
national strategy as well as the requirements of
military strategy, the relationship between them
and their place in the function of government.

The Place of Strategy

The place of strategy in the process of
national government in both peace and war
must be clearly understood. A formulated
strategy is of little value unless it is accepted
by the government as a basis for policy deter­
minations. Those policies, derived from con­
siderations of strategy, are the instruments of
day to day government. This process of
government may be considered in three stages:
• the formulation of strategy;
• the determination of policy; and
• the implementation of policies.

In national political activity, debate occurs
at all three stages, but the emphasis of the
debate is normally directed at the policies and
the plans for implementing them. It is at this
level that government actions have a visible,
immediate effect on the electorate and where
party political views and attitudes are most
evident. Because that debate is so often centred
on party and ideological differences rather than
on the underlying strategic considerations, true
national needs may be masked by domestic
political perspectives.

A political party comes to office in govern­
ment on a broad party platform of policies
drawn up without the professional advice of
departmental or military staffs. Whilst those
policies meet the immediate desires of the elec­
torate they need not conform to the require­
ments of strategy as viewed by professional
staffs. Thus there may be substantial differ­
ences between government policies and the
military view of strategic needs and priorities.
As there can be no doubt that the ultimate
authority for national policies rests with the
government, in that professional military re­
sponsibility requires that advice on strategy
be given free of domestic political influence,
there is need for a sound working relationship
so that differences can be resolved in the
national interest.

The basis of a sound working relationship
is derived from a logically formulated, realistic
and sound strategy together with an under­
standing of the processes of government. The
aims of the government and its advisers are
common, both are concerned with the national
interest but perhaps from different perspectives
of priorities. Governments can be swayed by
well reasoned advice but need time in which
to react. Just as government programmes do
not fully achieve the policy objectives because
of conflicting priorities and constraints, govern­
ment policies may not fully satisfy the strategic
objectives. Neither strategies nor government
policies are created instantly. Both result from
extended periods of consideration and con­
sultation and both are constrained by ongoing
commitments. In the formulation of strategy
and policy in peace, the first requirement is
that they be compatible. Rarely, short of crisis,
will they be complementary.

In the military political relationship, advice
proffered to the government falls into two
broad categories, that intended to shape and
formulate policy and that related to the im­
plementing of policy. In practice, within the
continuous processes of policy determination
and programme implementation, it is fre­
quently difficult to distinguish between the
two forms of advice, particularly when the
strategy, on which the policy formulation
should be based, has not been clearly articu­
lated. As a result, the programme, reflecting
domestic political views, tends to influence
the policy, rather than the policy dictate the
programme.

To meet its dual responsibilities of advising
and supporting the government of the day,
the Department of Defence needs a view of
national strategy and a military strategy, en-
endorsed by the Defence Committee or its equivalent as providing the basis for advice to and influence of the government on questions of national policy. Clearly, outside the Department of Defence, such a strategy has the status only of advice, but within the Department and the Defence Forces, it provides strategic objectives against which co-ordinated force and infrastructure development objectives can be devised. Further, although not approved by the government, that military strategy assists in the selection between options which may be available for implementing government policies and thus is also a necessary adjunct to the second responsibility of supporting the government of the day.

The place of strategy in the process of government is illustrated in Figure 1. Against this background it is now possible to examine the requirements of realistic strategy. In this examination, it will be addressed from the military viewpoint.

**Origin**

The purpose of strategy is clearly the satisfaction of the primary national objective. Most nations, motivated by a degree of self interest will have an ultimate goal of improved prosperity which incorporates a requirement for security. This objective, when coupled with the ideology of the form of society, provides the origin of strategy. The origin is important because it prescribes the broad avenues of strategic actions that are achievable. For example, an aggressive military outlook is not possible unless it conforms both to the national goal and social structure of the country. Thus it is achievable in the case of say Israel, because of the will to survive. The key aspect of the origin of strategy is that although national goals will be influenced by external circumstances, the primary determinant of strategy will be found in internal factors, influences and objectives.

**Positive Outlook**

The first requirement of a true strategy is that it must be positive. It is aimed at the achievement of national goals. It is concerned with the optimum application of national resources in the broadest sense. It requires the outward projection of influence not only of the total strategy but also of each component of the whole. It must provide a firm basis for constructive improvement in each of the components and for co-ordination between them. To meet its aim, strategy must not only seek to avoid adverse situations and pressures but also to exploit strengths and opportunities. To achieve this, strategy must result in a series of national policies which provide a positive, constructive basis for the development and co-ordination of all the components of national activity.

**Forward Outlook**

To evaluate national strategic activity beyond the unsatisfactory, inadequate precept of merely reacting to circumstances as they evolve, it is essential that strategy be projected as far into the future as possible. No artificial time frame should be imposed. Only by the consideration of future possibilities can the full effects of current events or decisions be evaluated. If the situation at some future date will be directly influenced by the decision taken today, then the whole intervening period is relevant to the strategy which should provide assistance and guidance to the making of the decision.

In that it is designed to help shaping national policies, the strategy is concerned not only with the lead times associated with the acquisition of particular military capabilities but with the lead times of improvements in national capacity in industry, in technology, in transport and perhaps most of all in management. Because frequent and rapid changes in policy are politically undesirable and a bar to effective national administration, a strategy, if it is to have any influence, must address long term requirements. It must provide an enduring basis for national policies.

**The Intelligence Contribution**

Because of the requirement for projection into the future, it is necessary to establish the contribution which intelligence makes to the formulation of strategy. In that it assesses the likelihood and nature of actions that may be undertaken by other nations, intelligence does provide a guide to some of the operational tasks which the armed forces may be called upon to perform. There can be no doubt on the value of sound, accurate intelligence but its usefulness is in the prompt and relevant
THE REQUIREMENTS OF NATIONAL STRATEGY

THE PLACE OF STRATEGY

Defence and Service Staffs

National Aspirations

National Strategy

National Objectives

Other Government Staffs

Interpretations
Definition

Military Strategy

Military Strategic Objectives

Government Policy

Policy Objectives

Interpretation Definition

Defence Policy

Defence Policy Objectives

Government Programmes

Programme Objectives

Interpretation Definition

Defence Programme

Programme Objectives

Interpretation Definition

Other Programmes

Programme Objectives

Budget

Project Proposal

Government Approval

Action

Other Policies

Other Policy Objectives

Other Policies

Other Policy Objectives

Other Programmes

Programme Objectives

Action

Figure 1.
actions that flow from it rather than in its mere availability. Because strategy is concerned with ensuring the national capacity to take appropriate, adequate actions should attempts to avoid adverse situations fail, it must be based on a broader set of parameters than those threat assessments derived from intelligence.

By definition, strategy is concerned with both “developing and using political, economic, psychological and military forces . . .”. The distinction between ‘development’ and ‘use’ is important. It is the development process which ensures the adequacy of resources including military forces, so that their use in response to needs indicated by intelligence becomes a realistic option. Thus the intelligence contribution to strategy is to be found primarily in the operational planning processes leading to the use of forces. The development process must therefore look beyond intelligence and threat assessment for its foundation. That basis can be found in the requirements to satisfy national objectives.

Whilst operational planning must cater for the possible contingencies derived from intelligence assessments, force development must consider the uncertainties of the future which could be of greater consequence. Both planning and development processes may identify the need for changes in the force structure but the changes resulting from the operational planning process are likely to be constrained by the time available between the recognition of the threat and the possible need for a military response. Where time is short in comparison to the lead times for force structure changes, the result will be the force structure which can be achieved rather than the structure that is needed to best undertake the particular tasks. The inevitable consequences are greater casualties, greater cost and a greater risk of an inadequate military response.

To avoid this undesirable and unnecessary situation, the force development process must provide the fundamental basis of the design of the force structure necessary to cope with a range of circumstances. These circumstances need to take account not only the probability but also the consequence of occurrence. Such a structure may then be finely adjusted to meet the particular requirements on emphasis suggested by intelligence assessments. Such a course of action also has the advantage of permitting the design of the force structure to assist avert the development of adverse situations as well as to react to them should it become necessary to do so. Additionally, the existence of this fundamental basis for force development, permits better direction of intelligence agencies to concentrate on essential elements of information and an improved basis against which the significance of particular events can be better evaluated.

Co-ordination

The national strategy is a blend of many components — including political, diplomatic, economic, psychological, social and military aspects. The aim of concerted, co-ordinated application of all components towards the national goals is not easy to achieve because of conflicting issues and requirements of the separate elements and difficulties encountered in deciding between matters of practical reality and matters of principle (eg. East Timor). Because it is an exercise of judgement rather than precise calculation based on specific laws, the art of strategy is in the selection of the optimum blend of components.

That blend is dynamic. As the perception of national goals fluctuates away from the central objective of peace, stability and prosperity, the proportion of the various components should change accordingly. In the case of the military contribution, which is the primary concern here, this can be illustrated diagramatically.

The order of the increase in the contribution of the military component may be demonstrated by the levels of resources committed to defence for various perceptions of national goals. This may be seen in a country by country comparison or in an examination of anticipated changes in a single country in the transition from peace to war. For example, in the case of Australia, the peace-time levels of expenditure on defence have approximated to three per cent of GDP. In times of war, the level of expenditure could again rise to the World War II peak of about 40 to 45 per cent of GDP. Similarly, in manpower there could be a fifteen to twenty-fold increase in the numbers of full-time uniformed personnel (from 80,000 in peace to 1,500,000 at war). Even with sound national administration and resolute
In practice the ideal situation at A is rarely reached. While nations are motivated by self interest there will be at least elements of security and expanded influence in national objectives. If national will, changes of this order cannot be achieved in a matter of months.

In practice, because of the time delay between the commitment of resources and the acquisition of actual military capabilities, the military component of strategy will frequently lag behind the theoretical optimum. This is particularly true in periods of rapid shift in national perspectives. The problem is that public opinion and government policy can change much more rapidly than forces can be effectively multiplied or restructured to meet the optimum contribution to the national strategy. The increasing complexity of modern warfare, the longer lead times for acquisition of major equipments and the increase in training times for manpower add to the inertia. The existence of a significant gap could be serious not only in that it increases the possibility of military defeat but also in that it reduces the options open to the government in response to any form of external pressure.

Co-ordination of national strategy is thus not a simple matter of simultaneous adjustment of each of the components. The disparate rates at which each component can be varied must itself be a consideration. Where policy can change more rapidly than capability, the consequence of a shortfall in capability must also become a significant consideration. Thus the military practice of considering the ‘worst case’ has a logical foundation. The national consequence of military inadequacy in time of serious conflict, highlights the central importance of military considerations to an effective national strategy. It is for this reason that strategy is so often viewed primarily in military terms and for this reason that military requirements must be projected beyond the needs of current public perspectives.

Military Strategy

The relationship between national and military strategy is often misunderstood. By definition military strategy is concerned with
the employment of the armed forces. It seems to presuppose a situation of conflict, yet in a democratic nation with no aggressive intent, the aim of national strategy is likely to be to avoid the need to resort to armed force. Thus the armed forces are sometimes seen as preparing for a war which may seem unlikely as the nation as a whole strives for peace.

In peace, the link between the national and the military strategy is the need for a deterrent. By providing a deterrent which is adjudged by potential adversaries as an effective bar to their use of force the military forces of a nation thus assist and provide the secure national environment within which the energies of the nation can be directed with confidence at the achievement of other national objectives.

To be effective, the deterrent must be seen to provide the military capabilities necessary, or the potential for the timely acquisition of the necessary capabilities, should deterrence fail. Thus, even while the threat of war seems remote, the military strategy must provide for a response to a range of situations up to the limit of national capacity. The degree to which it is necessary to acquire the actual capabilities and to increase the potential for acquiring the necessary capabilities, can then be properly adjudged.

In formulating the military strategy, particular emphasis must be given to the need for realism. In peace, the limits of realism are likely to be associated with the cost of implementing the government policies necessary for the strategy to be viable. An ideal military solution which requires peace-time expenditure levels beyond the price the public is prepared to accept, is unrealistic and must therefore be discarded. The military strategy must be acceptable as a basis for government policy determinations. Only by influencing those policies can the military potential of the nation be enhanced thus “increasing the possibilities and favourable consequences of victory and lessening the chances of defeat”.

**Strategy in War**

Unless the foundation for the conduct of military operations is established before the need to commit forces is evident, the national capacity is likely to be limited to that of reaction to enemy initiatives and the military capabilities then achievable may limit the options available to the government. The risk of military defeat is then heightened. The emphasis in this consideration of strategy has thus been given to the requirements during peace but would be incomplete without an examination of the transition to war.

Several important changes occur when a nation goes to war, particularly when the conflict involves national survival or defence of vital interests. The fundamental change that occurs is a narrowing of national objectives. Aspirations of improvements in the quality of life, economic advancement and social improvement, although still present, clearly rank lower in priority than the more immediate problems associated with the war. Many of the conflicting factors and influences which so complicate the national strategy in peace are no longer entirely relevant. The gap between strategy and government policy is narrowed. The significance of the military appreciation is increased, and the energies of the nation are transferred as far and as fast as is possible to the support of military operations necessary to avoid defeat. In the ultimate the aims of the national and military strategy become identical. A military strategy which fails to make provision for this eventuality, is likely to lead to a deficiency in national military capability at the time it is most needed.

**Implications**

Before the particular requirements of an Australian strategy can be examined there are a number of broad implications which should be drawn from this consideration.

- Foremost is the need for understanding and a sound working relationship between the government, the department and the military staff. Each are likely to have somewhat different perspectives. There is no question but that the ultimate authority rests with the government nor that the government in the proper exercise of that authority needs the sound, specialist, professional military advice which can be tendered only by competent military staff. Thus even though there be differences in attitude or priorities which prevent the short term satisfaction of military requirements, the
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military staff must constantly advise the
government of the total requirements
free of domestic political influence. Only
if this is achieved will political policies
in the long term approach true national
needs.

- The fundamental role of armed forces is
the destruction of enemy forces. This is
a role which only military forces can
perform. This is their unique contribu-
tion to national strategy. In the face of
the difficulty of defending a country the
size of Australia, any policy which de-
tracts from the armed forces ability to
satisfy that fundamental role must be
viewed with considerable concern. This
is not to say that armed forces should
not be used on lesser tasks. There could
obviously be times when the government
has little other option, but it is unsound
to deliberately structure and equip the
armed forces only for the lesser tasks.

- Although the whole military strategy is
formulated within a broad assessment of
resources likely to be available, actual
resources are committed only in the
implementing phase. Provided the objec-
tives are accepted, a shortfall of re-
sources actually committed at any one
time does not necessarily negate the
military strategy. It will affect the degree
to which objectives can be satisfied and
hence represent the acceptance by the
government of a degree of risk. That
degree of risk is of primary concern to
senior military staffs. It is the form of
advice required by the government to
permit a proper judgement of the ade-
quacy of resources devoted to defence
which in turn is an essential need for
the military strategy to be tenable.

- The whole process of strategy formulation
and policy implementation is one of
continuous iteration and adjustment. It
has neither beginning nor end. It is a
process of seeking constant improvement.

- Sound, comprehensive military advice
cannot be offered to the government
without first deriving the military objectives
from complete consideration of the
requirements of military and national
strategy.

CONCLUSION

Although Australia’s strategic situation may
be currently assessed as favourable, there is
no cause for complacency. No responsible
government, nor its military advisers, can
allow such a favourable situation to deteriorate
because of lack of thought and effort towards
sustaining it. The military forces have a par-
ticular and continuous role in the creation and
maintenance of an environment conducive to
the Australian people achieving their aspira-
tions. Even though major military threats may
seem remote, force development needs to
continue.

The basis for force development is not to be
found in threat assessment; rather it has in the
broader considerations of strategy. Thus a
comprehensive strategy is fundamental to a
rational, effective, economical force develop-
ment programme which will ensure adequate
forces should a threat develop. There seems to
be a need for greater discussion and under-
standing of strategy and its function in achiev-
ing the optimum application of all national
resources towards all national goals. Most of
all, there is a need to move away from a
situation of merely reacting to circumstances
as they occur to one of positive, constructive
actions designed to create and sustain a pre-
ferred environment. This is the real purpose
and rationale of a sound strategy.

NOTES

1. ASJS. USJS definition from JSP(AS)101.
2. Australia has not adopted the USJS definition of
national strategy. Perhaps it should. It is given in
JSP(AS)101 as the art and science of developing
and using the political, economic and psychologi-
cal powers of a nation, together with its armed
forces during peace and war, to secure national
objectives.
3. ASJS. USJS definition from JSP(AS)101.
4. For the purpose of this paper, these definitions
have been accepted; however the author has some
reservations about their validity. They may be
worth further examination in a subsequent paper.
5. Some might argue that strategy flows from policy.
There is some basis for this view and indeed the
definitions given earlier support such a stance.
On the other hand such a view seems to assume
the availability of adequate, definitive policy state-
ments. This relationship of strategy and policy
deserves further consideration.
The DEFENCE of AUSTRALIA

A Bi-Mobile Concept
For The Army

Major S. Krasnoff psc
Royal Australian Infantry
and
Captain W. W. Houston
Royal Australian Armoured Corps

INTRODUCTION

The recent changes to the defence policies of Australia have induced a spate of writing on these and related subjects. The disparity of views expressed range from those who would forego any attempt to destroy the enemy in the early stages of an invasion and would rely on guerrilla war once the enemy is in occupation to those who would harness the full spectrum of modern technology. The social and economic ramifications of such polar concepts are monumental and their lasting effects will bear witness to the wisdom or folly of decisions made now and in the future. These decisions should be pervaded with practicality and made on the basis of informed discussion of defence problems. Notwithstanding an obvious need for maintaining defence secrets, unfettered debate on defence involving the public at large would achieve a level of enlightenment and should favourably influence defence spending.

The purpose of this article is to examine a force concept which will allow the Army to meet its commitments in the defence of Australia and its interests. The initial strategic reference point of this review is the Defence White Paper presented to Parliament in November 1976. From this point the threat is identified in general terms and strategy to counteract it is discussed. A philosophy for the conduct of future operations emanates from this strategy and permits the development of necessary force characteristics suited to the Australian environment.

THE DEFENCE WHITE PAPER

The White Paper identifies three key areas of world strategic significance: the nuclear relationship between the ‘Super Powers’ (US and USSR); the Central European theatre; and the North East Asian area. It postulates that strategic deterrence, though fraught with uncertainties, is providing a form of global stability which permits the development of the current defence strategy.

The White Paper further postulates that this general degree of global stability pervades the region of immediate defence interest to Australia. This region includes: the South West...
Pacific countries and territories, Papua New Guinea, Indonesia and South East Asia. A diminution of Australia’s military presence in this area has occurred in view of the regional countries’ improved capabilities for self defence against local insurgent threats and because the prospect of large, external powers acquiring major strategic influence in the region has very substantially receded. Interestingly, within twelve months of publication of this assessment the two major communist powers (USSR and China) have become increasingly involved in the Indo-China dispute. This dispute in itself has a destabilizing influence on the region in view of Vietnam’s desire to establish a ‘coordinating’ role in Indo-China. This policy is based on its perception of the importance of the ‘revolutionary interest of South-East Asia’.

The possibility of the development of a threat to Australia in the future was, however, recognised by the White Paper. Accordingly defence policy is based on contingencies and not on demonstrable threats.

**Nuclear Potential**

Notwithstanding the fact that there is no identified movement towards the acquisition of nuclear weapons within the area of Australia’s regional interest, numerous countries on the immediate periphery have developed nuclear technologies. Those nations whose nuclear technology is currently harnessed only for peaceful purposes could convert this effort to the production of nuclear weapons. The existence of any nuclear technology must therefore be considered a potential nuclear threat which must not be discounted.

**Self Reliance**

The existence of the ‘Guam Doctrine’ and subsequent US policy can leave little doubt that the White Paper was correct to call for increased self reliance as the US expects a substantial defence capability to be demonstrated by its allies. However, the White Paper also relies specifically on the premise that ‘support would be forthcoming from the US in the event of a fundamental threat to Australia’ despite the fact that the US has no treaty obligation to aid Australia against aggression. The ANZUS Treaty calls only for consultations and US reaction to any crisis would undoubtedly be governed by its own priorities, not by Australia’s. The sanguine philosophy behind the White Paper may lead to optimistic misconceptions and a state of unpreparedness on Australia’s part. On the other hand, the fact that this nation of some fourteen million people expends only 2.8 per cent of its Gross Domestic Product on defence casts an air of austerity over all defence planning. This situation is unlikely to be redressed due to the lack of a definitive threat which justifies defence spending to politicians.

**THE CIRCUMSTANCE OF DEFENCE**

Although no specific threat can be identified, the prevailing international situation indicates that threats may, and often do, develop rapidly.

**The Spectrum**

The threat of terrorist tactics as an implementation of politically motivated groups has already reached Australia. As yet we have been spared overtly identified urban guerilla activities, but given the polarizing effect of volatile politics and subjective media coverage, it must be considered a real threat. In addition to internal disturbances, consideration must be given to external threats which may range from minor raids to an invasion of Australia aimed at acquiring all or part of the country. There also exists the possibility of expeditionary activities by the Army ranging from UN observer duties to operations in Australia’s area of regional interest.

In the light of these contingencies the Army should be structured to conduct high, mid and low intensity non-nuclear operations and be prepared to operate under nuclear conditions in:

- remote areas of northern and Western Australia; and
- the more densely populated and industrialized areas of south eastern Australia.

**THE STRATEGY**

It would appear that in view of political, financial and population constraints Australia is forced to adopt a ‘Continental’ strategy. The potential to secure the homeland while
projecting power overseas is beyond our capabilities. Against a major threat, an expeditionary force would possess insufficient power to absorb the enemy's potential to retaliate. Accordingly, Australia should concentrate its forces in the defence of the homeland. This is not to say that maritime forces are unnecessary but that it is unlikely that such forces as Australia could afford, even if all defence resources were allotted to them, could, in mid or high intensity operations, guarantee the security of our ocean trade routes let alone project power overseas.

The implementation of this strategy is open to a variety of options covering the spectrum from guerilla warfare to operations harnessing the full range of modern technology.

The Guerilla Option—The Poor Man's 'Little War'

'. . . innumerably gnats, which, by biting a giant both in front and in rear, ultimately exhaust him. They make themselves as unendurable as a group of cruel and hateful devils, and as they grow and attain gigantic proportions, they will find that their victim is not only exhausted but practically perishing'.

Mao Tse-Tung—1937

There would seem to be a number of proponents of guerilla warfare in Australia who believe in the universal suitability of this type of war. In light of the obvious economies of raising an army on light scale, many ignore the fact that operations may occur in the more densely populated areas as well as the remote regions. To rely on guerilla warfare is to accept as a first resort the occupation of the country and the subjugation of the population. Further, guerilla operations by the defence forces leave the population as a whole to suffer any reprisals that may be inflicted. All this is an abrogation of responsibility of the defence force to protect the population.

There would seem to be some confusion between guerilla operations and the totality of revolutionary warfare. Irregular operations have been conducted from the earliest times. As early as AD44, Caratacus, having been defeated by the Romans in pitched battle resorted to guerilla operations, but lacking external support and sanctuary he was eventually defeated. In more recent times Lawrence and Wingate have been among the successful exponents of this type of warfare. It was, however, Mao Tse-Tung, Ho Chi Minh, Vo Nguyen Giap and Che Guavara who added a new political dimension, signalling an era of revolutionary warfare. Of the three, the luminary is undoubtedly Mao Tse-Tung.

Mao's 'long march' to the mountains of Shensi Province in the face of superior enemy forces during 1934-35 has prompted many military thinkers to admiration. His guerilla operations against both the Kuomintang and the Japanese illustrate the usefulness of such operations but it must be remembered that at this stage the military aim was to assist and protect political activity among the population. In the end, it was massive conventional force, made possible by external aid from the USSR, which finally resolved the issue and brought victory to the communists. The battles in Shantung and Manchuria culminating in the communist victory at Hsuchow in 1949 were not won by guerillas but by an army of 600,000 troops in conventional battle array.

Vietnam further exemplifies the transient nature of guerilla warfare and its inability of itself to bring war to a conclusion. Despite effective irregular operations by the Viet Minh against the French, it was conventional combat power which defeated the beleagured forces at Dien Bien Phu in 1954 and presaged victory at the Geneva conference table. Again, General Giap's army was ultimately victorious in South Vietnam in 1975 as a conventional force and not as a guerilla army.

To provide credibility, advocates of guerilla warfare in an occupied Australia must satisfactorily answer three vital questions:

- Where is the inviolate sanctuary to which harassed guerillas may withdraw?
- From where will come the support, in the form of finance, weapons, training and overseas propaganda (public relations if you're squeamish) necessary for a successful campaign? and
- When the war enters Mao's phase three how else but by technologically advanced weapons will the guerillas offset their almost certain disadvantage of numbers?

All this is not to say that irregular operations have no place in the Australian environment,
but rather that a balanced defence perspective needs to be attained in which the place of such operations can be objectively assessed. Military history has shown that although irregular operations are unable to bring a war to a successful conclusion, they can attrite the enemy and pave the way to its destruction.

Technology—Pipedream or Reality?

At the other end of the strategic spectrum lies the potential of technology with its attendant high cost factors. In view of the requirement to defend a continent with limited manpower, the capabilities offered by technology need to be carefully examined. Technology is defined as ‘the science of the industrial arts’ and never before has the world witnessed such an explosion of knowledge and development in the industrial field. The apogee of this development rests with the electron; electronics has had a profound effect upon society at large and the military in particular. Accordingly, aspects of satellite, communications, computer and missile guidance technologies are touched upon here.

Satellites

Major developments for military usage have been in four areas, all of which enhance the preparedness of the force; these are:

- Strategic missile launch warning.
- Communications — developments include both command and control communications to ships, aircraft and ground vehicles already extant and missile guidance communications in an advanced state of development.
- Reconnaissance — provision of electronic and signal intelligence (ELINT/SIGINT) and imagery based on such systems as radar, infra red line scan (IRLS) and thermal imaging (TI).
- Meteorological — provision of accurate, timely data which effects force mobility and indirect fire support.

Battlefield Communications

Innovations in this field have permitted an unprecedented amount of information to be made available to the commander, aimed at improving the operational flexibility of the force. Some developments are:

- Secure man portable voice equipments.
- Closed circuit television (CCTV) for the provision of visual and verbal information between and (at higher levels) within headquarters.
- Improved line communications using fibre optics (F/O). This is significantly lighter than metal cored line, provides multi channel capacity and, if shielded, provides relative security.
- Facsimile transmission—the capacity to transmit maps, photographs, overlays and written material by radio or line.

Computers

Recent overseas developments indicate a substantial improvement in the potential for accelerated passage of information and the amount of detail made available to senior commanders and staffs. The capability to present information in terms of probability has also been enhanced. Examples of this development are:

- command and control systems;
- artillery fire control systems, the more advanced of which can be integrated into a command and control system; and
- logistic operations control systems.

As well as these, the recent breakthrough into miniaturization has had a profound and immediate effect on missile guidance technology. The reductions of size, cost, weight and power consumption made possible by the introduction of the minicomputer has permitted the development of such small missiles as the Air Launched Cruise Missile. Miniaturization is leading to the proliferation of small, accurate, highly lethal and comparatively cheap guided weapons onto the battlefield at an unprecedented level.

Missile guidance

Initial developments in small non nuclear battlefield missiles (anti-tank/assault and air to surface) have been through three generations of command to line of sight (CLOS). All CLOS weapons require the operator to maintain a line of sight to the target throughout flight, and this requirement has been the major detracting factor of this guidance concept. Operator distraction/neutralization results in marginal accuracy on the battlefield. Recent
developments in laser designation however, permit missile guidance systems to 'home' onto targets without exposing the firer to enemy retaliation although the same cannot be said for the designator. The latest developments in terminal guidance ('fire and forget') have lent a new perspective to tactics; major developments have occurred in:

- TV (electro-optical) guidance—a system which uses a camera to 'lock-on' to a target and guide the missile to it.
- Radar guidance — usually used as mid course guidance with another system to provide pinpoint terminal guidance (e.g. dual mode Condor with radar and TV). Other mid course systems include autonomous and co-operative mode use of hyperbolic or satellite navigation systems.
- Infra-red/magnetic signature guidance by means of which the missile homes onto either the heat or magnetic field of the target.
- Inertial guidance—the use of onboard sensors to detect and correct any deviation from a programmed course.

Such advances in small guidance units have led to the development of the Precision Guided Munition (PGM), by definition: 'a guided munition whose probability of making a direct hit at full range—when unopposed—on a tank, ship, radar, bridge or aircraft is greater than half'.

Today it is possible to launch relatively small devastating warheads with a high hit probability at comparatively low cost.

Selection of Capabilities

To date, the approach taken in defence procurement, has been influenced by the 'replacement syndrome' and/or the 'overseas models' approach both of which are responsive in nature. This reactive rather than innovative philosophy coupled with rapid technological development has lead to a popular belief that latest technology is beyond our means. Clearly what is required is an underlying concept for the defence of Australia upon which a 'rationalist' approach will permit selective procurement of weapons and equipment appropriate to it.

THE ARMY CONCEPT FOR THE DEFENCE OF AUSTRALIA

Factors Effecting the Concept

The force must be capable of meeting a wide range of contingencies of varying intensity. As the higher level threats represent the worst problem they will be considered in detail while factors affecting only low intensity operations will be noted where applicable. Australia presents a unique defence problem and experience gained by other armies in Western Europe or the Middle East may not be directly relevant. Many strategic and tactical lessons do have universal application but when applying them to Australia, cognizance must be taken of several factors.

Area, distance and terrain

Australia is a vast island continent some 7,687,000 sq km in area. Characteristically, its population spreads along the coastal fringe principally along the eastern coast and the south western corner. Within some 20,000 km of coastline there are only eleven ports with "roll on roll off" facilities, of these there is only one in the west and another in the north east. This leaves the northern coastal arc from Townsville to Fremantle devoid of modern cargo handling facilities. Operations in this area many have to be supported by Logistics Over The Shore (LOTS) with its resultant requirement for protection of additional coastal shipping. The interior is substantially semi-arid, arid or desert land with a paucity of road and rail communications. About thirty major airfields service the area north of the Tropic of Capricorn providing reasonable potential for air transport and conversely for...
enemy air landing operations. Although the northern and western regions contain resources of great economic importance the industry and population of the south east are vital to a viable defence effort. It follows therefore that although the south east must receive defence priority, there can be no question of surrendering the economic resources of the remainder of the country. In the north or west it will be possible to trade space for time while deploying forces against the invader. In the south east this will not be possible and the enemy must be rapidly contained in the smallest possible area.

The potential enemy

In the past, the 'exercise enemy' of the Australian Army has always been depicted as a basically infantry force with a small number of obsolescent AFVs and a nondescript logistic system. Such an army is unlikely to be capable of mounting an invasion of Australia. In reality, the potential enemy will most likely possess technologies at least equal, if not superior, to our own. Mindful of this, a realistic assessment must conclude that he will have modern air and naval forces capable of protecting his invasion force. An invasion would be launched only if his appreciation of relative strengths indicated a high likelihood of a successful landing and lodgement. His ground force will be mobile, and in view of the likely terrain over which operations will be conducted, this mobility will largely be provided by armoured (mechanized) forces. In the light of the huge distances involved, a potential for air mobile vertical envelopment cannot be discounted.

The provision of warlike stores

Although much has been spoken about industrial self-reliance, the defence industry remains minute and in fact is in a state of attrition. Australia is principally reliant on overseas supply and this reliance attracts a number of penalties, such as:

- political constraints may inhibit the supplier as was the case with Carl Gustav ammunition during Vietnam; and
- the enemy may be able to successfully interdict the sea routes.

The time between the perception of a threat and an attack may be so short that one of the preceding factors may arise before the equipment is delivered. This would seem to lead to two conclusions; first that any equipment adopted by Australia must be such that it could, if necessary be manufactured here and second, if the first is not possible then procurement should include mobilization and reserve stocks. Realistic assessments of warning times indicate that the option to purchase overseas when a threat arises is unlikely to be granted.

Paucity of manpower resources

With a population of only fourteen million, Australian forces will most likely be outnumbered by the potential enemy. The manpower problem is further compounded by the fact that greater industrial self reliance will increase the demand for labour, both skilled and unskilled, in industry. Thus defence planners must allow for the real manpower available to the Services being substantially less than simple population figures would indicate. All this points to a need for economy in the use of ground forces. While the Army remains more manpower intensive than the other Services it is increasingly becoming a weapons intensive, weapons dependent organization. The concept should avoid, at least in the initial stages of combat, a headlong confrontation with enemy combat power. The requirement to attrite the enemy becomes mandatory and effective utilization of those technologies which permit economy of manpower on the battlefield, should be made.

The Concept

In establishing a concept for the defence of Australia focus must be made on the divergent nature of the possible areas of operations. The same potential to trade space for time in the remote areas of northern and Western Australia does not exist in the populated and industrialized south east. This leads to the conclusion that the concept must cater for two modes of operation. Under these circumstances it is unlikely that light forces, with limited ground
mobility, could contain the enemy as suggested in TIB 28. A more sophisticated concept, of attrition by high technology weapons followed by containment and eviction is required.

The concept for ground operations will be discussed in terms of phases for clarity although in certain circumstances some or all phases may be concurrent as the northern and southern modes will require different priorities of effort. In view of the fact that the enemy will intercept the lines of communication from the industrial base to the battlefield, security forces must be available. The threat will include air reconnaissance and interdiction and ground troops ranging from special force operations to major airborne/air mobile landings. In the area of main enemy incursions, three phases may be readily identified.

Attrition

This phase would open with reconnaissance units seeking to identify the enemy's intentions and denial operations being conducted. Air and, if available, satellite reconnaissance would be utilized to direct ground elements to enemy activity. Small OPs and patrols ('hunter killer groups') mounted in light vehicles would be inserted to acquire targets. The areas to be covered and the possibility of multiple landings will require not less than a division to be available for employment in small groups. Needless to say, the viability of the force in this role is enhanced by the ease with which small groups can conceal themselves; aided by the enforced dispersion of enemy surveillance capabilities.

Once suitable targets are acquired they would be designated for attack by aircraft using stand off PGMs (GBU10 or missiles) or battlefield support missiles. The Terminally Guided Sub Missile (TGSM) and cluster bomb warheads under development for the US Lance missile are indicative of the type of weapons best suited to this task. The missile used should have a range of at least 250 km so that it can be kept well back from the main enemy force. As the enemy's L of C lengthens, his communications, logistic installations and battlefield support weapons are attacked by PGM and the ground 'hunter killer' parties. The time and distance afforded to this phase will depend on the area of operations. In the north or west maximum use may be made of the capability to attrite the enemy before joining in decisive battle while in the south east the requirement to defend vital areas will limit the time and space available. Further, the requirement for conventional forces in the south east will probably leave only SAS and Commando units available for PGM designation tasks.

Containment

Once the enemy is reduced to manageable proportions or as he approaches a vital area he must be stopped by heavily armed forces with conventional firepower. Such forces must be able to move and fight under fire and have weapons capable of timely reaction to surprise enemy thrusts. Due to peacetime procurement and training policies the available heavy force is likely to be small and should be husbanded to deliver the 'knockout blow' after maximum attrition of the enemy by PGM. Obviously a landing in the south east would require earlier commitment of the heavy forces to contain the enemy. However, in this area the heavy forces should be readily available and will require less time to deploy.

Eviction

When the enemy is sufficiently worn down by the heavy and airmobile forces, offensive action will be undertaken to evict him. It is unlikely that Australian forces would be capable of destroying the enemy without resort to nuclear weapons. Therefore the aim must be to exert such pressure that the enemy is compelled to evacuate his forces or, at worst, discontinue hostilities and negotiate the removal of his forces.

Firepower and Mobility

Firepower

To meet the firepower requirements of the concept described, the force will need:

- Long Range Designated Weapons (LRDW) which will include sub-missiles carried by a battle field support weapon (eg. Lance) and air delivered Stand-Off PGM;
- Direct Fire Guided Weapons (DFGW) such as anti-tank/assault weapons and shorter range shoulder fired weapons; and
- Unguided direct and indirect fire weapons (small arms, AFV weapons and artillery).
Mobility

The conflicting nature of requirements for operations in both the northern mode and the southeastern mode indicates a need for total force mobility, which will include:

- strategic mobility—the ability to move to a theatre of operations;
- tactical mobility—the ability to manoeuvre within a theatre or area of operations; and
- battlefield mobility—the ability to manoeuvre under fire.

FORCE STRUCTURE: THE BI-MOBILE FORCE

Total force

To meet the wide range of threats over the potential range of areas of operation is beyond the capability of any homogeneous force structure. It will require a bi-mobile force consisting of airmobile and heavy elements supported by a rear areas security force. The use of airmobile forces in low intensity operations is well established and the US Army, in experiments with the Air Cavalry Combat Brigade and Air Assault Division has proved that, with proper tactics, airmobile forces can be used effectively on the conventional battlefield. The composition of heavy combat forces is the subject of far more contention. Such a force needs substantial direct and indirect firepower. It requires battlefield mobility so that forces can redeploy under fire to seize the initiative or counter the enemy’s moves. It must have considerable tactical mobility to allow the commander to impose his will upon the enemy or, at worst to implement a timely reaction. Within the foreseeable future it is difficult to identify any solution to this problem other than AFVs. Tanks, with their characteristic mobility and shock action, together with infantry in MICV/APC will permit operations as a combined team. The third leg of this team should be provided by self-propelled artillery with its inherent mobility and armoured protection.

Army troops

The most significant change to Army troops will be the addition of battlefield support missile units. In the worst possible case, anticipating a dispersal, total deployment of an airmobile division in the initial stages of battle in the northern mode, a battlefield support regiment of six missile launchers (two to a brigade) would need to be raised. The skills required within the missile unit, within the SAS and airmobile units which will locate and designate targets and within the staffs that will co-ordinate the two must be developed. Thus some form of capability is essential. However, as the nature of the unit is such that it is unlikely to be used in situations short of mobilization it could be an ARES unit with an ARA technical cadre. Weapon complexity is not likely to be insurmountable as modern designs emphasise simplicity for the user.

Security Forces

The security forces should have two main elements, air and ground defence. It is probable that the air defence units will be integrated with appropriate RAAF units to form an Air Defence Command. The ground elements will of necessity be lightly equipped, as all available heavy weapons will probably be concentrated with the armoured and airmobile forces. Equipments might include vehicles and light aircraft for patrolling. Australia’s large park of privately and club owned light aircraft might be mobilized for this patrolling role. Ground patrols should be capable of destroying small enemy special forces groups and of containing larger groups. As security operations would concentrate on key installation and population centres and as such areas are usually served by roads, many of the units could be wheeled. The cheaper acquisition and running costs of wheeled A vehicles would minimize the diversion of resources from the heavier equipment of the main forces, despite which it will be important to avoid under-equipping the security forces.

ORGANIZATION OF THE FORCE

The Force-in-Being

Manpower and technology

In developing a force-in-being cognizance must be taken of the fact that manpower is a limited and expensive resource. To augment the paucity of manpower, selected high technology weapons in adequate numbers must be made available. It appears that to balance this requirement manpower costs need to be held down, permitting the procurement of appropriate weapons and equipment.
A proposed structure

The structuring of this force must be such that it can be afforded in war or time of serious threat. In peace, the most that can be expected is a skeleton organization capable of developing the required skills while retaining a limited capability for low intensity operations. In the light of the requirement to train commanders, staff officers and specialized units, the divisional structure, which is the smallest formation to contain all arms and services should be maintained. The envisaged divisional structure, however, is relatively small in size, relying on accurate weapons and effective equipment for development of combat power. The force structure could be developed as follows:

- **1 Division**—The ready division for low level contingency operations, which would consist of an ARA HQ with two ARA brigades and one ARES brigade with supporting arms and services being provided on the ratio 2:1, ARA to ARES. This would be an airmobile division on light scales but capable of being augmented for intensive operations in the south eastern mode.

- **2 Armoured Division**—This division would form the basis of heavy forces, which would consist of a mixed ARA/ARES HQ, one ARA brigade and two ARES brigades with supporting arms and services in the ARA-ARES proportion of 1:2.

- **3 Division**—This division would form the basis of the security forces and would control all ARES field force units not in 1 Div or 2 Armd Div.

Current force transition

The current manpower ceilings would hold units to their present strengths. Four of the six Infantry battalions, on light scales, would constitute the two ARA brigades in 1 Div, the other two would be mechanized and part of the ARA brigade in 2 Armd Div. Armoured units would be reorganized as the requirement for Armoured Personnel Carrier (APC) units would disappear. The independent APC squadron would remain an independent squadron but in the anti-armour role; the APC Regiment would be converted to the tank role and, with the present Armoured Regiment, form the tank strength of the ARA Armoured Brigade. Tank strength and manpower limitations will require regiments of 35 tanks (squadrons of 11 tanks) in peace which will release manpower for the necessary increase in Armoured Centre and RAEME. Within RAA, the two field regiments would form the ARA component of 1 Div Arty while the medium regiment would become part of 2 Armd Div and eventually become a self propelled (SP) regiment. Other arms and service units would divide between 1 Div and 2 Armd Div in the proportion approximately 2:1 with some reorganization necessary in units allocated to 2 Armd Div.

Future Expansion of the Force

The concept for the defence of Australia requires the containment and final eviction of the enemy force. While the force-in-being, based on an airmobile and armoured division would probably be capable of containing the enemy, it would be unlikely to provide a follow-up capability to evict him. Consequently follow-up forces would be required. In view of severe limitations on defence expenditure and the lack of a defence industrial base, it is not feasible to provide timely equipment for such forces without massive infusion of material from a major ally.

CONCLUSION

To arrive at a realistic force structure for the Army it has been necessary to identify the basic problems of defence and derive solutions to them. The matter of defence cannot be couched in simplistic terms. The complexities involved need sober and objective resolution.

Continental strategy

With its limited population and financial resources the only strategy open to Australia is a continental one. Accordingly, the three Services should be structured to defend Australia including our internal and external lines of communication and to project such strike-power as is available after meeting defensive requirements. It follows then, that the Army must be preoccupied with continental defence and can therefore expect, to undertake expeditionary operations only in a low intensity situation.

Maintenance of territorial integrity

The inability of the Services to guarantee
the prevention of enemy invasion forces landing in Australia has been highlighted. The major Army task, eviction, can only be forced upon the enemy by the combat power of conventional arms. Thus, while irregular operations may be able to assist conventionally organized forces by attriting the enemy, they are only useful as an adjunct. The decisive capability of the Army will rest with regular formations.

**Equipment Intensive Forces**

No longer is the Army a manpower intensive, weapons and capital light organization. While it may be more manpower intensive than the other services the Army is a weapons intensive, weapons dependent organization. Manpower is now the most expensive resource in all the Services, restricting all capital expenditure by its requirements for wages and support. There is a requirement for a force in being with an immediate capability for likely contingencies; in the short term low intensity operations. Having met that requirement the force in being must concentrate on training leaders at all levels as a basis for mobilization. Manpower must be held at or below present levels to permit more realistic expenditure on equipment. Unless some form of wage control is introduced even a substantial increase in defence spending should not be wasted on increased manpower but invested in equipment.

**Selective technology**

The imperative to use technology for defence purposes has been established; however, the high cost of modern defence equipment indicates that Australia cannot afford all of it. Financial constraints will not permit responsive procurement of the 'overseas model' or 'replacement' type. Accordingly Australia must adopt a 'rational' approach based on a developed concept for defence. The selection of appropriate technology means that although Australia may not always have the latest or the best weapons available, it will have the equipment best suited to its requirements. This must include surveillance devices, PGM, and the means of achieving strategic, tactical and battlefield mobility.

**Self Reliance**

For a variety of reasons it may not be possible to procure defence equipment overseas once a threat is perceived and the difficulties will be increased on the outbreak of war. Thus equipment adopted by the Australian Army must be either:

- such that Australian industry is capable of manufacturing it even though local production may not be economical for peacetime procurement of limited quantities; or
- initial procurement must be sufficient to cover war establishments of regular and reserve forces as well as providing reserve stocks and adequate spares for wartime consumption rates.

‘State of the art’ purchases must be balanced against considerations of how urgently the item will be required on mobilization and how long it will take to implement manufacture. It must be remembered that the force in being is designed for expansion and that expansion in Army manpower is quite useless unless adequate stocks of equipment are available or can be rapidly acquired.

**The bi-mobile force**

The requirement for force mobility has been established in light of the Australian environment. The bi-mobile force, centred on air mobile and armoured forces is not only appropriate to Army defence requirement but is economically feasible. Lack of available space precludes the possibility of developing, in detail, the organizations of this force which would highlight these economies. It will, however, be the subject of a supporting article at a later stage. Ultimately, effective defence will only be the product of adequate financial expenditure.

**Professional Responsibility**

The free and informed discussion of defence problems by the public, which holds ultimate electoral control of expenditure, is inhibited by lack of information. Some restrictions on information are unavoidable as certain official secrets must be preserved. However, the reticence of members and ex members of the Services to discuss their specialization in public forum is unmatched in any other profession. The limitations placed on subordinate members by Australian Military Regulations and Orders place the responsibility (pending amendment of the Regulations) on the highest commanders.
It may be argued that the Generals are responsible to, and should not embarrass the Government of the day. The responsibility of the Defence Forces is to the entire population of Australia, not just to that minute portion of it that forms the Government. If the population is to make its opinions known in elections it must have facts on which to base those opinions. If the Defence Force commanders, in their experience and knowledge, perceive a requirement it is surely their responsibility to make it known to the electorate. If a majority of the population makes a decision to ignore this requirement then it is on their own heads and the defence forces must accept it, having fulfilled their duty to the people. The concept of taking major decisions direct to the population as a whole is not without precedent in the political ideologies of the world—it is called democracy.

NOTES
1. Defence White Paper, p. 3.
2. Ibid., p. 6.
3. Ibid., p. 6.
6. Ibid., p. 6.
7. Ibid., p. 10.
12. Ibid.
16. GBU—Glide Bomb Unit.

TRADITIONS AND CUSTOMS OF THE ARMIES OF THE WORLD

Army military and civilian personnel throughout the world are being asked to contribute an article to a book to be titled “Traditions and Customs of the Armies of the World”.

This document will have a separate section for unit and Army-wide traditions and customs for the Army of each country.

In addition, some of the general topics to be covered will be historical background, wartime and peacetime differences, volunteer and draft armies, the impact of technology, the impact of women, relationship to success in battle, and probable future trends.

The volume is being compiled and edited by COL Clyde D. Boden, USAR-Ret., whose military roots go back 40 years. A pre-World War II soldier, he commanded combat troops in Europe, served on the Army Staff during the Korean War, and commanded the DCSPER Mobilization Designation Detachment. COL Boden is a 1968 graduate of the Command & General Staff College and a 1970 graduate of the Army War College.

Draft manuscripts, photographs, and drawings should be submitted to COL Boden, 512 N. Livingston St., Arlington, Va. 22203 (703-528-7913) no later than 31 August 1978. They will not be returned but their receipt will be acknowledged.

Authors are requested to include a 50-word or less biographical sketch for inclusion if their articles are accepted and a 100-word or less synopsis of their article to be used as an introductory paragraph. All who submit copy will receive a copy of the first printing.
INTRODUCTION

OVER the last year or so a great deal has been written and spoken about a proposed new tactical fighter force (TFF) aircraft for Australia. Unfortunately, the debate seems to have been conducted at two extreme levels; firstly, with more heat than light in the press and secondly, with considerable light but little acclaim in specialized forums such as the conference held by the Strategic and Defence Studies Centre of the Australian National University in November 1976. This article offers a basic exposition of the main points involved in the hope that it will give a better feeling for the subject and help to eliminate the false accusation that the RAAF just wants a shiny new toy.

Basic Principles

What fighter aircraft are all about is control of the air. For the same reasons that armies seek to take and hold ground and navies aim to clear and patrol oceans, so air forces seek to gain and maintain control of air space. Indirectly this might be done by destroying enemy aircraft before they get airborne (preemptive strike), as was done by the Israelis in the 1967 war, or by isolating the airspace with an umbrella of surface-to-air missiles, as the Egyptians did in the 1973 war. Each of these methods is limited to special circumstances and the only generally applicable way of ensuring control of any airspace is by fighting directly for it.

Such fighting has two basic forms—defensive and offensive. Defensive operations are usually associated with interception; with the fighters at readiness to scramble and intercept incoming raids under ground based radar control. Offensive operations are typified by the fighter sweep in which aircraft fly out to clear and occupy enemy airspace for a period of time. Of course, there are many variations and combinations of these two basic forms. The airspace in question may be over friendly territory, enemy territory or no man's land; the time involved may be months or minutes; and the degree of control may vary from absolute air supremacy to the occasional foray warning off potential intruders.

To meet these two basic types of operation ideally requires two specialized aircraft; an air defence interceptor and an air superiority fighter. However, the requirements of each role are sufficiently similar that a single aircraft is usually called on to perform both. Additionally, such aircraft are often called on to take part in air-to-surface operations once control of the air has been won. This resultant 'jack-of-all-trades' is called a tactical fighter.

The Tactical Fighter

From the foregoing one can see that a tactical fighter must inevitably turn out to be something of a compromise. For stand-off interception, emphasis must be placed on rapid climb, high speed and long range radar and missiles. For close-in air superiority, emphasis must be on the aircraft's ability to manoeuvre and its possession of effective close combat missiles and guns. For surface attack, emphasis needs to be on the ability to carry and deliver a reasonable quantity of guided and/or unguided air-to-surface weapons. Some of these requirements are conflicting and optimization for one role may preclude the aircraft's use in another. For example, an aircraft optimized for air-to-surface operations would have only subsonic or at most transonic speed and a high wing loading. These characteristics would effectively preclude its use as an interceptor or air combat (air superiority) aircraft in all
but the most limited circumstances. On the other hand optimization for either the air intercept or air superiority role would not preclude air-to-surface operations except in the most demanding situations. The RAAF's Mirage III-O aircraft is a useful example. Designed as a high altitude interceptor, it has been used as an air superiority aircraft with some success, and in addition has a limited, but useful, air-to-surface capability. At the other end of the scale, the RAN's A4 has proved to be a most successful surface attack aircraft but has never even been considered in the air superiority role and if used as an interceptor is restricted to subsonic targets in clear weather.

**WHY DOES AUSTRALIA NEED A TACTICAL FIGHTER?**

When faced with the not inconsiderable problems associated with acquisition of a new tactical fighter, it is not difficult to ask “Do we really need it?” The answer ultimately lies, as with all equipment procurements, in an assessment of future risk. What is the likelihood that a situation will arise for Australia which demands such equipment; and what would be the penalty for not having it if needed?

History shows that, if nothing else, future events are largely unpredicted and unpredictable. With that in mind, it is relevant to note that while present circumstances may not suggest a definite need for a new tactical fighter, they equally do not clearly indicate that one will not be needed. In such a condition of uncertainty, the penalty for not having a given capability must become the major criterion for choice. I suggest that the penalty for not having the necessary degree of control of the air would be unacceptable. Without it, all friendly air operations could be greatly inhibited if not stopped. This in turn would have its effect on other services' operations and probably on civilian life and industry. For example, the ARA would have to increase greatly its anti-aircraft defences and/or place considerable limitations on the movement and concentration of men and material. The RAN could find itself shadowed wherever it went and subject to continual attack. On the civilian side, extensive passive defence measures could be required to protect both people and industry.

In a way, it is unfortunate that Australian forces have nearly always operated in a friendly air environment. The consequence is an Australian tendency to take such for granted and an unconscious resistance to accepting the need for control of the air. Just as paying premiums on an insurance policy which has not been called up is resented, so maintaining a fighter force which has not recently been used is also resented.

**WHAT IS WRONG WITH THE MIRAGE?**

Assuming that the need for a fighter force has been accepted, the next logical question is, “What is wrong with the Mirage?” The Mirage III was designed in the 1950s and has been in service with the RAAF for over fifteen years. It is coming to the end of its useful life not only in a mechanical sense but also in an operational sense. Its mechanical problems, such as fatigue, have been widely publicized and comment has been made on how such problems could be overcome, e.g. a structural repair program could be undertaken. Indeed, there is no reason why the Mirage could not be kept running for many years. But is it worth doing? Just as an old car has more and more breakdowns and requires more and more money to keep it going, so old aircraft become less reliable and more expensive to maintain, i.e. the bathtub effect (Fig. 1).

The increasing cost of maintaining the Mirage III would not in itself cause the Air Force to seek a new aircraft now. Unfortunately this aircraft will soon be incapable in operational terms. As the capabilities of new western and Soviet aircraft of all types have increased since the 1950s, so the ability of the Mirage III to match them, both offensively and defensively, has gradually diminished. The technological gap is widening and the time is approaching where it will no longer be a question of what would be beyond the Mirage's capabilities but, instead, what would be within them.

The question of updating the Mirage then comes naturally to mind. This is not a simple matter. With regard to the airframe, the basic materials in it (aluminium and steel) cannot be replaced to take advantage of newer, stronger and lighter materials such as titanium and boron composites. Therefore we are restricted by an airframe which is ‘overweight’
in modern terms and the aircraft's performance, even allowing for a new engine, could not be improved to equal that of newer aircraft. More importantly, however, the avionics of the Mirage (e.g. radar, navigation and communication systems) and its chief weapons (the Matra R530 and the Sidewinder 1A air-to-air missiles) are no longer up to the task. They are essentially products of thermionic valve technology with all that implies in terms of reliability and performance. What is more they form an integrated system with each part matched to the other. Consequently, piecemeal replacement of one part of the system, such as the radar, by more modern equipment would achieve little as the remaining parts would still limit overall performance. The alternative, a complete avionics refit, would be a most complex and expensive business amounting almost to a new design.

In short, while it is possible to alter the Mirage in minor ways to stretch its useful life somewhat, any attempt to achieve anything akin to current fighter standards would be such a major undertaking as to amount almost to designing and building a completely new aircraft. In addition, even if this were considered desirable for political or financial reasons, there must be considerable doubt as to Australia's ability to undertake such a task.

WHAT THEN ARE THE DIFFICULTIES?

Defining Objectives

One of the more obvious difficulties in acquiring new tactical fighter aircraft is deciding just what compromise will be accepted in terms of aircraft/systems capabilities. At a time when there is no obvious threat, the amount of emphasis which ought to be placed, for example, on all weather air defence vis-a-vis interdiction cannot be fixed with any certainty. Even if a modicum of agreement were reached concerning such emphasis, interpretation of what this means in specific aircraft avionics and weapons capabilities could be almost endless. Because possible aircraft are restricted, through lack of an indigenous design, to those meeting other nations needs (or at least resulting from their compromise) the situation is further complicated.

As a result, the normal process of acquisition is reversed. Instead of deciding what is needed and building or buying to those requirements, the capabilities of various aircraft are ascertained and matched against a range of possible Australian circumstances to see which copes best across the board. When this has been done, the extent of mismatching becomes obvious. Each particular aircraft/system then tends to be vetoed in turn because of its shortcomings in one or another potentially dangerous circumstance.

Number of Types

At this stage of the discussion the two-type solution deserves examination as a possible way out of the impasse. The conflict in basic design requirements for air-to-air and air-to-surface roles suggests the use of specialized aircraft in these two roles. This, however, is feasible only where the numbers involved in each role are sufficiently large to counter the effects of increased maintenance and support effort; and also large enough to give a reasonable guarantee of doing the separate jobs unassisted. In the case of Australia's tactical fighter force, these criteria are unlikely to be met. The present Mirage force consists of less than a hundred aircraft and there is no prospect of a new aircraft being procured in the same quantity. If this lesser number were to be further divided in two the resulting penny packets might not be capable of meeting even low level contingencies. Equally importantly the cost of supporting the force would rise significantly and place further strains on an already extended Air Force support system.

Cost

Consideration of numbers leads to what is undoubtedly the major difficulty in acquiring a new tactical fighter—cost. As with everything,
inflation has taken its toll. Not only that, ever­more demanding requirements arising from technological advances mean more complex systems which cost proportionately more. The point has been reached where the question is being asked: “Can we any longer afford the amount involved?”

This is a fundamental problem not confined to the TFF Project alone. All Defence equipment procurements have been affected by similar cost escalations. At the same time, the funds available for capital equipment have remained much the same in numerical terms (Table 1). The elimination of an essential component of our force structure because we could not afford it would have implications for all other service projects, large or small. Competition for funds is nothing new, but if fundamental elements of the Services are forced into ‘life or death’ conflict because of cost, as seems imminent with the RAN’s aircraft carrier and the RAAF’s tactical fighter, a new era has begun for this country.

**Industry Participation**

Another difficulty which the TFF Project faces is that of Australian Industry Participation (AIP). Apart from the well known problems arising from the general state of our aircraft industry there is a basic conflict which bedevils the whole subject. The RAAF quite reasonably wishes to obtain a proven aircraft rather than speculate on a design on paper (as was done with the F111) which must have large cost and development uncertainties. This means that the aircraft should have been in service with a major Air Force for a few years before selection. Unfortunately this approach also means that production in the home country should be well advanced; all contractors and sub-contractors already being set up and well down the learning curve. This in turn means that Australian industry is in a very poor position to compete and prospects for AIP are poor.

For AIP to be much more than an afterthought Australian industry should be in a position to bid on the initial aircraft contracts which are let before the aircraft enters service in the country of origin, i.e. before the aircraft is proven. A compromise between the Air Force and the industry positions is not a sensible solution as it entails the worst of both worlds. The TFF Project comes at a time when the critical Government decisions on the relationship between industry and the armed forces have not been taken. As a result, the tug of war continues.

**Technological Change**

Technology itself is proving to be a difficulty in view of the long life which can be expected from a new aircraft. With the present pace of technological developments, there is little prospect that an aircraft developed in the mid 70s will still be effective by the year 2000. The temptation, therefore, is to wait a little longer for those new developments which lie tantiliz-

**TABLE 1**

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<td>1407.0</td>
<td>1790.6</td>
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**Note 1:**

Quoting the specific costs of aircraft can be misleading if the numbers, amount of support and conditions of payment are not taken into account and discussed at some length. Project costs quoted as portions of the Defence capital expenditure over a number of years perhaps give a better idea of the likely cost impact of the Project but again, without knowledge of how much of that capital expenditure is already committed and what else must be foregone, the impression given can be somewhat false. Suffice to say the project cost for a new tactical fighter would be of the same order as that for a new aircraft carrier and its aircraft for the RAN. Unfortunately, they are both relatively expensive and fall into a similar time frame.

(From Defence Reports covering period.)
ingly on the horizon. Each procurement proposal is today beset by suggestions that a little delay may produce that magical cost-saving technological breakthrough which all manufacturers imply is just around the corner. The tactical fighter project is more susceptible than most to the dictum that "the better is the enemy of the good".

Intangibles

Finally there are some intangible aspects which ought to be considered. Firstly, how is the equipment obtained going to affect the morale and hence the fighting effectiveness of the people who must use it? Unfortunately trade-off analyses of loss ratios in battle versus equipment costs rarely include this factor because it is so difficult to measure. Yet it is crucial and is certainly not a constant. Top line equipment engenders confidence which is reflected in high morale and, ultimately, a better performance in battle. In this case the crews, who must have the level of intelligence needed to operate complex equipment in demanding situations, will realize better than most the full implications of procurement decisions. It is incumbent on all decision makers to ask themselves, "Would I still make this decision if it were I who had to use the equipment?"

The other important intangible which needs to be kept in mind is the effect that decision would have on the international perception of our national will. I do not suggest that only by always buying the very best can our national will be demonstrated. However, less than optimum equipment can only be credible when national priorities clearly indicate a minor

Mirage III Os of 77, 3, 76 (disbanded), 75 Squadrons, OCU No. 2, and Air Research and Development Unit, — the users.
or non-vital role for that equipment. At the moment, such national priorities do not seem to be clearly spelt out.

**IS THERE AN ANSWER?**

It has not been possible for me to discuss the various proposals put to the RAAF or the individual capabilities of aircraft for obvious reasons. However, I would be remiss if I did not point out that each is sufficiently different as not to be directly competitive. Each has its own peculiar strengths and weaknesses. Greater cost does not necessarily indicate greater overall capability. It generally indicates a very high level of development of one particular capability of the aircraft. If that capability is considered to be critical, ie. 'second best won't do', then the extra cost is justified. If not, it is so much waste of money for Australia.

By the same token there is a certain baseline below which one cannot reasonably go. The air vehicle (engine/airframe and functional systems) cost for a modern tactical fighter is at least $5 million. Since the avionics (eg. radar, communications, navigation and electronic warfare systems) must be added to this it is apparent that the so called cheap option is a myth.

The foregoing—which could not possibly be more than a survey of salient points—has hopefully shown that there is no simple answer to the questions surrounding the acquisition of a new tactical fighter. In fact, a major difficulty is that there are a large number of possible answers each of which can be logically supported depending on the assumptions chosen.

If you have bothered to read this article, you probably have in mind your own private solution. I merely ask: "Would you be willing to risk your life on it?"

**TABLE 2**

**POSSIBLE TFF CONTENDERS**

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Main Role</th>
<th>Secondary Role</th>
<th>Crew</th>
<th>Maximum Weight</th>
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<td>Panavia Tornado (IDS)</td>
<td>Interdiction Nuclear Strike</td>
<td></td>
<td>2</td>
<td>24500 kg</td>
</tr>
<tr>
<td>Panavia Tornado (ADV)</td>
<td>Air Defence</td>
<td></td>
<td>2</td>
<td>25000 kg</td>
</tr>
<tr>
<td>Sepecat Jaguar</td>
<td>Interdiction</td>
<td>Close Air Support</td>
<td>1</td>
<td>14500 kg</td>
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<tr>
<td>Fairchild A-10</td>
<td>Close Air Support</td>
<td></td>
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<td></td>
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<td>31370 kg</td>
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<td>General Dynamics F-16</td>
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<tr>
<td>Northrop F-5E</td>
<td>Air Superiority</td>
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<td>1</td>
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  —Janes’ All the World’s Aircraft.

1 Estimated.

**Editor’s Note**

On 7 April 1978 the Minister for Defence announced that the Government had decided that project development proceed with emphasis on a new fighter with primary capabilities in the air-to-air role; and to confine further evaluation to the McDonnell-Douglas Corporation F15 and F18A, the Northrop Corporation F18L, the General Dynamics F16, the Panavia Tornado and the Dassault-Breguet Mirage 2000. At the same time the Government will examine proposals for refurbishment of the Mirage III O to provide an important complementary capability through to the late 1980s.
CONSIDER THE REVERSE SLOPE

First, consider the defence of Continental Australia with its mind-boggling logistical requirements and its myriad of tactical possibilities. Without speculating on the strategic and political aspects of the problem, let's assume that the assaulting enemy, whether he marches out of TIB26 or not, would probably be highly mobile, using armoured fighting vehicles and assault guns capable of accurate and lethal, long range direct fire. Initially, at least, the Australian Army would be on the defensive, fighting delaying actions, area defence, and perhaps even mobile defence battles. In these battles the repeated employment of defended localities and anti-armour firing points in relatively exposed forward slope positions may result in unacceptable casualties, and the administration of these positions by day may be difficult. To be successful, the defender will need to use the ground shrewdly to lessen the effect of the enemy's weapons while increasing the effect of his own. He may have to avoid the tendency to always occupy the forward slopes of the high ground simply because it is the high ground and because his previous training has stressed forward slope defence.

A somewhat novel, but by no means untested, alternative is the reverse slope. This form of defence has been successfully employed on numerous occasions ever since Wellington established its reputation in the Peninsular Campaign. In fact throughout World War I, World War II and Korea, Australian Forces and their allies both encountered and employed reverse slope defence. Perhaps no more than one in ten or even one in twenty future defensive battles will be fought on ground and under conditions appropriate for reverse slope defence. However, since the destructive fire power of most modern armies is steadily increasing, the reverse slope defence, because of its peculiar advantages of protection, may be of even greater value in the future. Unfortunately, no current Australian Army doctrine exists which provides a detailed description of reverse slope defence or the techniques for its employment. Although paragraph 1655 of The Division in Battle, Pamphlet No. 1, dated 1970, suggests that reverse slope positions may on occasions be appropriate, no detail as to implementation is provided. The perceived need for such detail has prompted this writing. The characteristics and concepts for employment outlined in this article represent a compilation based on several United States sources, and the emphasis is primarily directed at rifle company level.

CHARACTERISTICS

What actually is reverse slope defence, and what distinguishes it from a forward slope defence? One definition describes reverse slope defence as one organised on that portion of a terrain feature which is masked by a crest from enemy direct fire and ground observation (See Figure 1). This definition was modified slightly
in 1945 by Lieutenant Colonel R. G. Emery who stated that the actual fighting positions or pits of the forward platoons should extend back from the crest only to the maximum effective range of small arms fire. The basic definition highlights the major, unique characteristics of reverse slope defence: that it is used to get concealment from enemy ground observation and obtain protection from enemy direct fire weapons which otherwise could either destroy your own positions or suppress the fire of your weapons. If Colonel Emery’s stimulation is adhered to, the majority of forward platoon positions will not be able to see or engage the enemy until he is within effective range of their small arms — another important characteristic of reverse slope defence.

To further qualify the definition, it should also be noted that not all of the main fighting positions of a unit on the FEBA need to be sited on the reverse slope in order to effectively employ this form of defence. For example, a battalion will rarely conduct a strict reverse slope employment along its entire front; but it might have one or two companies sited in reverse slope positions. There are also a number of layout variations at company level which will be described in detail later.

In addition to providing concealment and protection for forward positions, the reverse slope defence is also designed to impose maximum casualties on the enemy forward of the position just as in forward slope defence. However, the reverse slope defence can also be used to deceive the enemy as to the true location of the main forward defensive positions and to obtain maximum surprise, fires on the enemy as he crosses the skyline.

Finally, the reverse slope defence must be designed to deny the crest of the defended feature to the enemy — even though the bulk of friendly forces are located behind the crest. Therefore, the overriding requirement in planning a successful reverse slope defence is to ensure that control of the crest is achieved and maintained.

CONDITIONS

These special characteristics lead us to a consideration of the conditions which might influence a defender to choose this form of defence rather than the more usual forward slope defence. At least one of the following conditions must exist to justify selection of the reverse slope.

- When the forward slope cannot be occupied due to enemy direct fire (i.e. when the enemy is in a position to observe and fire, and when lack of cover and concealment on the forward slope makes it untenable).
- When the forward slope has been lost or not yet regained. (A distinct possibility in a fluid battle situation where the initiative can quickly shift).
- When the ground on the reverse slope provides for better fields of fire than the forward slopes, (i.e. when the forward slope is an escarpment or is covered by thick vegetation).
- When it is necessary to avoid occupying disadvantageous ground such as a dan-

![Diagram of Reverse and Forward Slopes](image)
gerous salient or re-entrant, (i.e. when a bulge in the FEBA could permit the enemy to cut-off or by-pass defensive positions).

- When occupation of the forward slope is not essential for observation, (i.e. when the front can be adequately observed from other locations).
- When it is necessary to achieve surprise and to deceive the enemy as to the true location of main defensive positions.

**ADVANTAGES AND DISADVANTAGES**

If at least one of these conditions exists, a commander could be justified in considering further the selection of reverse slope defence as a course of action; but he would have to carefully weigh the advantages and disadvantages involved. Even though several of the above conditions may exist, the advantages of using the forward slope may still outweigh those offered by the reverse slope. However, the advantages of the reverse slope include the following:

- Defenders will be afforded protection from enemy ground observation and direct fire weapons. Therefore, the enemy cannot make a detailed reconnaissance of your position, and it will be more difficult for him to suppress the fire of your weapons.
- Unless he has an air observer, the enemy will be restricted in his ability to deliver accurate indirect fire on your positions. Therefore, the effect of his mortar and artillery fire will be reduced.
- The enemy may be deceived as to the true location of your main fighting positions until he has advanced to close contact at which time he will be within effective range of the majority of your weapons.
- Defenders on the reverse slope will have greater freedom of movement, particularly by day — but depending on the enemy’s air observation capability. Fighting positions, fields of fire, and obstacles can be improved with less enemy observation and interference; and, administration of the unit can be more easily accomplished.
- Finally, the movement of counter-attack or counter-penetration forces may be facilitated if it is masked by the crest from enemy observation and fire.

Although in many cases these advantages may be significant, the astute commander cannot fail to recognise and appreciate the various possible disadvantages listed below.

- Observation of the enemy to the front may be limited simply because the crest is interposed between the likely enemy locations and the bulk of defending troops. Therefore, the defender’s capability to accurately adjust indirect fire may be reduced.
- The range of our organic direct fire weapons may be restricted. Certainly, if our main fighting positions are between 200 and 400 metres from the crest, at least some machine guns will not be able to fire at their maximum effective range.
- The defender will have a limited capability to achieve effective direct fire and observation on any minefields or obstacles to the front of the feature.
- If the enemy can seize the crest, he can attack the defenders’ positions while moving downhill, and a counter-attack to eject or destroy him will have to move uphill.
- Finally, the reverse slope defence can be particularly vulnerable to a night attack. Because of the defenders’ limited observation to the front, the enemy may be able to deploy for the assault in a forming-up place close to the feature with little or no interference.

**ORGANIZATION AND LAYOUT**

When a commander has in his appreciation weighed the relative advantages and disadvantages and has decided to employ a reverse slope defence, the next step is to develop the defensive organisation. In determining his layout he must attempt to use each advantage to the utmost and to minimise the effect of the disadvantages, and he must remember that the defence will not be complete or effective unless control of the crest of the feature is ensured by the disposition of his troops and by fire support.

For the rifle company commander, the assessment of tasks and layout of his platoons will depend on several additional factors including
his mission, the frontage he has been assigned, and likely enemy approaches. When the reverse slope has been selected to be occupied as the main fighting position (as in Figure 2), the forward platoons must be located close enough to the crest of the feature to control it by fire, yet far enough back from it to give the troops time to react to an enemy attack. Weapon positions should be sited so as to permit maximum effective surprise fire on the crest, on approaches around the crest, and, if possible, on the forward slopes of adjacent terrain features. Ideally the forward platoons should be mutually supporting, and designated machine guns from these platoons should assist in achieving mutual support with adjacent companies.

Often the most serious disadvantage of a defensive position on a reverse slope is the difficulty of maintaining observation of enemy activity to the front. To offset this disadvantage, the commander can employ observation and security groups on or just forward of the crest. The size and composition of the groups may vary, but usually they should be as small as possible during daylight. For a rifle company in defence these groups might range from a few men to a reinforced section including artillery and mortar forward observers. They should be positioned where they can observe and bring fire to bear across the entire frontage. In order to provide a measure of security as well as observation, these groups should be equipped with machine guns, and, if appropriate, anti-armour weapons to aid in deception and to impose delay on the enemy if required. Troops and equipment for these groups will normally be taken from the depth platoon in order to leave the forward platoons intact for the major defensive battle. The groups will normally be augmented at night since periods of reduced visibility require increased security measures, and because the reverse slope defence is particularly vulnerable to a night attack. In fact, if the commander appreciates that a night attack is likely, the bulk of troops (perhaps both of the two forward platoons) might be required to move to forward slope positions along with the observation and security groups. In addition, the groups should have land line communications with the company commander; they should be equipped with appropriate surveillance devices; and they should have prescribed and protected withdrawal routes back to the depth position. Certainly reconnaissance and fighting patrols can augment the capabilities of the observation and security groups and will be used to harass and delay the enemy and to provide early warning of his approach.

The adoption of a reverse slope defence often requires that an increased and somewhat unique emphasis be placed on the consideration of depth. Unlike the forward slope defence in which depth is relevant only forward of the ground of tactical importance (GTI); in reverse slope defence at company level depth elements will frequently be located well behind the Company GTI, if it in fact has been designated at all. However, in positioning the depth platoon, the company commander should endeavour to place it where it can help block likely enemy approaches and assist in halting penetrations, where it can support forward platoons by fire, and where it can help protect the flanks and rear of the company position. If at all possible, machine guns from the depth platoon should be able to fire onto the crest of the hill being defended. In some cases this can best be achieved by positioning the depth platoon on the counter-slope (i.e. the forward slope of the next hill mass to the rear). If there is no suitable high ground to the rear of the...
FEBA, the depth platoon will then also occupy positions on the reverse slope — only somewhat further back from the crest than the forward platoons. And, as previously mentioned, the depth platoon will normally provide most of the troops and equipment for the observation and security groups.

The company observation post should be located in a position which provides the best possible observation of the battle area, the platoon positions, the flanks, and the likely enemy approaches. Normally the OP can be established somewhere near or within the depth platoon position so that personnel in the OP can observe and be protected. In selecting a site for the company headquarters, the commander should consider a central location near the rear of the company position to facilitate control. The position should have concealment, cover, and good routes for resupply; and it should be located where it will not interfere with fire support or the expected manoeuvre of counter-penetration or counter-attack forces.

Just as in a forward slope defence, a commander must plan for anti-armour defence in depth ensuring that his anti-armour weapons are mutually supporting whenever possible. If the company commander has Medium Range Anti-Armour Weapons such as 106mm recoilless rifles or Anti-Tank Guided Missiles available for his employment, he should consider siting them initially with the observation and security groups, which would allow them greater range than if they were sited with the forward platoons. When their firing positions on or forward of the crest become untenable, they could be moved back to the vicinity of the depth platoon or to other alternative firing positions from which they could fire onto the crest and cover approaches around the defended hill. Organic company anti-armour weapons such as the MAW and LAW should be employed to deny the enemy control of the crest and to fire onto approaches around the crest. In many cases enfilade fire can be achieved on armour approaches by the careful siting of anti-armour weapons in reverse slope positions, which can also provide protection for these weapons from enemy tank fire. Hopefully, the enemy armour will not be able to see or to fire at our defensive positions until he is within range of our anti-armour weapons. Also, if some of the enemy armoured vehicles can be channelled to move over the crest itself, they will become a more vulnerable target, and as they cross the crest they may not be able to depress their guns sufficiently to engage the majority of our positions.

Planning indirect fire support for a reverse slope defence parallels that for defence of a forward slope: the commander will need to plan for long range and close defensive fires as well as final protective fires (FPF). However, in a reverse slope defence the FPFs are selected not only to break up the enemy's assault but also to assist in controlling the crest. To accomplish these tasks, the FPFs are normally located either right on the crest of the defended hill itself or just on the friendly side of the crest where they can be observed and covered by fire. The effectiveness of the FPFs can often be enhanced if selected machine guns can be designated to fire into them and if the selection of FPFs is co-ordinated with the barrier plan (see Figure 3). Because observation forward of the crest is difficult, alternative OPs for forward observers may have to be selected on vantage points (perhaps in other unit areas) from which they can direct fire on the forward slope.

The reverse slope defence commander should plan to use and improve all natural obstacles.
in his area, and he should try to use wire, booby traps, and minefields to break up the enemy assault, to canalise him into killing zones, and to force him into the bulk of defensive fires. Because the majority of his forces will be behind the crest, it will be difficult to achieve good observation and effective fire on obstacles placed forward of the crest. For this reason the best place for a protective minefield may be on the crest itself or between the crest and the FEB A.

If, during an attack enemy elements gain the crest or simply seize and occupy the observation and security group positions on the forward slope, the commander may have to order a counter-attack to regain these positions and drive any remaining enemy off the crest. But he must be cognizant of the company's capabilities and limitations in this regard. In order to conduct a counter-attack at company level the enemy penetration must be contained by the forward platoons, the enemy cannot be reinforcing that particular penetration, and the enemy penetration cannot be of a size greater than that which can be handled by the company. In most cases the company could not afford to commit much more than the depth platoon in a counter-attack. Therefore, if the above conditions do not exist, then a company level counter-attack cannot be made, and the depth platoon should simply support the forward platoons by fire and assist in holding the enemy penetration until a larger counter-attack can be mounted by battalion or, more likely, task force. However, control of the crest is the key to success in the reverse slope defence; and, if the company cannot destroy or dislodge the enemy from the crest by fire, then a counter-attack must be launched to eject him or the defence is no longer tenable. As long as the enemy occupies or controls the crest, the defence is seriously threatened and all the advantages of the reverse slope are negated.

**VARIATIONS OF REVERSE SLOPE DEFENCE**

In addition to using the reverse slope for a main battle position as described above, it can be used primarily as a field of fire or simply as an area to afford sheltered positions for troops. If both the forward and reverse slopes of a feature are unsuitable for main sub-unit positions, the feature can still be denied to the enemy by using the reverse slope as a field of fire or killing zone for weapons sited on the forward slopes of nearby hills (see Figure 4). The use of flanking hills for positions frequently provides for grazing and perhaps enfilade fire on the reverse slope and for fire on otherwise unprotected areas just over the crest. This variation can also be used when there is simply not enough space on the reverse slope to employ the forward platoons (i.e. when there is less than 200 metres from the crest to the base of the hill).

When it is necessary or desirable to use the fields of fire afforded by the forward slope as much as possible, but at the same time reduce exposure to enemy observation and direct fire; a third variation of reverse slope defence may be employed. In this case fighting positions for the entire company are prepared on or forward of the crest. However, these positions are fully manned only at night or when a daylight attack is imminent; at other times the majority of the company stays in sheltered positions or bunkers on the reverse slope. A skeleton force from each platoon occupies the forward positions to provide early warning and engage the attacking enemy while the remainder of the company moves forward to the fighting positions via trenches or other covered and concealed routes.
This particular variation depicted in Figure 5 was used on several occasions by Australian Forces in Korea when enemy observation and direct fire made daylight occupation of forward slopes dangerous and administration difficult.

The three major variations of reverse slope defence will require modifications to fit specific local conditions, and they can be employed frequently with one another or in conjunction with a defence based originally on the forward slope. Even if all of his main fighting positions are on forward slopes, a commander should try to locate alternative positions on reverse slopes to be occupied if the forward slope positions become untenable. Although this would not primarily be a reverse slope defence, the selection of those alternative reverse slope positions could be based on the techniques outlined in this article. However, no matter which form or combination is used, one fact is clear: the integrity of the defensive position is maintained only so long as we retain control of the crest either by physically occupying it or by denying it to the enemy by fire.

**Conclusion**

A good defence is based on common sense, a thorough knowledge of the enemy, and the intelligent use of ground and your available resources. History can provide many examples of successful defensive actions conducted on reverse slopes; and a commander might find himself using the reverse slope virtually any time he is required to hold ground. The key to its success depends on controlling the crest and properly applying the basic considerations or principles of defence.

The use of reverse slope defence should be at least considered in his appreciation by every defender who is outgunned, less mobile, numerically inferior, or operating on disadvantageous ground.

**BIBLIOGRAPHY**


**Award: Issue No. 9 (March/April 1978)**

The Board of Management has awarded the prize of $30 for the best original article in the March/April 1978 issue (No. 9) of the *Defence Force Journal* to Major L. N. Francis for his article "The Case for Rationalization of Our Defence Supply Management".
IN recent years, a great deal of criticism has been levelled against the Defence Forces for the apparent lack of defence and surveillance of our own coastline—some of it warranted, but most, the usual uninformed nonsense that the forces tend to suffer during peacetime.

The problem of seaward defence has existed for Australia since the First Fleet arrived in 1788. About this time, England was emerging as a leading power in both the economic and military fields, so the colonies were assured of a high degree of protection. This dependence on Britain existed until 1911 when the first Australian fleet sailed through Sydney Heads. Although a relatively small force, it could call upon the Royal Navy's Far East Fleet for support if the need ever arose. Such was the situation until the outbreak of World War II, when the majority of British ships were redeployed away from the Far East Station, leaving Australia, to a large extent, undefended against a potential enemy. When this threat materialized in the form of Japanese bombings of Darwin and Broome in 1942, the problem of coastal defence was literally brought home to the Australian public.

But at the end of the war, the United States emerged as the new front runner in the race for superpower status. Coupled with the rosy promises of the newly formed United Nations, there seemed little need for reviewing the lessons learnt during the previous six years of hostilities, so Australia crept under the protective wing of the United States and resumed her 'head in the sand' attitude. Even as the Korean war raged, little discussion was raised on the problem of coastal defence with respect to a 'police action' several thousand miles away.

But in the last ten years, an up-scaling in foreign traffic of various kinds close to our coast, has attracted a corresponding increase in attention from the public. Probably the major cause for alarm, from a large section of the population which still recalls the Japanese threat to Australia, is the increasing number of Russian warships sighted in the Indian Ocean. The coast which is washed by these waters is the most sparsely populated area of our country, and therefore the hardest to patrol and defend. With this in mind, it is only natural that a large amount of illegal drugs and other contraband enters the country from the north and western coasts. Add to this the recent unobserved landings of Vietnamese refugees and the increasing incidence of illegal fishing, we see that there is a definite gap in our defences.

But to criticize the people responsible is fair, only if we can present a better solution to the problem. Perhaps the best way to do this, is to:

- Identify the problem in all its aspects.
- Reach a conclusion regarding our inadequacies.
- Present a solution with respect to what we need, and what we can afford and determine the advantages for the whole country.
The Problem

As already mentioned, the basic problem is our inability to defend our country in both the military and para-military roles. The reason for these shortcomings is simply the lack of units to front up to the opposition. We have neither the ships nor the aircraft to mount a continual patrol of those sections of the coast which are ideal for illegal operations. Along with this we have to rely more heavily all the time on the overcommitted USN regarding the whereabouts of Russian warships and submarines operating close to our shores.

At present, available forces for all commitments include one ageing aircraft carrier, five destroyers, six destroyer escorts and twelve small patrol boats. The majority of these vessels are almost always deployed off the east coast of Australia, in South-East Asia or in refit, leaving the job of protection to less capable ships. On the aircraft side, we have two squadrons of Orion Anti-Submarine aircraft based in Adelaide—a long way from the problem areas.

Conclusion

As Australia has no Coastguard as such, the Navy and Air Force are called upon to perform, in addition to the traditional role of defence, the tasks of:

- Protection of off-shore resources.
- Prevention of contraband entering the country.
- Air-Sea rescue.
- Detection of illegal immigrants.
- Detection of insurgents.

To increase the number of destroyers and DEs for these duties would cost far more than the defence budget could handle, but to acquire a fleet of small patrol boats of limited range, would deprive the Fleet of much needed effective warships in time of war. So there appears to be something missing between our larger, expensive units and the smaller, limited endurance patrol craft.

Until recently, this gap has remained the major problem of many other countries in the same economical position as Australia. But recent advances in the shipbuilding industry have offered a way around the soaring costs of construction and manning in the form of the Corvette.

Solution

The ‘missile age Navy’ which was introduced to this country in the early sixties, would have had little use for corvettes as effective warships.

In fact, we were, at that time, phasing out the remaining World War II type warships in our fleet. The large, sophisticated weapon systems then coming into service were much too extensive to be fitted to anything smaller than a destroyer escort.

Now, in less than two decades since the first Seacat missile was fired from an RAN ship, weapon system electronics has advanced to an almost unbelievable state of miniaturization.

This, coupled with the reduced complement needed to maintain and operate electronic equipment, has placed destroyer-size punch in corvette-size hulls. Incorporate advances in Gas Turbine technology into the hull and power plants, and the result adds up to some of the newer corvette-size ships now being offered on the international market.

To purchase any of these types of vessels, though, would only tend to knock away another leg from under an already shaky Defence Industry. To build them in Australia would have many obvious advantages—not the least of which would be the creation of new jobs for a long period.

The Ship

To produce a ship with capacity for all the tasks we require, a great deal of planning would be required. Therefore, what follows is merely a general description to form an idea of what the ship would look like.

Measuring 220-250 feet in length and weighing in the range of 1200 tonnes, the corvette would incorporate two gas turbines developing 30 knots. Crewed with no more than 120 officers and sailors, a typical vessel of this class...
would incorporate systems to handle all modes of warfare.

Because of the low relative cost, a great deal of versatility could be built into this ship by deciding on, say three different weapon fits. While still retaining a high degree of patrol capabilities, a greater accent could be stressed on surface, sub-surface or air defence. Basic systems common to all three fits would include a 76mm Dual Purpose gun and a helicopter.

**Surface Mode**

The 76mm gun, of which the Italian Oto Malara looks like becoming the international standard, would be used against surface targets as well as offering a limited shore bombardment facility. The main surface weapon, though, would be one of the latest generation missile systems. Of these cruise types, the two most suitable are the US Harpoon and the French Exocet. Both systems are intended for use in patrol craft or larger vessels, though the Harpoon tends to lead as far as performance is concerned. With the introduction of the Patrol Frigates in the 1980s, it would seem that Harpoon (which is earmarked for the FFGs) would also be the more economical of the two.

For the Coastguard role, two 20mm close range gun mounts would be fitted to persuade small craft to subject themselves to close inspection.

**Anti-submarine (A/S) Mode**

More space would be allocated in this type of corvette to fit a long range attack sonar interfaced with a data link to other ships or the ship’s own helicopter or both. This would enable other ships fitted with Ikara or similar A/S weapons to attack targets without making contact themselves. The major A/S weapon would be the helicopter, fitted with lightweight torpedoes and dunking sonar.

**Surface-to-Air Mode**

Although many SAM type systems have been developed for small ships, few seem to offer as much as the Royal Navy’s GWS 25. Firing the Seawolf missile, this system offers short range surface-to-air defence as well as a fast reaction anti-missile capacity. Once a target is acquired, all subsequent actions are automatic, thus this system far outclasses the Seacat setup it was designed to replace.

**The Helicopter**

The addition of a helicopter increases the range and capabilities of a warship manifold. The ASW potential has already been mentioned, but there are many other fields in which a shipborne aircraft is invaluable. In the SAR, spotting of illegal fishing boats and any of the other tasks allocated to this type of vessel, a helicopter can be on task hours before the parent ship arrives in the area. During a confrontation with an enemy, we would have, at our disposal, a long range, airborne radar, a chaff dispensing unit capable of effectively screening the parent ship or an aircraft to destroy missile boats sent against the ship. In fact, the uses for a seagoing helicopter are only limited by the aircraft’s physical capabilities.

Of course we are talking in terms of large outlays in research and building costs for these ships, so what are we going to get for our money besides a better equipped Navy?

The most obvious advantage would be the boost in capital and employment within our ailing shipbuilding industry. Because of its size, the corvette could be built in any of the major dockyards in Australia.

With a lead program of three ships (to evaluate the different weapon fits described earlier) followed by a 5-8 year program to produce another nine vessels, the experience and expertise gained would prove to be invaluable.

Such an undertaking would also be a major step toward self-sufficiency in the Defence Industry, as a large amount of fitted equipment would be either designed and produced in Australia or built under licence to foreign designs.

So much for the short term effects. What will this program mean once its projected life comes to an end? The very fact that a vessel of this type would be built to cater for a limited Defence budget, would make it very attractive to other countries in the same position as us: New Zealand, a prospective buyer by virtue of her modest budget, comes readily to mind.

Any money received from overseas sales could be ploughed back into R&D for other programs on the same theme of “economic quality” as the corvette, eventually establishing
Australia as a major defence hardware supplier in the Pacific region.

In summary, it would appear we need some form of vessel designed for all the roles we have discussed; a ship that can carry out a varied assortment of missions in any of the diverse environments experienced around our continent.

Although it is not the ‘cure-all’ desired by some sectors of the population, I believe a corvette similar to that described in this article, would go a long way towards ‘total defence’.

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LEADERSHIP SELECTION AND TRAINING: A SOCIOLOGICAL PERSPECTIVE

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University of New South Wales Regiment

All armed forces are concerned about the antecedents of their recruits, particularly in the case of those who will be trained to become officers. This concern is founded in the belief that experiences prior to recruitment are formative or revealing. High achievement in scouting, for instance, might be thought to have developed in a boy some of the capacities desired in an infantry officer or to show that he was already endowed with such capacities. The purpose of this paper is to examine these assumptions from a sociological perspective in the light of general research findings regarding leadership, and with specific reference to a British Army study carried out by the author.

Leadership and Leadership Capacities

There are two polar perspectives on leadership, and they derive from psychological and sociological models of man. I am calling one model psychological not because it represents the thoughts of all or even many psychologists but rather because it reflects a psychological emphasis on individual capacities as determinants of behaviour. Sociologists, on the other hand, tend to stress situational determinants of human behaviour. A good deal of research into leadership has been done in the field of social psychology which occupies the no man’s land between the two disciplines.

The psychological emphasis on individual capacities led to attempts by social scientists to identify specific traits, whether innate or developed as a result of environmental factors, in leaders. These attempts are generally held to have failed. The only individual attributes which seem to relate at all to leadership are education, and possibly the need for achievement (n_ach), which has been studied extensively by McClelland. Of the two attributes only n_ach has any resemblance to psychological capacities or personality variables like courage or authoritarianism, and n_ach can be learned, according to McClelland.

The sociological model does not deny the existence of individual capacities—formed by early socialisation—nor their relevance to the ability to lead, but it does emphasise the situation in which leadership is to be exercised. Situational factors include the nature of the task to be performed, the individuals involved, the organisational structure of the group performing the task, and the relative statuses of the participants. Thus, for instance, navigating a ship, maintaining morale on an air force base during peacetime, and leading a platoon in an assault under enemy fire may all require different capacities. Similarly, leadership in a democratic group requires a different style from leadership in an autocracy. And, in a hierarchy, individuals of high rank or status are looked upon for leadership in almost all formal situations. The lack of findings concerning leadership traits lends weight to the argument that leadership is situation-specific.

Even in a purely rational task-oriented group, leaders could hardly be chosen for each new
situation that arose since that would imply: that the group would always have long enough to deliberate on who should lead in any situation; that the capacities of each person would be known to all members of the group including the individual to be chosen leader; and that no social stratification would develop. In real life these conditions can never be met. The armed forces' final task is war, in which a series of emergencies typically demand that someone be able to take command immediately and that the identity of the commander be known to everyone at all times, the need for effective leadership precludes debate or elections. With regard to the second point, it is unimaginable that all members of any group will know all others as well as is implied, particularly if the group is large. What is more, new situations may demand unknown capacities. Nobody can really predict how he will react to stress, to fire in the air or bombardment on the ground, until he experiences it. Finally, even in the determinedly egalitarian Israeli Kibbutzim social stratification has been observed. Administrators tend to gain status, women tend to end up with kitchen duties. In a stratified society whose religion relegates women to a lowly place these facts are hardly surprising; no institution can easily insulate itself from the mores of the larger society in which it is situated. Once such stratification develops it is difficult to vary leadership within the group, the same individuals tend to be looked to for leadership in all situations because of status achieved within the group as the result of age, administrative ability, and so on. So the situation obtaining in the armed forces, where stratification is according to rank and leadership in almost all situations also goes with rank, is hardly typical or irrational. Thus considerations of rank and the structure of the organisation of the armed forces very definitely enter into situations in which leadership is exercised. Officers, commissioned and non-commissioned, join an organisation in which their rank denotes certain leadership functions known to all its members.

Experience Prior to Recruitment

If performance in prior roles is not revealing because the personality characteristics allegedly revealed have no bearing on performance in future roles, the performance of prior roles may nevertheless be thought to have a bearing on performance in future roles. That is, the boy scout who becomes a leader in that organisation may not have done so because he is a 'born leader', but the experience of leading in the scouts may make him a more effective leader in future roles, particularly if those roles resemble roles performed in the scouts. According to socialisation theory the degree in which experience in one environment facilitates adjustment to another environment depends on the degree of consonance between the two environments in question.\(^5\) We should therefore have more reason to expect a cadet leader to become a successful officer than to expect the same of a youthful bandleader. We might, however, expect both to benefit from their leadership experiences and to be better officers as a result.

In my view this expectation rests upon too great a belief in the efficacy of early socialisation. The theory that experiences in childhood and early youth have an overriding effect on adult behaviour ignores the possibility of socialisation and resocialisation later in life.\(^6\) Belief in the primacy of early socialisation is founded on the nature of the socialising institutions involved, the family and, to a lesser extent, the schools. These institutions are able to exercise a great deal of control over their charges, and the relationships involved in the family are particularly intense. However, unlike most employers the armed forces are also able to provide an intensive resocialising experience in what have been termed 'total institutions'.\(^7\)

An Empirical Study

The term leadership has so far been left undefined. It may be defined as a function, that of getting a task done with a group of individuals. This group will include the leader himself, but whether he participates directly in the task or simply organises it depends on the nature of the task, the size of the group, and the rank of the leader. An officer is unlikely to assist in unloading stores, a corporal may. A platoon commander can participate in a battle while directing his part of it, a general cannot.

In 1975 I carried out a study of British Army officers which tends to indicate that, within limits, experience prior to enlistment has less bearing on officers' leadership capacities than is popularly supposed.
Most of the British Army's career officers were trained at the Royal Military Academy, Sandhurst. In the past Sandhurst, along with other British institutions which are gateways to elite status, has turned to the Public schools for a disproportionately large number of recruits. Between January 1947 and January 1958, for instance, two-thirds of the 6,171 cadets admitted to Sandhurst came from Public schools, though only one-fifth of those who tried to get in were Public schoolboys. The evident bias in selection in favour of Public schoolboys clearly implies that the Army believed that they were better endowed with leadership potential than boys from other schools whose academic standards were the same. This belief was almost certainly fostered by the Public schools themselves, and widely accepted by institutions other than the British Army. As Brogan observed in 1943:

What is extraordinary is the sudden rise in the nineteenth century of the idea that only a 'Public School' could give an education fitting for a boy for command in business, in politics, in the army, the civil service, even in the arts... It became an accepted dogma of English life that the male population were divided into two classes, public school and others. The products of the public schools were assumed to have certain moral and social qualities which, if not quite unattainable by the products of other schools, were at any rate rarely attained by them.9

We have examined the wider claim that specific traits may distinguish leaders from others and found that most researchers now hold that it is untenable. However, even if the Public schools cannot claim to develop a generalised leadership capacity they can, nevertheless, make a very good claim to develop in their students the qualities the Army looks for in its officers. As the sociologist Ian Weingberg has said: "The norms of the Public school code of behaviour are especially prevalent in the officer ranks of the Army. Both the Public schools and the Army are total institutions, so that Public schoolboys are perhaps better socialised for military life than are grammar schoolboys".10 This statement applies most accurately to Public school boarders.

It is upon the 'boarding principle' that the Public schools generally rest their claims to prepare boys for leadership and public service. The principles and systems refined and developed at Rugby by Thomas Arnold were designed for boarding schools. The Headmasters' Conference in 1967 described boarding as one of 'the positive things the Public schools have to offer', allowing staff to engage in 'character building and training in a sense of responsibility'.11

As was pointed out above, socialisation theory has it that the degree in which socialisation in one environment facilitates adjustment to a second environment depends on the degree of consonance between the two environments in question. The degree of consonance between the English Public boarding school and the environment in which a British Army officer lives, works and has his being can be shown to be very high indeed on a number of salient dimensions, particularly for the years relevant to this study.12 If the Public schools, then, really develop capacities for leadership appropriate to the Army's needs, it is among their former boarders that we should expect to find these capacities most fully developed.

We have distinguished between Public school boarders and other entrants to Sandhurst. A second distinction, between prefects and non-prefects, may also be made. In the Public boarding schools the whole way of life, which embodies norms to be found in the officer ranks of the British Army, supposedly contributes to the development of 'character' and leadership skills. And the most important instrument in developing these capacities is the prefect system.13

Leadership has been defined above in functional terms. For the purposes of this study it was postulated that the exercise of leadership is the main function of Army officers and that, therefore, officers perceived to be most skilled in the exercise of leadership would be promoted most rapidly. Thus two hypotheses deriving from the rationale discussed above were that, other factors being equal:

- Former Public school boarders would be promoted more rapidly, on aggregate, than former dayboys of Public and other schools; and
- former Public boarding school prefects would advance more rapidly, on aggre-
gate, than non-prefects, or prefects in other than Public boarding schools.

These hypotheses were tested by surveying all currently serving graduates of RMA Sandhurst who entered the Academy in 1952 and the first half of 1953. The procedures and statistical analyses used are described elsewhere.

The findings came as something of a surprise to the author and the British Army. In neither case were the hypotheses borne out by the data. Former Public school boarders and the former prefects among them were not promoted more rapidly than other officers despite the fact that they had been prepared, since age seven, in total institutions, for precisely the kind of career they took up. In fact it might be argued that, in the western world, only kibbutzim and American 'military schools' provide a training more specifically oriented towards a career in their national armed forces than the English Public schools. Yet, in the long run, this training seems to have conferred no enduring advantage on the graduates of the English Public schools.

This study, then, bears out the supposition that prior experience in another environment, even if that environment closely resembles that of the armed forces, has little bearing on ability to lead in the armed forces. Leadership in the English Public schools, as a prefect, did not bear upon performance as an officer, as evidenced by rate of promotion over a period of 23 years. This is further evidence that there is no 'leadership type', destined to lead in all situations. And the experience of attending a Public boarding school, and attaining leadership within it, so long believed to be an excellent preparation for leadership in any sphere, and particularly the Army, also had no bearing upon leadership in the British Army.

Summary and Conclusions

I have argued that the effectiveness of leaders is influenced more by the situation in which they lead than by the personal capacities of the leaders themselves. Indeed, one US Navy-sponsored study, carried out over a period of 15 years, led one of its authors to suggest adapting the situation to the leader because this is easier than adapting the leader to the situation. In a very real sense the armed forces do both of these things. A newly commissioned officer emerges into a situation adapted to the style of leadership in which he has been trained.

There are certain implications in all this for the selection and training of officers. Personality traits are very difficult, if not impossible, to measure, given our present techniques. And leadership performance in one situation seems to reveal little about personality as it relates to leadership performance in a subsequent situation, even when the situations closely resemble each other. What is more, training for leadership in one situation seems to have little bearing on the ability to lead in another situation.

I would argue, therefore, that much more weight must be given to the training of officers, in situations similar to those in which they will be employed as leaders, than to the qualities the potential leader allegedly possesses before he is trained. It is no good expecting English Public schoolboys, or American military school 'cadets', or Australian G.P.S. boys, or cricket captains, or senior scouts to possess qualities that will make them better leaders as a result of these youthful experiences.

The Australian Army Handbook on Leadership says that: 'The most effective method of developing leadership is to select the leader on the basis of the qualities he already possesses, and then to teach him what he must do in order to be effective as a leader.' My argument is that the first part of this sentence is misleading. We cannot effectively measure the relevant qualities before recruitment, only in performance. The implication, therefore, would have to be that a much broader category of potential recruits can be trained to become officers than is generally believed to be the case. The armed forces should probably worry much less about the qualities of their recruits than about training them once recruited.

NOTES

Letters to the Editor (cont.)

SYDNEY AND EMDEN

I READ with interest Colonel Lawson’s article on the story of HMAS Sydney and the Emden (DFJ No 8, January/February 1978) and would wish to join with him in rebutting the charges of unchivalrous conduct preferred against Captain Glossop.

The Colonel referred to the exchange of signals between the two ships prior to Sydney opening fire on the beached Emden at about 4 pm. The inference would be drawn by readers that this exchange of signals was the only communication between the two ships. But this was not so. The signals can only be understood when one reads them in context with the letter sent in by boat under a flag of truce by Captain Glossop a copy of which I have been able to obtain through the help of Captain R. M. Baird, RAN, at the Royal Australian Naval College, Jervis Bay, which I enclose.

As you can see from the text, far from being an unchivalrous officer Captain Glossop was well aware of the plight of the Emden and her ship’s company and deeply conscious of the need to avoid further bloodshed.

I believe I first saw the original of the letter in HMAS Penguin in 1954 hanging framed in the Wardroom Library. But time plays tricks with one’s recollection and I cannot be sure of this. It would be tragic though if the original of this valuable historical document is lost and it may be that an appeal through your columns may reveal its present whereabouts.

Navy Office, Canberra, ACT

T. J. Holden
Commander RAN

Copy of Captain Glossop’s Letter

H.M.A.S. “Sydney”,
at sea,
9th November, 1914.

Sir,

I have the honour to request that in the name of humanity you now surrender your ship to me. In order to show how much I appreciate your gallantry, I will recapitulate the position.

(1) You are ashore, 3 funnels and 1 mast down and most guns disabled.

(2) You cannot leave this island, and my ship is intact.

In the event of your surrendering in which I venture to remind you is no disgrace but rather your misfortune I will endeavour to do all I can for your sick and wounded and take them to a hospital.

I have the honour to be,
Sir,
Your obedient Servant,
John (C. S.?) Glossop,
Captain.

The Captain,
H.I.G.M.S. “Emden”.


14 Wakeford, op. cit., p. 20.


16 Petty and Chipherfield, op. cit.


FIELD-MARSHAL BERNARD MONTGOMERY
A Critical Assessment

Lieutenant A. L. Graeme-Evans*
Australian Army Reserve

The basis of the controversy lies in Montgomery's own character and in his own records. It is not easy to feel neutral towards Montgomery or his record. You either admire him as one of the greatest soldiers of his day, or you dislike him intensely and believe that his war record is compounded of luck, other men's abilities and the brilliant use of publicity.¹

MONTGOMERY is a controversial figure. But there again, all great men normally are. The problem surely is how one judges. On the one hand Montgomery was never defeated:

Cocky, arrogant, sharp — he was all that, but he won battles, and that is what Generals are for.²

Whilst on the other an historian who attempts to assess the facts must remember that victory cloaks a multitude of errors. 'What might have been' is primarily a question left to the defeated and their critics. This article attempts to substantiate the argument that Montgomery was not of the same mettle as his German and British counterparts of equal fame. Manstein, Guderian, Rommel, Wavell, and Viscount Slim, by first looking closely at his military performance in the desert 1942-43 — from whence his legend arose — and as a field-marshal taking part in the assault on Fortress Europe 1944-45; and secondly, bearing in mind what kind of qualities military strategy demands from good field commanders, by relating these to Montgomery.

²Reprinted from The Army Quarterly and Defence Journal with permission. Lieutenant Graeme-Evans has written previously for the Army Journal.

In many homes in Britain during the war there was a map of Egypt on the kitchen wall. On it would be marked 'Monty's' victorious advance from El Alamein to the River Sangro.³ He became Britain's lucky mascot, the man who symbolized 'the turn of the tide'. The historian must get behind such a charisma and ask, in a strategic sense, what the situation really was like in those last few months of 1942. How did Montgomery really cope? These questions, answered in a professional rather than a political manner, will determine how good a general he was. On this point quite a few critics have made biting comments, one of the most harsh being:

Legendem Om Montgomery (The Legend about Montgomery) — an essay based mainly on R. W. Thompson's The Montgomery Legend. Thompson shows how Montgomery simply adopted General Claude Auchinleck's ideas as his own in his report to Churchill on 19 August 1942; also, it was Auchinleck's orders that were utilized in throwing back Rommel's offensive at Alam Halfa. Montgomery lacked imagination, and his tactical concepts were strictly 'm/1918'. The second battle of El Alamein was a battle motivated by Churchill's political considerations. It converted Montgomery, a 'lonely unknown Lt. General', into a popular hero at the cost of 13,500 men and 600 armoured vehicles.⁴

His supporters, on the other hand, seem to bend too far the other way, building him up into a kind of superman. His able Chief-of-Staff, Major General de Guingand, in his chatty book Generals at War, gives us a perfect example of this. He talks of the '... brilliant way in which he (Montgomery) took a grasp of things from the first moment of his arrival,'
yet he does not pause to consider how much lighter Montgomery's task may have been made by Dorman-Smith's and Auchinleck's staff work. De Guingand describes in great detail what Montgomery had done between 13 August — when he took over command of the Eighth Army — and 16 August. Then in the very next paragraph he writes: 'within three to four days, however, Rommel attacked'. Such a presentation, drawn from dimming memories, naturally expanded the legend for posterity. In fact, Rommel did not attack until the 31st.

But was the Eighth Army in a state of chaos in August 1942 when Montgomery took command? His Memoirs imply this, which caused D. W. Brogan, in his review of the book in The Spectator, to remark, 'Veni, vidi, vici'. Was this fact or fiction? Whilst Churchill and Alexander imply that it was the former, Lord Tedder seems to be a little more honest towards the former Commander-in-Chief of the Middle East Forces, General Auchinleck, on whose shoulders the responsibility for allowing the Germans to capture Tobruk for the second time ultimately fell.

It can be argued that such a statement is not only unjust but also, as shall be discussed later, spurious. Firstly, we must look at some of the shortcomings, if any, of the Middle East force, and secondly, see how Churchill's strategic decisions made in the opening stages of the war had drastically affected this force's strike capability, that is, until July 1942.

Considering the former, were these army officers stationed in the Middle East such 'useless good fellows' as Lord Tedder implies? To answer this a distinction must be made between 'base wallahs' in Cairo and those with the Eighth Army in the desert. Was the Eighth

infected with the cancer of defeatism that only a Montgomery could cure? It is to be presumed that quite a few of its officers had served in Wavell's earlier campaigns, of which the official historian records that the force was '. . . comparatively small, below strength and short of equipment, but it was, nevertheless, well suited to the task, imbued with a fine spirit and resolutely led.'

To counter such assertions some might say, 'Oh yes, but was against the Italians, not the Germans': even so, their record was impressive;

_A British force of never more than two divisions—one of them armoured with a proportion of corps troops, advanced five hundred strenuous miles and totally destroyed an army of ten divisions for a loss of 500 killed, 1,373 wounded and 55 missing. The captures were 130,000 prisoners, 180 medium tanks and more than 200 light, and 845 guns of the size of field guns and above._

It is hard to believe that such a heritage died with Wavell's departure.

Turning to the second factor, popular biographies have conveniently obscured two funda-

Rommel and General Bayerlein at Alamein, 1942. Rommel was unwell and the strain shows on his face.
mental factors which drastically affected the overall performance of military operations in that theatre of war up to the 'turn of the tide' in July 1942. First, it could be argued that the real limiting element with regard to military operations in the Middle East before July 1942 was not one of leadership, as is implied, but one of material. That such difficulties existed is perhaps best borne out by an official historian's comment:

...in 1941 and early 1942 the British had a great deal of leeway to make up in arms and equipment... forced to keep manufacturing obsolescent weapons.9

Such deficiencies severely restricted army commanders in the field in terms of effective deployment. For the first two years of the war such men had to contend with very great logistic supply problems:

The artillery position was complicated by the fact that production of ammunition for 18-pdr. and 4.5 inch howitzers with which some units in the Middle East were armed had ceased because of the introduction of the 25-pdr. 'gunhow'. The position would be serious until rearmament with 25-pdr. could be completed. Similarly the 37-mm. anti-tank guns had only 21,000 rounds in all; no more were being made because of the introduction of the 2-pdr. gun. Rearmament was therefore an urgent problem.10

In fact, the above logistic problem was not adequately solved until August 1942, when for the first time all anti-tank regiments were re-equipped with the new 6-pdr. gun which could effectively penetrate the armour of the Marks 3 and 4 Panzerwagen, and were ready for Montgomery's first action — Alam Halfa. This sudden logistic 'about face' in the Middle East it is suggested arose out of Churchill's need for a military morale booster in order to strengthen his negotiating powers with America. He was after a headline victory at any cost. The newspaper world was focused on Rommel v. the Eighth Army. Ritchie's mis-management had made Rommel a field marshal by July, as shall be seen later, was irrelevant.

This leads me to my second point. Gazala represented only one of the many fronts that Auchinleck as Commander-in-Chief of the Middle East had had to contend with inadequate forces.12 He made it clear in despatches that, if forced to choose, in the event of a successful German offensive, he was prepared to sacrifice Egypt if it meant keeping his armour so that he might effectively defend the oil fields of the Peninsula, so vital to the Allied war effort.13

In the early months of 1942 a German convoy managed to re-supply Rommel with sufficient men and equipment so that he might launch an offensive. This he did, and because Ritchie did not carry out his chief's sound advice11 Tobruk fell once more. The pace of Rommel's advance, and the corresponding confusion in the Eighth Army's retreat, forced Auchinleck to issue a tentative withdrawal order for Cairo, in line with his above-mentioned policy. However, with the successful outcome of the first battle of El Alamein, where Auchinleck had summarily taken over command, such an order became obsolescent, as he succinctly points out in a letter to The Sunday Times in 1958, in direct answer to Montgomery's Memoirs:

It is incorrect and absurd to say that at that time I was contemplating a withdrawal from the Alamein position. Such a plan had ceased to be seriously considered since early in July 1942, when Rommel had been forced back on the defensive and the Eighth Army had regained the power to attack, a letter which Montgomery never answered. Rommel himself, in a letter to his wife, bears witness to the fact that the fronts had stabilised in July:

Although the British losses in this Alamein fighting had been higher than ours, yet the price to Auchinleck had not been excessive, for the one thing that mattered to him was to halt our advance and that unfortunately he had done.15

From such an appreciation it would be difficult not to come to the following conclusions:

- By July, there was no longer chaos in the Eighth Army, with Ritchie removed and Auchinleck in direct control.
- Rommel, his lines of supply fully extended, had been effectively contained at the first battle of El Alamein weeks before
Montgomery’s feet touched the desert sand.

- All that the Eighth Army needed was fresh blood, a new leader, one who was energetic, competent, but above all a good field commander.
- As is argued later, Montgomery had the first two qualifications but not the last. It has been suggested by the critics that he was but a third choice, the two before him having been killed in July, one in a jeep that rolled, and the other in a plane crash.
- Logistically there had been an irrevocable ‘turn of the tide’ in favour of the Allied forces operating in the Middle East.
  - New lend-lease vehicles from the U.S.A.
  - Honeys, Grants/Lees and Shermans.
  - New anti-tank equipment from the U.K.
  - Air supremacy — a most important factor.
  - Fresh divisions.

Thus, in August 1942, just before Montgomery came on the scene, there was no ‘looking over the shoulder to their seats in the lorry’ as Churchill had reported, as far as the Eighth Army was concerned. Nowhere in the popular biographies supporting the Montgomery legend is the point sufficiently brought out. They have exaggerated Montgomery’s revoking of Auchinleck’s tentative withdrawal order from Cairo. In Egypt in August, Montgomery’s statement that there would be no more withdrawals was merely asserting the obvious, but overseas, to those that only had the name of Rommel to go on and were not aware of the substantial change in comparative material strengths between the two opposing forces during that month, he appeared to be another Horatio.

Montgomery’s revoking of the withdrawal order for Cairo marks the beginning of his ‘legend’. It enabled Lord Attlee years later to say, in his review of Montgomery’s Memoirs, that:

*His examination of generalship is most interesting, particularly his emphasis on that extra intuition which marks out the genius from a most assiduous, competent craftsman. He showed that at the crisis of El Alamein.*

Montgomery on taking over command of the Eighth Army was not only fortunate in a logistic but also in a personal sense. He was to have above him a new Commander-in-Chief, General Alexander, in age three years his junior and as new to the desert as himself. This was because the rift between Auchinleck and Churchill had become irreconcilable on 4 August 1942, although official historians have phrased it another way — Auchinleck lost Churchill’s confidence. Yet the very reasons for which Churchill sacked Auchinleck, first, that he had refused to put a new, unclimatized division immediately into the field against the veteran desert *panzers,* and second, that he said he could not go on the offensive against Rommel until the middle of September, were both subsequently conceded to Montgomery. Whereas Auchinleck considered that, given new tanks and men, he could launch an offensive against Rommel in mid-September, Montgomery’s offensive did not commence until the end of October. If Churchill’s object was a speedy victory his actions seem inexplicable.

John Terraine, one of our foremost military historians, comments that:

*Generalship is chiefly a matter of concentration — of perceiving the single object which is essential, no matter what else may be desirable in any given situation, and of the bending of all available means to its attainment.*

Montgomery’s mission or ‘single object’ in the desert was to destroy Rommel’s Afrika Korps. Did he complete this task? He considered he did and states so in his autobiography, yet the critics argue otherwise. They claim that this was the very thing that he failed to do. If anything, they say, Rommel’s retreat through Tunisia was a victory for the Germans, not Montgomery — a German Dunkirk.

*Their (the British) command continued to show its customary caution and lack of resolute decision. Thus they repeatedly allowed their armoured formations to attack separately, instead of throwing in the 900 or so tanks, which they could safely have committed on the northern front, in order to gain a swift decision with the minimum of effort and casualties. In fact, only half that number...*
of tanks, acting under the cover of their artillery and air force, would have sufficed to destroy my forces, which frequently stood immobile on the battlefield.\textsuperscript{15}

It did in fact take Montgomery six months to reach Tripoli. The critics interpret such a slow advance to be a slight on British arms especially when coupled to the fact that the remainder of Rommel's forces after the second battle of El Alamein—comparatively pitiful in terms of firepower with respect to Montgomery's Eighth Army—was left substantially intact to fight once more in Tunisia.

Had Montgomery succeeded at Alam Halfa there would have been no second El Alamein; had he succeeded in destroying the remnants of the German-Italian army after the second Alamein there would have been no triumphal march to Tripoli and on to Enfidaville. It is impossible to escape the conclusion that after the second Alamein it was Montgomery's object to destroy the German-Italian army and prevent it from joining with the Axis forces in Tunisia. In this he failed.\textsuperscript{19}

Such a slight if accepted must surely be considered as a direct reflection on Montgomery's generalship, for he had a completely free hand. It suggests that he failed to attain that 'extra intuition' which Lord Attlee believed 'marks out the genius from a most assiduous competent craftsman'.

No one, either sympathiser or critic, will deny that Montgomery was an excellent trainer of men. However what he is most criticised for is his inflexibility as a commander. In contrast to Terraine's 'single object', Napoleon considered flexibility—the ability to adapt quickly and exploit new situations as they arise—to be the most important quality that marks great generals. Such flexibility the critics consider Montgomery did not possess, both in his follow-up of Rommel after Alamein and as 21st Army Group Commander in Europe. If one 'reads between the lines' of Liddell Hart's work, one can see that he considered Montgomery's performance to be contradictory; saying one thing but doing another. He would talk of break-throughs, pursue and surprise as the important elements in the employment of mobile forces, yet he himself would never use them, although his Memoirs would suggest the opposite.

Rommel, after a while, when retreating from Tunisia, became quite used to Montgomery's preparatory bombardment—frontal assault and single hook.

The British Commander risked nothing in any way doubtful, and bold solutions were completely foreign to him. I was quite satisfied that Montgomery would never take the risk of following up boldly and overrunning us as he could have done without any danger to himself. Indeed such a course would have cost him far fewer losses in the long run.\textsuperscript{20}

It serves as quite a contrast to compare the official historian's analysis of Wavell's earlier campaigns when supplies and equipment were so unpredictable:

Throughout this campaign its employment was a model of well-judged adjustment of means to suit the end. Deception and surprise—especially by the choice of the unorthodox course—were not confined to the opening phase where naturally there was great scope for it: at Bardia and Tobruk, and on other occasions where an attack was obviously to be expected, the enemy was kept guessing as to the time, place and method.\textsuperscript{21}

Montgomery's strategy seemed to differ from that of the First World War in only one aspect. He increased the effectiveness of his artillery bombardment in smashing a hole through the enemy's strong-point by using aircraft. One of his students at Staff College commented after a vigorous session, 'he uses a sledge hammer to smash a nutshell'.\textsuperscript{22}

The avalanche of high explosive that fell upon the German-Italian positions at 9.40 p.m. on 23 October was of an intensity and volume unknown since the First World War. It virtually destroyed the Italian Infantry Regiment and it disabled almost completely the communication net of the army.\textsuperscript{23}

As Rommel himself said: 'for several days the British actually undertook no operations but relied simply and solely on the effect of their Artillery and Air Force.'\textsuperscript{24}

It is agreed that Montgomery could afford to do this, but it must be remembered that one of the roots of the Montgomery legend lies in the fact that at this battle he was supposed to
have soundly beaten Rommel — the Desert Fox. This implies skill, for to most people a battle infers a certain element of risk, with a reasonable probability that either side may win. It is not exactly left in the laps of the gods, but rather in the hands of the generals: their skill will carry the day.

At Montgomery's El Alamein the critics argue that the disparity of forces was such that the conclusion was a foregone one, or at least it should have been. There was no crisis, as Lord Attlee implies. Rommel said about this famous battle:

"... we simply did what we could with our very meagre resources to come to terms with the unalterable disadvantage under which we suffered. It was a matter of getting the best out of a hopeless situation."

Montgomery writes in his Memoirs that 'everything went as planned', believing as he did that '... the German was a good soldier and he will fight, though I believe it is true that once you get him down he cracks up.' The facts would appear to rebut such a presumption. Four times the British offensive was baulked, and as late as 3 November the enemy's anti-tank screen was still unbroken. Furthermore, if Hitler had not interfered with Rommel’s plan of withdrawal, Montgomery’s ‘master plan’ — which was ready to go into operation on the night of 3 November — would have been assaulting thin air.

When we embarked on our retreat on the night of 2 November, a long time elapsed before the British forces started their pursuit — and but for the intervention of that unfortunate order, we would probably been able to escape to Fuka with the bulk of our infantry.

‘Rommel had only 38 tanks armed with a 75-mm. gun,’ whereas ‘the British numbers included more than 500 tanks armed with a 75-mm. gun.’

In terms of artillery (General Von Stumme was initially in charge of the Axis forces until he died of a heart attack) — ‘... his supplies of ammunition were such that he decided not to break up British attacks in their assembly areas, saving his shot and shell until his troops saw the “whites of the British eyes”. Even so, there were times in the battle when it was estimated that his gunners could only return one shell for 500 from the British side.’ As for air power, the Italian historian, Caccia-Dominioni, wrote by way of explanation as to why there was nonexistent air support on the Axis side:

‘... the Italian and German Air Forces could hardly have been expected to play any significant part in the great battle. They often had insufficient petrol to fly away when airfields were abandoned, and many planes had to be destroyed where they stood.’

If his opinion is acceptable, then indeed Rommel did not mince words when he said, ‘It was a matter of getting the best out of a hopeless situation.’

Michael Howard stresses in his review of Montgomery’s Memoirs in the New Statesman that ‘... the deployment of superior forces requires no less skill and generalship than the deployment of inferior.’ Yet the way in which Montgomery utilized his forces is one of the critics’ main bones of contention. They argue...
that El Alamein developed unnecessarily into a battle of attrition. No finesse was involved since it degenerated into: '... a "push and crumble", and as the British front line troops and armour died, or were exhausted, new men and armour took their places.' El Alamein cost the Allies 600 tanks and 13,500 casualties. The Axis forces suffered 26,000 casualties and lost 180 tanks.

As a political victory, the result of the battle was incalculable. The church bells were pealed all over England. But what of Montgomery’s skill? Could the battle have been won at half the price? Writing of the General’s skill, Fuller said:

Montgomery is pre-eminently a general of material... it is difficult to imagine him fighting a Sidi Barrani or a Beda Fomm.

Indeed, one of his field commanders in that battle was to remark many years later, in the course of an interview: ‘my opinion then was and still is that Monty was living in 1918 and never left it.’

Moorehead states in his biography of Montgomery that the General could make ‘neither head nor tail’ of Clausewitz as a student of military history. This would appear to be most unfortunate, since one of the firm principles expounded by Clausewitz is that, in warfare, commanders must accept that a certain degree of confusion and uncertainty will abound; these are the ‘frictions of war’. Under such conditions the commander’s skill is judged by his decisive leadership at the critical stages. In direct contradiction to this, the critics argue that Montgomery was always fanatical about maintaining a tidy front; he would not move until he had one. Because of this obsession they argue that he was not able to pursue that ‘single object to which all ends must be concentrated’.

Collier, another prominent critic points out in respect of the battle of Alamein:

Now appeared a situation which seemed to make his (Rommel’s) defeat within the next forty-eight hours almost certain. But Montgomery’s eyes were fixed on an offensive he hoped to launch in October... thus Rommel wound up an operation which had exposed his mobile forces to great risks, but had cost him fewer than 3,000 German and Italian casualties from start to finish.

It is debated that Montgomery’s inability to ‘seize the moment’ occurred yet a second time — the closing stages of the Second Battle of El Alamein. At this point Rommel had but ten serviceable tanks left. With uncontested reconnaissance flights Montgomery must have received such intelligence. Why did he not administer the coup de grace? His divisional commanders at least realized the need for pursuit and pleaded with him to let them make a bold sweep along O’Connor’s desert tracks in order to cut off Rommel’s line of retreat. With overwhelming firepower, airpower supremacy and unrestricted supplies they had nothing to lose. Montgomery’s Chief-of-Staff recognised this:

In fact, early on in the battle I had the supplies and transport already organised for such a move... but Monty was determined not to risk a reverse.

Yet we read in de Guingand’s account that, after Agheila, ‘... it looked at one time as if we would have a really good bag, but the two Panzer divisions... broke away westward through gaps in the New Zealand positions: very heavy toll was taken of them and the whole party was severely mauled.’ In reality, compared with those on the Russian front, formations were paper tigers, divisions in name only.

Montgomery it appears never failed to amaze Rommel.

During 6 November, Montgomery closed his principal trap at Baghoush, just East of Matruh: it was empty, the sole catch of the day was a remnant of 21st Panzer Division, which, immobilized for want of fuel, was brought to action by 22nd Armoured Brigade. It held off the British until nightfall, received some fuel and slipped away.

His tactics it is suggested had become as dependable as clockwork.

Later, on the European front, the Americans were to pay tribute to Montgomery’s zeal and energy in the training and handling of the actual operation. ‘Only Montgomery could have got the Western powers across the Channel.’ Once more he had been given a free hand. However, it must have become obvious that, concerning strategy, he had gone beyond his ceiling as an army commander. He could not accept the fact that he was now part of a team.
There comes a point in the conduct of strategy . . . when calculations valid at a lower lever no longer entirely apply . . . to cope with such problems the qualities of a statesman or at least a diplomat are as necessary as those of a soldier, and these qualities the Field-Marshal signally failed to acquire.\(^4\)

The Americans had made it clear from the start of the planning stages of Operation Overlord that they preferred and expected General Alexander to command the British forces. Their initial preference in his critics eyes seems justified, since Montgomery never reconciled himself to the fact that the credit for the final victory would have to be shared. He made life unnecessarily difficult at the Allied Command Headquarters (SHAEF).

No problem at Allied Headquarters was more difficult than trying to get Montgomery to forego some of his independence.\(^4\) Apparently he would not turn up for important meetings which the Supreme Commander called, thereby causing unreasonable delay. De Guingand points out in a polite way:

\(\text{It was, however, I think, a pity that my Chief did not attend certain conferences which were called from time to time by the Supreme Commander, for at times I was unable to give a clear-cut decision on Montgomery's behalf, and this in turn meant a delay in normal processes.}^5\)

At one stage Montgomery forced the issue to such an extent that Bradley, the American 12th Army Group Commander, threatened to resign, and Patton professed to be right behind him.\(^46\)

It has been mooted that Montgomery would have been sacked if it had not been for the timely intervention of his ever-faithful Chief-of-Staff, de Guingand. No love was lost between Montgomery and his fellow peers, Patton and Bradley, and most researchers agree, the nationalistic element aside, that it was predominantly Montgomery's fault since, 'on the balance', Montgomery had his way with Eisenhower. As Bradley elucidates.

\(\text{Although Monty entered the city of Antwerp on the 5 September, it was not until nearly nine weeks later that he finally cleared the Scheldt . . . this delay was to account for an irrevocable loss to the Allies.}^7\)

and as Constance Fitzgibbon in the New Statesman points out, this 'extreme slowness of the 21st Army Group . . . while 12th Army Group was largely immobilized, made it inevitable that the war must go on into 1945.'\(^48\)

The campaign at Caen was conducted in a similar manner to that of the second battle of El Alamein, another 'push and crumble'. Montgomery refused to advance — to the consternation of the Americans — without total security. Whilst for posterity the fighting at Caen has been described as a 'holding action' for the Americans, the ghost of Rommel's letter of 1942 comes to mind: 'The British Commander risked nothing in anyway doubtful . . . I was quite satisfied that Montgomery would never take the risk of following up boldly and over-running us . . . indeed such a course would have cost him far fewer casualties in the long run.'\(^19\)

One cannot but draw comparisons with other Allied field commanders, in particular Field-Marshal Viscount Slim.

\(\text{It was very plain to me . . . that this dash for Rangoon by a mechanised force, confined to the one road, thrusting against time through superior numbers, was a most hazardous and possibly rather un-British operation. I knew the risks and the penalties of failure but, as I checked over the final plans, I was ready to accept them. Whatever the risks, we were winning. We had kicked over the anthill: the ants were running in confusion. Now was the time. My soldiers were out for Rangoon, and anyone who was with them and had seen them fight could not doubt that they would get there.}^49\)
This would seem a perfect example of pursuing 'the single object which is essential, no matter what else may be desirable in any given situation, and the bending of all available means to its attainment.' Would Montgomery have run the gauntlet of the monsoon rains against superior forces in order to take Rangoon? I think not.

Why has Montgomery remained such a controversial figure? Perhaps the answer lies in his character. After the war he became involved in N.A.T.O. Montgomery now considered himself to be an expert on most things, from Communism — which produced the following rebuke from H. J. Laski: 'I hope with all my heart that this is not the way Mr. Attlee and his colleagues regard the present difficult international situation . . . Quite frankly, Lord Montgomery's speech to the Royal Netherlands Society does not suggest that skill in ideological analysis is among the special gifts with which he has been endowed' — to how to bring up children. 'No, I am not happy about them. Boys and girls must be taught that certain things are good and certain things are not good.'

Montgomery had risen above his level, the level above which a man should — according to him — never be allowed to rise, a dictum which he ruthlessly applied to others. The critics are quick to point out that even Lord Attlee, one of Montgomery's most fervent supporters, had to admit that, after 1947, when Montgomery became C.I.G.S., the years which followed were the least successful in his career.

His Memoirs have been considered to be: 'a bold and most readable assault on the verdict of history . . . his book is much less a work of art than Grant's personal Memoirs, and indeed is in places scandalously incomplete.'

Some say that there is a meanness about them which cheapens many of his achievements. Perhaps General Alexander, in his Memoirs 1941-45, best explains the reason for this trait. 'If his wife had lived, her influence over him would have made him more human; when he was so tragically bereaved he retired very much into his own shell.' Even so, at times his treatment of those who had served him faithfully was inexcusable. De Guingand, to whom he owed a great deal of his success, wanted to view the final surrender of the German Army:

As this was to be such an historic moment — the consummation of several years of toil . . . I phoned my Chief and told him en passant that I proposed flying up; the suggestion, however, was not very warmly received and I was in fact told that my presence was entirely unnecessary, and surely I had plenty of work to keep me occupied.

Whilst Montgomery's flamboyance on the field (his wearing of a digger's hat on which were encrusted the badges of all the units under his command) and his unstemmable energy were just what the Eighth Army needed in 1942 — a conscious realisation of fresh blood at the helm — he had a certain sharpness with his immediate subordinates which did not breed personal as against formal loyalty from his officers. Howard comments:

He was less popular in the Eighth Army than is sometimes believed. The men despised his showmanship and the officers found in the gentle competence of Alexander a man much more after their own hearts.

Who, then, should receive the credit for that victorious drive to Tripoli? I think most critics would agree with the words of General Alexander:

Nevertheless I should formally record the extent of the Eighth Army's achievements. In six months they had advanced over 1,800 miles and fought numerous battles in which they were unfailingly successful . . . it reflects in particular the greatest credit on the Administrative services.

"Thus to the critics, be they theorists, military historians, or those who served with him but disliked his flamboyance, he will be forever in their eyes but a competent craftsman — not the great military genius the Allied press or writers of popular histories have made him out to be both during and after the Second World War.

His critics argue that it is ironic that because it took Montgomery so long to execute the order given — to destroy Rommel's Afrika Korps — that he became famous, that for months the newspaper headlines followed his slow progress up the coast to the detriment of far tougher operations going on in other war theatres.
Yet for those of us who admired him and thus tend to dismiss the critics' arguments, have indirectly been affected by the propaganda and charisma of the "Montgomery Legend" and are not particularly interested in reading generals' memoirs, the hero of the desert will be:

Montgomery of Alamein — you remember him. 35

NOTES
3. The title of one of Montgomery's books.
8. Ibid., p. 362.
11. This was due especially to the fall of Tobruk coming too soon after that of Singapore.
16. A fairly important distinction here is that meagre reinforcements reached Rommel were normally fully trained in their particular specialisation for desert warfare whereas on the Allied side it has been suggested they were not trained to the same degree.
18. Liddell Hart, op. cit., p. 329. It must be remembered that these notes and letters were written 'at the time'. Rommel did not survive the war.
23. Thompson, op. cit., p. 139
25. Ibid., p. 333.
28. General Bayerlein, in a footnote to Liddell Hart, op. cit., gives the following figures concerning the relative strengths of the opposing forces as of 23 October, 1942:
   - British
     - 170 Grants
     - 252 Shermans
   - German
     - 85 Panzer, Mk. III L/42
     - 80 Panzer, Mk. III L/60
     - 8 Panzer, Mk. IV L/24
     - 30 Panzer, Mk. IV L/43
     - 211 tanks

     Of the German tanks, only the 30 Panzer, Mk. IVs with the high-velocity 75-mm. Kwk 40 L/43 gun mounts were able to penetrate the hulls of the Shermans. Three other authors confirm the authenticity of the belief that the Germans had only 30 such Panzers. They are Barnett, op. cit., p. 258, B. Collier, A Short History of the Second World War, London, 1967, and Carver, El Alamein, London, 1962. The later version of the L/43 gun, the L/48, was not available to Axis forces in the Mediterranean theatre until the closing stages of the African campaign.
32. Thompson, op. cit., p. 105.
33. Barnett, op. cit., gives 1,000 and 8,000 (German) and 1,000 and 16,000 (Italian) dead and taken prisoner respectively. Thompson, op. cit., considered the Axis casualties to be 59,000.
34. Most authors seem to agree on this figure.
36. Thompson, op. cit., p. 105.
37. A. Moorehead, Montgomery, London, 1947; Chapter II, 'Boy in the Beret', pp. 24 et seq., is of special interest, as is the chapter entitled 'Military Messiah' in Barnett, op. cit., p. 271 et seq.
39. O'Connor was the desert commander in an earlier Allied campaign, that is, until he and his staff were ignominiously captured by a group of enemy motorcyclists.
41. Ibid., p. 75.
43. Howard, op. cit.
44. J. B. Phillips, Problems of Command in the West, Newsweek, 11 October 1948.
47. Ibid., p. 424.
48. C. Fitzgibbon, 'Monty Through Bradley's Eyes', The New Statesman, 22 November 1958. Fitzgibbon was one of Bradley's staff officers.
54. Howard, op. cit.
This article was written and researched in 1972 from sources then available. In the Spring of 1974, the British War Office lifted its ban on any reference to how "Ultra" effected the course and strategy plans of the allied war effort during the Second World War. The Ultra Secret of that war, was the fact that in the late 1930s British Intelligence had obtained one of the German High Command Enigma Cypher machines from Poland, and with the aid of scientists and computer machines were able to crack the complex German code. This meant in effect that in most military confrontations and certainly at the second battle of El Alamein, British commanders were obtaining top secret orders intended for German Commanders in the field, as soon as they were broadcast, as well as their battle plans, locations, logistic strengths and orders of battle. It was therefore interesting to observe that F. W. Winterbotham, one of the masterminds behind the setting up of this cypher breaking operation, in his recently published book entitled The Ultra Secret reinforces most authoritatively the fact there was 'no crisis' in the desert by the time Montgomery had come onto the scene.

Page 95 of this quite fascinating book states as follows — third para:

"With the aid of Ultra, which had told him where and in what strength Rommel was moving his forces, Auchinleck had outwitted him like a light-weight boxer with quick punches just where Rommel least expected them. Rommel's signal to his bosses in Berlin was, I remember, a very long one. He reported heavy German losses, putting much of the blame on the Italians. His German units were under half strength, his replacements were sub-standard, he was short of fuel and supplies, he hoped his own position would hold if attacked. It was the turn of the tide, I doubt if the OKW took as much notice of Rommel's signals as Winston Churchill did. They were too engrossed in their operations against Russia.'

i.e. was it not Auchinleck as against Montgomery who had fought Rommel to the standstill?

TRIDENT OF NEPTUNE — CLARIFICATION

With reference to my recent article "The Trident of Neptune" (DFJ No. 8) I wish to make it clear that some of my source material was obtained form early unpublished Department of Defence, Central Studies Establishment (CSE) papers in connection with on going studies of force expansion problems and quantitative historical analysis of conflict warning times.

The interpretations I placed on their work were my own. It was an omission on my part for not further consulting CSE as I have placed an interpretation on their work which is not correct.

CSE have asked me to bring to readers' attention that the graph (Figure 1) of my article, was based on a preliminary appraisal in 1974 of available data on conflict warning times. Subsequent CSE work has shown this initial appraisal was incorrect, and that there are two major types of conflicts — Major Escalatory Conflicts and Deliberately Provoked Conflicts. The quotation "50% probability that conflict could occur in less than 16 weeks" refers to former category.

More importantly, these probabilities are not predictions of when conflict could occur but are simply statistical statements of the probable length of warning time once a major conflict had begun to emerge. The probability of when a major conflict could occur is quite a different matter.

I. M. Speedy
Lieutenant-Commander RAN

It is not quite correct to title this book a history of the Royal Australian Engineers in the period 1835-1902 because, simply, the RAE was not officially raised until 1 July 1902. The book can more correctly be said to be about the Colonial Engineers—the volume's sub-title—because it concerns the work of the Royal Engineers in Australia and of the several local engineer corps raised from 1860. It is, in fact, only the first volume of a four-part history of the RAE.

The book is more than simply a corps history, not least because military engineers in colonial Australia were responsible for much civil construction as well as fortifications and their achievements are among the assets included in the National Estate. Accordingly this volume, perhaps more than might be anticipated of the later three works which are planned, is deserving of wider attention than from just military historians, although it is undoubtedly a most valuable addition to the list of works recounting Australia's military heritage.

The author is a distinguished former officer (Major General) of the Australian Army and brought to his task not only practical knowledge of engineering but the experience of having written two books previously. The account he has produced is consequently well-researched and authoritative yet readable.

As far as production is concerned the book is excellent, although one wonders at the necessity of cluttering the front cover with inessential information. The fact that publication was undertaken by the RAE Corps Committee need not be any recommendation at all to many potential buyers and recognition of the efforts of the worthy committee members can just as easily be accorded on the title-page, as it has been in any case. One wonders, too, at the prominence given the Corps' motto "Ubique"; one gains the impression from the front and spine of the dust-jacket that "Ubique" is the chief title yet it does not even appear on the title-page.

The use of the rear endpaper to provide four maps is economical as well as making the maps handy for reference while reading. The ample use of illustrations (twelve pages of photographs) also makes for an interesting work, and included are some badges which will interest collectors of militaria. The needs of the student and scholar are met, with the text fully referenced and the inclusion of a bibliography and index. One hopes the next three volumes of the series are of a similarly high quality.


Australian Joint Warfare Establishment

Until the fairly recent scandals involving such names as Northrop, Lockheed, Dassault, Prince Bernhard of the Netherlands and ex-Prime Minister Tanaka of Japan, it was doubtful whether many people would have given much thought to the world of the arms dealers and the methods they employed. The exposure of the methods employed by Lockheed to ease the way in selling its weapons attracted the interest of Anthony Sampson, at first just to investigate Lockheed but then as he became aware of the wider implications he investigated as much of the world of arms dealing as he could uncover.

Anthony Sampson is recognised as one of the world's top investigative journalists. He regularly writes for The London Observer and Newsweek and his previous books include such best-sellers as 'The Anatomy of Britain', 'ITT—the Sovereign State' and 'The Seven Sisters', a book about the influence of the oil companies. His latest book is 'The Arms Bazaar'
which is sub-titled ‘The Companies, The Dealers, The Bribes: From Vickers to Lockheed’.

In ‘The Arms Bazaar’ Sampson records the bribes and payoffs behind the deals engineered by the arms dealers and arms manufacturers in the Western world, mainly those in America. In doing so he covers the subject as far back as Krupp and Vickers and decides that the great difference between the arms industry and any other industry is that it is infinitely expandable whereas virtually all other consumer markets cannot be expanded beyond a certain point of saturation. It is by extension therefore that bribery has such an important role in the arms world for this is the surest way to influence people in the right place that it is in their interests to expand the demand for arms. It is the author’s thesis that many of the arms companies in France, UK and USA are now so dependent on their established production that any reduction in their market could have fatal implications for the future of the company. An example is made of Lockheed which is the largest arms manufacturer in the world and is so dependent on exports that it cannot afford to ignore any means to hold and if possible expand its share of the market.

A rather ominous picture is painted of the American arms manufacturers applying great pressures on their government. They do this on one hand through the good offices of senators and congressmen who have a vested interest in the financial success of those companies based in their own state; on the other hand, they encourage their foreign clients to apply pressure to the US Government to authorise export of more and more sophisticated weapons. This great drive and purpose on the part of the arms companies often evolves as a separate foreign policy and the potential for conflict between national and commercial interests is very real.

There is no doubt that there has been a huge increase in the sale and export of arms abroad by the three major arms nations—UK, USA and France. The production and stockpiling of weapons today is the largest the world has ever seen, including the great build-up before World War I. What is most disturbing though is that now the greater percentage of those arms is in the hands of people who have the least experience in dealing with such power. Approximately $5,000,000 worth of arms have been exported to the Middle East every year for the past four years. The great danger now is that having such stockpiles of arms will lead to increasing pressure to use them.

Sampson throws some interesting light on the bribery employed by the arms companies. In Japan, for example, he discovered that Lockheed bribed or attempted to bribe almost everybody with whom it came in contact. He saw this initially as a ploy to reassure the powers within the company that everything possible was being done to assist the sales but finally it became a type of psychological obsession of bribery itself. Again in the case of Indonesia in the mid-1960s, Lockheed used bribery to improve its position with certain officials and finally out-bribed the opposition only to find that it had been competing with one of its own subsidiaries. While seeing a certain amount of humour in this last instance it is sobering to discover that the payments can be extremely large, in some cases they can be big enough to have an effect on the economy of the target country. Adnan Khashoggi apparently received $106 million from one company alone for acting as its agent in the Middle East and individual commissions often exceed three or four million dollars. It is probably no wonder, as Sampson observes, that many of the better ‘agents’ served their apprenticeships by selling cars! The situation is well summed up by one quote from the book:

‘If one offers money to a government to influence it, that is corruption. But if someone receives money for services rendered afterwards, that is commission’.

Reading this book one cannot help but get the impression that arms companies deliberately create tensions and promote regional rivalries to serve their own ends. That, given the opportunity, they will create fears and foment troubles where they did not previously exist, just to increase their own profitability. However, Sampson feels that would be too simplistic a view and he believes that the great costs of modern weapons, the specialized skills needed in their production and the long lead times for development, testing and production force even the major powers to export more and more of their sophisticated weapons just so they can keep their weapon production lines
open to arm themselves. A well-researched and well-written book which is highly recommended to those who have any curiosity at all about the greyer than grey world of international arms dealing.


Reviewed by Gerald Waish, Senior Lecturer in History, University of New South Wales, R.M.C., Duntroon.

This interesting study examines the determinants of victory and defeat in eight cases of revolutionary civil war: Rome 83-82 BC; England 1642-46; Mexico 1914-15; Russia 1918-20; Spain 1936-39 and three phases of the Chinese Civil War, 1926-28, 1930-34 and 1946-49. After brief outlines of the eight cases, two chapters explore the political and military factors in victory and defeat and concluding chapter analyses these factors. Eight appendices deal with such things as the author’s method, ambiguities in the cases, additional, related and rejected cases, and the “Principles of War” as applied to revolutionary civil war. There are copious long footnotes and a very useful bibliography.

The author’s distinction between political and military factors—“artificially separated by theory and doctrine, intimately joined by theory and practice”—is one of convenience. The political factors are discussed under the headings of Resources; Time, Program, Political Work, Political Control, Mobilization, Political Base, Strategy, Leadership and Organization. As well as the three last mentioned, the military factors include Position, Security of the Rear, Troops and Supply. There are numerous subsections: those dealing with propaganda and the different types of military leader are especially valuable.

David Wilkinson’s findings are presented in terms of model losers and ideal winners, and there are few surprises in the list of the characteristics of each. The losers have a narrow political base, are weakened by disunity and corruption, lack dedication, leadership, military mobility and a real political program. The ideal victors possess, among other things, the opposite attributes which leads them, whether of the Right or Left, towards a militant, centralized, autocratic, and repressive regime. The author also makes a few observations on the dilemma of the moderates and on the question of strategy in such struggles.

Specialists will no doubt draw attention to oversimplifications and misplaced emphases in the cases examined, but as a general analysis Wilkinson’s study is both timely and useful. Unfortunately, however, the book is not easy reading, being marred by the intrusion of sociological jargon and such sentences as: “Actual losers are generally more corrupt than actual victors.” Wilkinson is no Crane Brinton! But there is a more important criticism which stems from the limitations of such an approach. In his preface the author points out that revolutionary civil war can be studied “across centuries as well as cultures”. This is true. But the cultural differences ought to be fully investigated along with the revolutionary similarities. This is not done.

A clinical, systematic look at the phenomenon of revolutionary civil war across centuries and cultures can point up useful generalizations about such conflicts, but it cannot, of course, fully explain the outcome of any particular revolutionary civil war. For this a full knowledge of the historical context is imperative. While this type of book may delight the political scientist, it will not satisfy the historian.


Reviewed by Lieutenant D. J. Taylor, RAN, HMAS Creswell, Jervis Bay.

This publication may be classified as one of the many popular histories currently being published. Thus it suffers from the strengths and weaknesses common to all these publications.

Richard Hough’s objective in this volume is to provide examples of what he sees as being a great admiral. His term ‘great admiral’ must firstly be clarified, for he almost exclusively concentrates on the popular fighting admirals. Single exception is perhaps the German Naval leader Von Tirpitz. Disappointingly he does not include any of the reformers and innovators such as Scott and Fisher, both of the Royal Navy.
Biographies of twenty-one admirals, ranging from Don John of Austria to the American admirals of the Pacific campaign during the Second World War, are included in this single volume.

To help with comprehension the book has been divided by time periods, and examples taken from the various periods. Often Hough has taken opposing admirals such as Howard and Duke of Medina and some comparisons are made. However this comparison is never extensively undertaken which is a continual disappointment.

Selection of admirals has been predictable, Drake, Nelson, Tromp, Nimitz all appear. The author does not unearth any new information on any of those studied and he takes the accepted stance on all. Nelson is seen as the archetype of the great admiral, the author’s most damning criticism of Jellicoe is, “would Nelson have acted in a similar manner at Jutland?” This is not to say that it would be correct to remove Nelson from the pedestal he so rightly deserves. However with the more controversial such as Beatty and Jellicoe, he religiously follows the traditional and established opinion. Hough even goes so far as to harshly rebuke “a young university historian anxious to make his mark” for questioning the activities of Francis Drake.

Hough’s selection did provide two surprising omissions, the American Farragut, and the great reformer of the Royal Navy “Jacky” Fisher. Both richly deserve inclusion in any discussion of the great naval leaders. The exclusion of Fisher is more surprising for Von Tirpitz is included, and yet his great rival is not. Perhaps economies are the real reason for Fisher’s demise—book size and the fact that the author has already published a volume on Fisher.

A great weakness in this volume is the number of admirals studied in the space available. This book is only some 271 pages in length. Thus each career is dealt with in a very sketchy manner, often only concentrating on a single action of the admiral under discussion. One continually gains the impression, though probably incorrectly, that the commentary is really a brief summary perhaps for some later publication. Hough has attempted too great a task in too little a space.

The publication itself is very well produced. The book abounds with illustrations, although perhaps there are too few maps. Fortunately the illustrations help to offset the failure of the written commentary.

This publication is ideal for the book browser, however for the serious naval or general military historian or student it has little to offer.


Reviewed by Major F. R. Duncan, Personnel Branch, Army Office

The subtitle of this book—A Guide to the Battlefields of the First World War—is a more apt description of the contents than the main title and one is tempted to think that the author, Rose E. B. Coombs, chose the main title for the initials to provide an additional memorial to the British Expeditionary Force.

In an area where even the smallest error in detail would invite a flood of corrections from individuals and associations Miss Coombs, with confidence based on a lifetime of interest, years of research and over 100 visits to the World War I battlefields, provides 133 pages of easy to read detail. Facts provided range from actions involving whole armies to those of individual servicemen with side excursions into such items as the Poppy Legend; the death of the Red Baron; who fired the first shot of the war and who was the first and last to die.

The guide is laid out in a series of itineraries through the various battlefields and the narrative describes the items of interest encountered.

Many of the 400 illustrations are in pairs showing the ‘then and now’ situations which are of particular interest and provide mute testimony to the efforts of the inhabitants and nature to repair the destruction of war.

Prior to reading this guide I had visited the World War I battlefields three times and had taken some pains to prepare for these journeys but now discover that I passed within yards of significant items not knowing they existed. I revisited the battlefields in 1977 with this guide in my hand and it was a vastly different experience.