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Front Cover
A Helping Hand.
(Anzac Day Papua New Guinea 1992)
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Telephone: (06) 270 6711. Fax: (06) 270 6744.
Gooly Chit History Project

Dear Sir,

Writer Thomas Wm. McGarry and researcher-collector R.E. Baldwin are seeking information, photos, documents, and personal stories regarding the creation, manufacture, distribution and operational use of 'Gooly Chits' (Blood Chits), Pointie-Talkies and related Escape & Evasion items from all nations for a book chronicling the definitive history of these devices. They are interested in both the official and theatre-made types from all periods from the British colonial period (India, Iraq, Arabia) to the present day, including those used by Australian Armed Forces. They are also interested in those used by U.N. observers and peace-keeping forces. Samples are also requested for photography and documentation. Contact: The Blood Chit Project, P.O. Box 11131, Berkeley, CA 94701-2131, U.S.A. All contributions of information, documents, photos, stories, samples, etc will be gratefully and fully acknowledged.

R.E. Baldwin

Disaster Relief

Dear Sir,

The proposal by Major D.H. Cato to form an Australian Relief Team that could provide emergency medical/engineering response to disasters in the South Pacific Region (ADFJ No. 92) is well thought out but appears to overlook the current availability of similar response from the civilian community. The Australian Overseas Disaster Response Organisation (AODRO) was founded in 1981 for the purpose, inter alia, of allowing the Australian community the opportunity to provide their skills to the victims of overseas disasters. Since AODRO receives Australian Government funding, there is the potential for a degree of redundancy in Major Cato's proposal.

AODRO, in 1985, established its Emergency Workers Service (EWS) which, with the cooperation of various professional bodies, soon built up to a strength of 120 personnel across a range of skills. The bulk of skills, though, are in the health and engineering areas, as these are, as Major Cato correctly observes, the primary areas from which emergency skills are required. Communications too, is another area that is of importance following disaster impacts in the South Pacific Region.

The EWS has been developed with quick response and flexibility in mind. However, experience has shown that while the EWS is able to respond (on light scale) in 48 hours, the lag time in the generation of official requests for this form of aid is such that the time for rescue work will have passed by the time the team reaches the disaster site. Emergency relief work, (as opposed to search and rescue work) is at the forefront of assistance required from foreign donors following cyclones in the Pacific, and this is usually followed by a need for assistance to rehabilitate services.

The EWS is not available for deployment within Australia. During the Cyclone Namu response (photographically depicted in Major Cato's article) the EWS deployed a medical team on light scale to the Solomon Islands. This assistance was requested by the Guadalcanal Provincial Government and was passed through official channels to the Australian International Development Assistance Bureau (AIDAB), the aid bureau within the Department of Foreign Affairs and Trade, in Canberra. AODRO was able to respond to AIDAB's request in 36 hours with a team that was self-contained except for transport. The team was led by a doctor with Antarctic expeditionary experience and it worked in a severely impacted area of Guadalcanal with support from a local nurse (language is usually a problem in remote areas) for ten days before being extracted by helicopter to Honiara.

Major Cato's conclusion that 'The Australian Government does not at present have any unit able to be quickly deployed in the advent of a natural disaster' and that 'Past experience has shown that military forces are best equipped to deal with the immediate effects of natural disaster whether these occur in the Australian continent or in the Pacific Region' reflect an outdated view of disaster management. The independent countries of the Pacific Region are becoming more and more self-reliant (with Australian and other assistance) and our disaster response is becoming less intrusive and with more of a people-to-people orientation. And even without calling on the private sector, the Australian Government has access to (and has often called
upon) its own departmental officers to provide specialised assistance in fields such as power supply, water supply, harbour survey and communications.

Your readers might be interested to know that AODRO has strong military connections. The founding Chairman was Major-General Paul A. Cullen, AC, CBE, DSO & Bar, Ed, (RL) and the current Chairman is Major-General Raymond J. Sharp, AO, RFD, ED, (RL).

I would be happy to provide further information to interested readers.

J.B. (Barry) Blake, FRD, ED
Colonel
Executive Director, AODRO

Disaster Relief

Dear Sir,

I wish to comment on the article entitled 'Disaster Relief in the South Pacific...'(ADFJ Jan/Feb 92).

Unfortunately, the opportunity to make a significant contribution to the defence community's understanding of a valuable peacetime function of the ADF has been lost. The presentation might easily mislead the reader into thinking that the major responsibility for disaster relief rests with the ADF, and that it no longer has any form of deployable health resource to meet such a commitment. This is incorrect on both counts. Responsibility for national and international disaster relief rests with the Natural Disasters Organisation (NDO) and the Australian International Development Assistance Bureau (AIDAB); while significant deployable health care assets do indeed exist in the ADF. For example, the RAAF has a number of Casualty Staging Facilities (CSF) that currently meet the requirements listed for an 'Australian Disaster Relief Team (AusDRT)'. The CSF Level 1, in particular, is normally able to deploy on six hours notice — well within the two days suggested as being necessary by the author — and it is 'fully air portable and able to be moved by C130E aircraft'.

Recent experience with Cyclones Val, Betsy and Fran are cases in point. On receiving advice that ADF assistance would be required, HQADF had tasked Air Headquarters with preparing a medical plan for the likely disaster relief. In all cases, within three hours a relief team had been formed and was on standby, with appropriate resources allocated.

The real need to establish a full time, dedicated AusDRT, as proposed in the article, must therefore be questioned. Given the current economic climate, I would suggest that Australia can ill afford the luxury of the duplication of resources that would occur upon its formation.

R.S. Adams
Wing Commander

The RAAF Needs a Regiment

Dear Sir,

My experience as a RAAF Chaplain during the Vietnam and its post war years support the suggestion of a RAAF Regiment.

At grass roots, RAAF servicemen within the factory environment of the aircraft maintenance are orientated towards technological and electronic aspects of war. They may philosophically appreciate that their role is one which involves aspects of war, and the defence of the Australian Commonwealth. It is a salutary fact that within a fighter squadron it is only the pilots who have a developed sense of fighting aggression. To some extent this is carried through with helicopter crews, and much less evident among transport crews.

I have heard literally dozens of RAAF tradesmen indicate to me they are not soldiers, or fighting people. Had they been so inclined they would be enlisted in a more hands-on fighting arm.

The RAAF seems to me, to have an unrealistic, even mind set approach through its failure to develop the concept and operation of at least a small RAAF Regiment. There is tradition and precedent in the past for the basis of such a Unit. The likely probability that Australia may face an enemy on her own soil in the next century requires that at this present time the necessity to 'Train for War in Peace' offers to develop and integrate into the RAAF some of the aggressions and skills of indigenous geographical and practical defence.

There is a biblical truism which can be interpreted more proverbially than in its original and needs to be heeded, 'There are none so blind as those who will not see.' (John's Gospel 9:39).

Frank Glen
Chaplain Ret'd RNZCh.D. & RAAF
Fellow Australian Institute of History & Arts

Use of Armour in Low-Level Operations

Dear Sir,

I refer to Capt D.J. Moore's letter in regard to my article. The Use of Armour in Low-Level Operations
I welcome his comments and those particularly on the importance of artillery. It is noted that I purposely restricted my argument to the advantages and disadvantages of armour in the low-level operations.

In answer to some of the comments put forward by Capt Moore I would like to make the following observations:

a. He has not given full cognance of the nature of low-level operations particularly where he equates it to conventional mechanised operations and to the Gulf War. I would also disagree with the assertion that there is no similarity between low-level operations and CRW. It was noted in the article that (particularly in any offshore operation) we could find ourselves operating either wholly or in part in a close country environment. Regardless of where low-level operations occur it is likely that the enemy may wish to avoid contact with our main force; preferring ambush and hit and run tactics. He may only conduct offensive operations where he is certain of easy victory, or political success. He is unlikely to stand and fight, and will take measures to avoid detection. In this scenario broad armoured sweeps may prove of little value. Our infantry may therefore need to dismount to adequately search for and hunt the enemy. I am aware of incidents where the reluctance of the infantry to dismount and search for the enemy has allowed the enemy to escape on exercise.

b. In low-level operations the tank offers enormous advantage as a result of its ability to quickly engage point targets while reducing the risk of collateral damage to the civil infrastructure (compared to indirect fire in built-up areas). A tank can be used to engage and destroy an enemy strong point with devastating effect.

c. When fighting in low-level operations in built-up areas or close country Infantry may be in close proximity of the enemy when contact occurs (as close as 20m). If the enemy does not intend to stand fight the force comd will be reluctant to pull back so as to engage the enemy with indirect fire.

d. The use of artillery over a widely dispersed AO presents many problems as to how it is to be allocated. Whether guns are to be centralised in static defended ‘bases’ in defence of key points or allocated out by sections into dispersed mechanised/ motorised columns is open to question. There is also the problems associated with the ability of trailed guns to move with a mechanised element.

e. If the broader question of combined arms operations in low-level operations is to be adequately addressed (and this was not the intention of my article) it would not be sufficient to discuss armour and artillery. The use of Engineer support, Army Aviation (offensive and troop movement) Communications also needs to be addressed.

Whilst I think that Capt Moore has overlooked some of the characteristics of low-level operations in trying to compare it with conventional mechanised operations, I do not denigrate his pro artillery stance. My article dealt specifically with those uses of armour in low-level operations and was not by design intended to define all aspects of combined arm operations. I would like to invite Capt Moore to put forward his view on the use of Artillery in low-level operations.

D.W. Phillips
Maj LHQ
Victoria Barracks

Australian Cadet Corps

Dear Sir,

I completely support the views expressed by Captain Jonathan Huston suggesting the reactivation of the Australian Cadet Corps in the July/August issue of ADFJ.

The response by Senator Mal Colston was very predictable of the political/academic/bureaucratic drongoism that prevails in this country on defence policy issues.

Senator Colston asks why our adolescents should be urged to wear a military uniform and be trained in combat related activities. Why not? For a start it might give them a sense of discipline, pride, self esteem, self reliance, and resolution which is lacking in large sections of Australian youth today.

Perhaps the politicians and public servants could give up some of their perks to make life more tolerable for the men and women in uniform.

There are wide sections of the Australian community who would support a return to National Service to give our youth a greater sense of purpose
and not unimportantly a useful role in the future defence of this country, and a return of the cadets to their traditional function would be some way to meeting this objective.

P.C. Firkins

Air Power

Dear Sir,

Major General Butler's comments on Air Power (ADFJ No. 93, March/April 1992) are based on a view of military matters which while common, is nevertheless out of date. It is a view that envisages the RAN, the Australian Army and the RAAF fighting a future war as virtually independent entities, each under the control of its own service leadership and each applying its own doctrine. In the future it will not be the RAAF leadership who will decide on how the nation's air power will be used; it will be the Defence Force leadership, who in turn will act in accordance with the dictates of our political leadership. If, for example, the circumstances and defence strategy dictates that RAAF fighter and strike aircraft be used to provide close support to the troops in the field, rather than, say, air defence and strategic strike, then that will occur, irrespective of what is in the doctrine or what the air marshals may or may not think.

Another fallacy in General Butler's views is the idea that the three services as they are currently structured and equipped will be called upon to fight a sophisticated enemy across the whole range of military activities. As was put by another correspondent to the March/April edition, they don't have a 'snowball's chance in hell' of doing so. All that our current force can do is to fight relatively minor, low intensity military actions, or provide a contribution to a larger allied force. Quite clearly the RAAF as it is today cannot meet even a fraction of the demands for support that the Navy and the Army, operating in a full war situation, might make, any more than either the RAN or the Australian Army as they are today could themselves fight such a war. Unfortunately, many appear to have forgotten that the prime purpose of our present day defence force is to act as an expansion base. It is about time that we gave more than a passing thought to what our expanded force might desirably look like.

The Air Power doctrine is not a policy directive, or an ambit claim, as to what will be provided by the RAAF: it is a guide to help those who have to direct war in the future as to what air power can and cannot do and how to get the best from it. To limit the doctrine to what we have today is to restrict one's thinking to the straight jacket of present day strategic and financial circumstances.

As to the question of how best to provide fire support to the infantry soldier, this needs to be decided, not against the thoroughly negative view that because the RAAF cannot be relied upon to provide such support in all circumstances, then the Army must be provided with its own organic fire support, but rather how best the Defence Force might meet this requirement. Maybe the best solution is to provide 'attack helicopters armed with air-to-ground missiles'. Then again maybe heavy artillery is the answer, or maybe more strike aircraft. Here again flexibility to be able to meet a range of circumstances needs to be considered as well as cost and relative effectiveness.

What the Australian military needs more than three sets of single service doctrine is an all encompassing 'combat doctrine' that matches the now well established organisation of the three armed services into a single Australian Defence Force operating under a single military commander.

Norman Ashworth
Air Commodore (Ret)
The Ready Reserve Concept — A Decentralised Option

By Major B.A.R. Scott, RA Inf

The main conclusion drawn from analysis to date is that there are unlikely to be any significant cost savings in the RRF concept, and that substantial levels of RRF in the ADF will require additional funding.

... one of the serious outcomes of the Ready Reserve proposal will be the effect it will have on the existing Reserves and their morale and the ability to both recruit and retain.

Introduction

The Ready Reserve (RRRes) concept was implemented in January 1992 as a result of Government decisions on Defence reforms. The Government has expressed confidence in the concept, believing it will be ‘attractive’ and ‘effective’. Nevertheless, some community organisations, opposition political parties and sections of the Australian Defence Force are not convinced of the viability of the concept and have expressed reservations.

The attractiveness asserted by Government appears to be in relation to the perceived recruiting potential and the community support reflected in recent surveys. Effectiveness, however, is not as easy to define. It could be related to the cost savings anticipated in sustaining RRRes units instead of ARA units, or the ability to sustain a stronger brigade, or combat efficiency or, indeed any combination of these aspects. In addition, specific aspects of the Ready Reserve Force (RRF) concept are causing serious concerns. These are, firstly, the unknown dollar cost of achieving success with the concept and, secondly, the impact it will have on the General Reserve (GRes). It will be important to ensure care is taken to minimise all costs and any negative effects.

While there are many unknown facets to the RRRes concept, this article will examine the announced ‘centralised’ concept and propose a decentralised option. It will examine the basic cost of facilities and travel and subsistence and outline how savings may be achieved. These aspects are important when considered in light of the predictions of zero or negative growth for Defence in future budgets. This article will also detail the long-term opportunities and benefits that may be available to provide enhancement to the GRes and greater interaction with the community. This is necessary to reinforce the importance which the ADF and Government places on the GRes and community support. The article also identifies the long-term benefits rather than short term ‘quick fix’ options.

The Announced Centralised Concept

Ministerial announcements indicate that the ADF restructuring will bring with it a change in general attitudes to the services by the wider community. Aspects of the RRF concept will, therefore, be studied in light of this announcement. Specifically, the effects and costs of a centralised brigade and its impact on recruiting, the GRes and the community will be examined.

The Ready Reserve concept, which will be implemented by converting 6 Bde to a Reserve formation, is aimed at becoming ‘a direct link between civilians and the cutting edge of our defence capability.’ Through various incentives, civilians are to be attracted to RRRes service in large enough numbers to become a significant source of manpower.

In due course, 6 Bde will expand from its current form to comprise three battalions as its nucleus, an increase in strength from 2900 (2000 ARA and 900 ARRes) to 3700 (700 ARA and 3000 RRRes). This is a significant manpower increase with major resource implications, particularly as the majority of the RRRes units are to be concentrated in one location. As a minimum, additional facilities at Enoggera Barracks in Brisbane will be required to house the third battalion. Calculations by HQ 1 Div indicate that in excess of $23 000 000 will be needed for facilities if the concept is to become a reality.

Recruiting the GRes

Historical data indicates that the enlistment of the number of soldiers required will necessitate a national recruiting campaign. Recruiting on a national basis
at a target audience of school graduates and tertiary education students will almost certainly have an effect on the traditional recruiting base for GRes units. This situation will cause some animosity between the two tiers of the Reserve component of the Army. This animosity will be further increased by the allocation of $50 000 000 to the RRes concept in order to purchase additional equipment—equipment also needed by the GRes. Recruiting and money allocation are therefore catalysts for trouble amongst the Reserves.

It is important to reduce any animosity by ensuring that the RRes benefits flow on to the GRes. Any proposed necessities must be capitalised upon to provide measurable benefit to the GRes in the long term, thereby avoiding the potential internecine situation within the Reserve component. The RRF concept must be seen to supplement the existing GRes in accordance with a stated principle of the Force Structure Review.

### Centralised Training

Concentrating the RRF in one location allows for the implementation of one locally adapted training package which can be developed and monitored by the formation headquarters. That would help to maintain standards and coordinate scarce resources such as equipment, training areas and transport. In addition, command and control within the formation will be easily facilitated.

Furthermore, the increase in numbers within the brigade will place additional pressures on all the local training resources within the South-East Queensland area. All ranges and training areas will be in greater demand in later years. This will force the allocation of priorities to users; it is assumed the RRF will attract the highest priority. This may in turn significantly limit the use of these facilities by local units, particularly GRes units. This could cause a detrimental effect on any interaction between the GRes and RRes and may detract from the GRes ability to train.

### Travel and Subsistence

In subsequent years, after full time training and recruitment has seen the RRes achieve its full potential, the annual travel and subsistence costs of centralised training by RRes units at Enoggera is predicted to be approximately $2 158 000. The bulk of this cost is likely to be incurred by RRes soldiers travelling to Brisbane from along the Eastern seaboard, the major recruiting base. This is a 75 per cent increase in existing costs and appears unavoidable in any centralised concept.

### Community Support

The GRes is extremely conscious of maintaining links with the community. The community is its local recruiting base and without its support GRes units have difficulty surviving. For the RRes to be sustained the support of the nation is paramount. The maintenance of this support will be a function of command which may need to be exercised in a similar face-to-face manner as is practised in the GRes. If a RRes soldier resides outside the Brisbane Metropolitan area, the impact of his service with the Army on the local community will be limited to the direct effect on family and employers. There will be no local public relations effect from RRes unit exercises as most will not occur within the soldier's home area. It is therefore likely that the centralised concept will not provide a basis for interaction with the community or readily encourage greater community support.

A training system, which encourages contact and interest by the unit in the part-time period of RRes service, is being developed within 6 Bde. Achieving this and maintaining direct links with the soldiers and their employers, not located in the Brisbane area, will be costly in administration. The plan for a 6 Bde training cadre to be located in regional centres is unlikely to provide the staff with the time to adequately perform this contact/link function. It is anticipated that difficulties in achieving the Government objective, of maintaining links with the community, will occur under the centralised concept.

### Summary

It can therefore be expected that the centralised concept, as outlined, will place increased pressures on the Brisbane area's resources. The increase in manpower requires major works projects to be undertaken at a time when fiscal constraints are a major issue. In addition recruiting nationally to sustain a RRes brigade in one location will result in an increase in travel and subsistence costs. Finally,
the maintenance of direct links with the soldiers, their employers and the community will be a difficult task. A decentralised option for the RRes brigade may alleviate these difficulties.

A Decentralised Proposal

An alternative to the centralised brigade option in Brisbane would be a brigade with units scattered down the Eastern seaboard cities. Advantages could then be taken of existing facilities, regional recruiting in major population areas and reduced travel costs.

An Eastern Brigade

A decentralised Eastern seaboard RRes brigade would require major RRes units to be located in the higher population areas of Australia, specifically Brisbane, Sydney and Melbourne. To achieve this, a reshuffle of units and an advanced schedule for the move of units North would be necessary. A decentralised proposal would have infantry units relocated:

- a. Brisbane — 49 RQR (RRes);
- b. Holsworthy — 7 RAR (RRes);
- c. Watsonia — 5 RAR (RRes); and
- d. Darwin — 5/7 RAR.

Brisbane. Enoggera Barracks, based on its existing 6 Bde structure, can support a number of RRes units of a brigade. It can however only house two infantry battalions. To save the facilities costs that would be required to expand to house a third battalion, an alternate location would be required. Such a location could be in either Sydney or Melbourne. A decision of this nature would ensure existing Brisbane area training facilities are not over extended and are available to other local units.

Sydney. Holsworthy Barracks will be 'thinning out' as the plans to move Army units to the North are implemented. In 1993, 2 Cav Regt will be relocated in Darwin thereby 'freeing up' facilities which could support the RRF concept. If 5/7 RAR was also relocated North several years earlier than planned, sufficient recently upgraded accommodation would be available to house a RRes battalion.

Melbourne. Simpson Barracks could also support a RRes unit with little modification. The facilities available after the closure of 2 Sig Regt and the move of elements of the School of Signals would house an infantry battalion. Puckapunyal will also be capable of providing the additional training area support once elements of its major user, 1 Armd Regt, are moved North.

Command and Control. A disadvantage to the decentralised RRes brigade concept is the command and control difficulties that will occur because of distance. This is not considered critical because the function of the RRes brigade headquarters will place a higher priority on support to and monitoring of training rather than practising the manoeuvring of units. Because the first six months of the full-time year will be individual training, it is unlikely that any subsequent RRes collective training will occur above sub-unit level, within a unit controlled scenario.10 The brigade headquarters will have to rely on the 90 days from call out to practise and achieve formation level efficiency. This should not be considered unreasonable if all the RRes units and the brigade headquarters are fully manned at all times and CPXs and like activities are used to hone staff procedures. Although additional travel expenses would be required to achieve this, they are considered minimal in relation to the increased bill for the centralised concept.

Travel and Subsistence

A decentralised brigade concept will permit recruiting to occur from major population areas and allow regional identity to be retained by the soldiers. This should reduce the travel and subsistence expenditure after Year 1 of the RRes soldier's service, particularly if these soldiers are undergoing tertiary education in Brisbane, Sydney or Melbourne. Attendance at weekend and non-discretionary training will be easier for the soldiers if their RRes unit is located nearby. Minimal costs in travel and subsistence will be incurred as it is anticipated that most soldiers will use public transport or their own means to attend training. Major travel and subsistence costs will only be required when the RRes brigade is called-out and concentrated in one location, either for a test exercise or in a state of emergency. Brigade level test exercises are not likely before the brigade is nearing its maximum manning level in 1996.11 It is therefore predicted that a decentralised RRes brigade travel and subsistence would require no increase on 1991 current 6 Bde costs.

With RRes units located closer to the recruiting base the ability to create and maintain links with the
community will be enhanced. The ease with which unit staff may liaise with employers and tertiary institutions will enable more personal links to be established. This should enhance community responsiveness and support to the RRF concept and minimise possible discontent through the lack of information and knowledge of the RRes soldier’s commitments.

Summary

The decentralised proposal offers considerable flexibility in maintaining links with the community and in ensuring support than the centralised concept. It should make more cost effective use of existing facilities and subsequently minimise travel and subsistence costs. If the RRF concept is successful then the units situated within a reasonable distance of a major population area could become self generating in the area of recruiting, through a low-cost public relations campaign. This campaign would utilise the RRes soldiers in recruiting in their regional areas, in much the same way as the GRes operates now. This could not be achieved without considerable effort and coordination from a Brisbane based RRes brigade.

Enhancement of the General Reserve

Any RRF option will almost certainly have significant effects on the GRes. It is therefore important that RRes decisions and plans should endeavour to provide some opportunities for enhancement of the GRes. Aspects of the RRes which may provide benefit to the GRes are resources, public relations and end of RRes service transfers.

Public Relations

The 'spin off' from positive press and active public relations campaign will also be limited if articles and reports do not appear regularly in appropriate interstate media. Economically, under the centralised concept, Brisbane and South-East Queensland stand to gain the most, while Watsonia and Holsworthy communities will lose monetary input as Regular units are disbanded or moved North. If some of the 'moving' Regular units were replaced with RRes units, it would ensure continued military presence and community support in these areas. This, in turn, would flow on to the GRes which requires community support for its very existence.

End of RRes Service

It is generally agreed that the RRF concept has the potential to significantly enhance the standard of the GRes if RRes soldiers join GRes units on completion of their RRes commitment. To gain this benefit RRes soldiers must be encouraged at the outset to join the GRes after their five year commitment.

The Centralised Concept. The current concept espouses little to achieve this foreseen enhancement of the GRes. It will be a major decision for the RRes soldier to undertake a commitment of continued service in the GRes. Therefore, they must be overtly and covertly encouraged to do so. Isolation from regional GRes units will be an obstacle of the RRF concept that must be overcome. A solution involving the RRes soldiers undertaking their discretionary training regionally with GRes units could alleviate this problem. This would force the soldiers to allocate their time and undertake a commitment

Also, the move of regular units North will take away traditional resources and support which may have been available to local GRes units. If some of these units were replaced with RRes units it may ensure GRes units still have access to the much needed equipment and some manpower support, albeit limited due to reduced numbers of regulars within RRes units. It is, therefore, considered that the decentralised proposal would provide the GRes with greater access to resources than the centralised concept. It may also reduce some of the negative effects the RRF concept may have on the GRes.
while experiencing all the home base pressures and distractions. If the soldiers were recruited regionally by platoons then peer pressure and unit esprit de corps could be introduced to ensure the group attended local training. If forced into the routine of regularly travelling short distances to a known GRes unit to complete a training obligation, the RRes soldier may find the decision to transfer to the GRes to be a natural one, particularly if groups were to do so. This system would not necessarily be beneficial to the parent RRes unit but may subsequently result in many soldiers joining the GRes after their RRes service.

The Decentralised Proposal. The considerations outlined in the centralised concept are also valid for the decentralised proposal. However, encouraging service with the GRes after RRes commitment would be easier to facilitate under this proposal particularly as a routine of regularly travelling locally to the base unit for training would have already been established. The opportunities for organised and cost-effective tours to and briefs from regionally based GRes units exist. Many soldiers transferring from the GRes to RRes would be able to maintain an affiliation with their previous units and thereby be encouraged to return to them on completion of RRes service. Attracting the RRes soldier to the GRes may prove easier under the decentralised proposal and therefore provide a better opportunity for the enhancement of the GRes in the long-term.

Summary

The decentralised proposal for a RRes brigade will allow the GRes continued access to scarce resources. Also, the public relations benefits from replacing 'moving' Regular units with RRes units would help to maintain community support for both the GRes and RRes. Finally, the ability to influence soldiers to join the GRes after RRes service may be more successful under the decentralised option.

Conclusion

The RRes brigade concept should be viewed at the start point for introducing a dynamic change to the Army structure. To ensure it has every chance of success and can be implemented to produce long-term cost effectiveness and capability enhancement, the concept should be viewed as being flexible and adaptable.

An examination of aspects of the centralised and decentralised RRF options highlights various advantages for the long-term. There are opportunities for saving facilities and travel and subsistence costs by RRes units occupying soon-to-be-vacated military facilities in capital cities. The savings achieved could then be redirected to the North. Also, regional recruiting and basing could enhance the success of the concept and establish Reserve service training routines. This, in turn, may facilitate a natural transition of soldiers to the GRes after RRes service and in the long-term enhance the GRes. Finally, the decentralisation of RRes units should enable maximum effective contact with the community and further assist in the implementation of the RRF concept.

The decentralised RRes brigade proposal provides an opportunity to minimise costs in facilities and travel and subsistence, improve links with the community and enhance the GRes. In doing so, the resources and manpower required to support and sustain the RRF concept will be harnessed to ensure long-term benefits for the Army as a whole.

Recommendations

It is recommended that the decentralised RRes brigade proposal be further studied to confirm perceived long-term benefits, such as:

a. the possible cost savings that may be achieved by occupying facilities to be vacated by units being disbanded and moving North;
b. enhancing GRes units access to scarce resources and establishing an environment where the RRes soldier may see GRes service as being a natural progression; and
c. RRes becoming responsible for establishing and maintaining community links and enhancing the public image of the Army.

NOTES

Major Bruce Scott commenced service as a cadet at RMC. He was transferred to Officer Cadet School, Portsea and was commissioned in 1975. After several postings he became an exchange officer at the Canadian Infantry School and participated in exercises in Canada, Germany and Norway. He is currently Brigade Major, 11 Brigade, RA Inf.
Gulf War Endorses Some Important Lessons in History for Those Responsible for National Security

By Commander R.J. Sherwood, RAN

The one safe conclusion to draw from the lessons of history is that those who may have to wage war must prepare their minds to deal with the unexpected.

Introduction

In the twelve months or so since the commencement of Operation Desert Shield and the effective commencement of operations by the United Nations endorsed coalition to effect the withdrawal of Iraqi occupational forces from Kuwait, much analysis has been conducted by strategists and defence experts to glean all possible lessons from the campaign. Yet most importantly and hardly touched upon by writers to date is the fact that again history has reinforced two basic strategic lessons, those of:

a. the pitfalls of having the key military decision making process dominated by a single man, and
b. the inflexibility of a single military strategic concept as either a means of achieving a national aim or for defending one's chosen position.

Success in the modern military environment requires a recognition that warfare is not just the bringing together of men in hand-to-hand conflict but also involves the distinct and separate activities of maritime and air warfare, requiring the direction of men specialised in their separate arts. This does not mean that in a given theatre of operations victory cannot be achieved by a single Commander in Chief. A Commander who has invariably been assigned a task whose dimensions have been determined at the strategic level. It is at this level that there must remain joint specialist advice to the government on the military options available to it.

The purpose of this article is to provide a review of modern military history up to and including the Gulf War and assess what lessons remain relevant to those who may have to use military force in the national interest in confronting the unexpected.

History as a Guide

The annals of history are full of the sagas of failed military campaigns. Yet in terms of modern military history, that period since the development of maritime warfare as a separate science from that of continental warfare and the more recent development of the science of air power, there have been some classic examples of failure, when a nation's military strategy has been dominated by a single leader or a single concept. Invariably they have been concepts dominated by the thoughts of those skilled in the art of continental warfare, or who have allowed their higher decision making processes to be dominated by like minded men. For the purposes of this article they begin with Napoleon and end with Saddam Hussein.

Napoleon and the Art of Land Warfare

Perhaps the first instructive example in modern military history of the fallacy of the 'one man band' military leader is that of France's Napoleon, touted by many as the grand master of land warfare strategy. Yet as one writer has pointed out:

'In spite of his marvellous grasp of facts, his close study of details, and of his genius for adapting his objects and purposes to meet the conditions which presented themselves to him, he never mastered the secrets of the element which proved his undoing.'

He refused to heed the advice of those who could have saved his empire, his naval leaders. More disastrously, his lack of understanding of matters maritime, had him continually commit to sea fleets, which although composed of good ships, were commanded not by seasoned commanders but by admirals who lacked operational experience with crews who had spent more time in port than at sea.

This up against a navy manned, from their leader Nelson down through to the lower deck, by men dedicated to the service or in the habit of following
the sea. Men who were members of a society which felt the rhythm of the sea in the pulse of its daily life, knew that their country lived by its commerce and believed that their freedom would die unless the command they exercised over it was defended in the deeps.  

Denied the use of the sea, Napoleon had surrendered the American and Asian markets to the British, whose trade and commerce flourished, providing the resources to finance their land campaigns and the crucial subsidies to their continental allies. The crippling of French commerce, forced Napoleon to overextended logistic lines as he sought to expand his empire continually.

**Russia and the Concept of Defence in Depth**

It was in the war with Napoleon that the Russians first put to test Peter the Great's single military concept of — defence in depth, the yielding of territory to gain time and wear down the enemy. Its success, against an enemy who possessed no strategy other than a continental one, gave a false impression and was to lock the Russians into a concept that brought failure as well. The navy developed as a force purely designed to support ground forces.

The result was a failure to contest the mastery of the Black Sea during the war in the Crimea serving to undo all the other strategic advantages held and ultimately leading to defeat. A strategy that had seen a Russian admiral, following the defeat of the Turks at Sinope, sink his ships in the harbour mouth and land his guns and men to help hold the forts. It was a concept of the ‘Fortress Fleet’, the idea that the fleet was there to defend the bases, rather than command the sea.

A strategy that again failed in the war with Japan, when despite having the third strongest navy in the world in 1904, her three squadrons dispersed in defence of their bases, were soundly picked off by a concentrated Japanese Fleet. A Japanese strategy, which served not to defend but to pave the way for land victories. The use of a maritime strategy by Japan had in addition to providing efficient and secure logistic lines of communication, given the Japanese army flexibility to pursue a land campaign free from harassment by an enemy unable to use the sea.

**Germany and the Army Tradition**

Germany is another nation in history who failed due to its reliance on single strategic concepts and the predominance of the army over military thought. During World War I, the General Staff pursued a strategy that was clearly dominated by the Army, who opposed the idea of maritime forces. The Navy, a creation of Wilhelm II, was continually interfered with and the authority of its admirals limited. Perhaps if more credit had been given to a strategy of interfering with British sea-borne supplies, rather than the fruitless land campaign in the trenches of France, the German nation may have achieved its national goals and avoided the calamity, which was Versailles.

Despite the successes that their submarine campaign had given them, the German mind-set had been clearly set on expanding the scale and intensity of land operations. Yet it was seaborne commerce that was required to provide the products to support this more industrialised and technologically advanced contest. British sea power and blockades had hurt France a century beforehand but never to the extent that it effectuated Germany, in reducing food consumption and handicapping industry by diminishing or shutting off crucial supplies.

Yet with the rise to power of Hitler in the early 1930s the lessons of less than twenty years earlier were not heeded with respect to grand strategy. Hitler created the Oberkommando der Wehrmacht, a supreme command for all the armed forces, with himself as Commander in Chief and an army general as a super Chief of Staff. The resultant force posture was one of a first-rate army, a second-rate air force, and a navy, which in comparison to the British (their most likely protagonist) was of negligible size. One can only surmise to how much more effective Germany’s submarine campaign may have been if they had received the support of long-range maritime aircraft. Yet in many respects it was not the air force who were to blame. Undoubtedly the fact that the three chiefs did not stand on equal footing had much to do with the decision in 1938 not to proceed with a long-range strategic aircraft but to go for something more suited to support ground forces and thus the dive-bomber.

Germany throughout the war remained the prisoner of the single strategic concept. As had been the case in 1918, Germany was finally defeated by a coalition of forces who through the use of a combination of strategies, and a military leadership
which at the strategic level was truly joint, managed to isolate Germany's strengths in land forces and pursue a victory by denying Germany access to vital resources. Like Napoleon before him Hitler was forced to overextend himself in the pursuit of resources. A campaign into a Russia which was successful, until the logistic support provided primarily by sea, enabled the Russians to turn the tables. Twice in the space of thirty years 'a great maritime coalition had fought and defeated a great European land coalition.'

**Saddam Hussein and the Walls of Flame**

Despite the lessons that should have been gleaned from the above incidents in modern military history, Iraq would appear to be a nation that in the most recent times has fallen into these two strategic chasms. Saddam Hussein effectively began his rise to power in Iraq when the Ba'ath Party seized power in 1963. Under the tutelage of one of its main leaders, Hasan al-Bakr (a relative) Hussein gradually accrued power to himself. Most importantly gaining control of the army in October 1977 and finally in July 1979 becoming President, Commander in Chief and Chairman of the Revolutionary Council.

Iraq now had a single military boss, whose only military knowledge was that associated with the skills of land warfare. This was reflected in the strategy he pursued in developing the nation's armed forces with a preponderance of the massive defence outlays going towards the army and its associated weaponry. By 1990 of a total active force of about 1 million, 95% were in the Iraqi army with a total outlay on Defence of 4.15 billion Dinar or 13.3 billion dollars. Despite much of the rhetoric about Iraq's air capability, it was realistically not a threat. An air force configured for defence and in support of the army and manned by untrained and inexperienced pilots. Iraq's continental strategy and the large army required to support it, was slowly destroying the very lifeblood of the country.

Despite the fact that a reliance on a primarily land warfare strategy in the previous confrontation with Iran between 1980 and 1988 had nearly resulted in defeat and at one stage had seen Iran holding significant amounts of Iraqi territory, it was a strategy that was persisted with. It was primarily as a result of United States naval assistance in protecting Iraqi oil tankers during the period 1987/88, that had prevented Iran from terminating the main source of Iraq's export income (ultimately Iraq's weapons budget), and thus achieving a final victory. The lesson of a single concept of war (in this case a battle between armies) was not heeded, and Iraq invaded Kuwait in August 1990 under the misapprehension that it would require a massive army to come and remove her forces. Unable or unwilling to comprehend the effectiveness of a naval and air blockade, Saddam had left Iraq unprepared to counter the strategy employed by the coalition forces ranged against them. Iraq was unprepared to face the unexpected. The sanctions imposed and more importantly the large and effective maritime force...
ranged within the Gulf in very short time, against a maritime capability which was of nuisance value only, left Iraq very vulnerable to subsequent operations.

The situation that Iraq found itself in is perhaps best summed up as follows:

'The Iraqis effectively had no 'strategy', if by that term is meant the art, knowledge, science or wisdom of the general. If what it had outside of these was a strategy at all, it was what might be described as a 'strategy of autism' under which its leadership appeared to become self-absorbed, incapable of communicating and unresponsive to the powerful military threats it was facing. The static nature of the strategy was explicit in Iraq's claim that Kuwait was the country's nineteenth province. It followed that, if it was, it had to be defended, as much as any other part of the Iraqi homeland, and so required a sizeable garrison, fortifications and a huge logistical effort. It therefore came to be defended, as other parts of Iraq had been more or less successfully defended, within the strategic framework the military leadership knew best. This involved not only fortifying the occupied territory — thereby attempting to relight the eight year Iraq-Iran war — but surrendering the mobility and thus the offensive capability of armoured units requiring them to 'dig in'. Baghdad's options, such as they could be said to exist, were thereby pre-empted.\(^{20}\)

It is now a matter of history that the coalition of forces ranged against Iraq were able through the well planned use of sanctions and subsequent air power both land and ship based, initiated a campaign against the static Iraqi forces that broke their morale and destroyed their main defensive weapons systems to such an extent that coalition land forces were able to move swiftly into and liberate Kuwait. A coalition of forces under the command of a Commander in Chief who had been assigned a clear and unequivocal task.

## Conclusion

In both respects, Iraq failed the test on the two important precepts of avoiding military failure. Iraq, like France, Russia and Germany in earlier times, didn't heed the experiences of modern military history. Lessons that clearly show that the concept of the single military chief and of a single concept of war — more often or not coexistent — are the precursors of defeat.\(^{21}\)

In all cases nations that have pursued the course of the single concept and the predominant military chief, have been dominated by the doctrine of their numerical superior armies. Doctrine that in many cases is purely the development of ideas that existed before the advent of the sciences of maritime and more recently air warfare. In every case they have been defeated by the unexpected, either changed conditions or by an opposition who did not assume the role they had assigned to him.

Perhaps as never before, the Gulf War has highlighted the rapidity at which weapon technology is advancing, and more importantly the utter uncertainty as to when and in what conditions a nation may be called upon to employ military force. Commonsense should therefore warn against proceeding down the path to failure through adopting a single military concept and or allowing strategy to be driven by the single military mind. There is no easy answer, no panacea for military anxieties. Any nation that seeks to recoil from more wider responsibilities in respect to its military strategy faces the prospect of the Maginot mentality, rejoiced by the French people for a few years, but in which they ultimately sacrificed their national substance.\(^{22}\)

Nations that have successful military strategies, will be those who employ flexibility in approach, encourage open debate, and ensure that the policymakers and political decision-makers receive their advice not from a single entity but from a group having collective responsibility. A group who are the product of a lifetime spent in each of the three services. Ultimately success will invariably come to those nations who prepare their military professionals to deal with the unexpected, not to be hidebound by preconceived ideas, or solidified by thought and authority under one man control or within the limits of a single doctrine.\(^{23}\)

## NOTES

GULF WAR ENDORSES SOME IMPORTANT LESSONS IN HISTORY

20. Bickerton and Pearson, op cit, p.188.
22. Ibid, p.713.

BIBLIOGRAPHY


The author is a graduate of the University of NSW, the RAN Staff College and has just completed 12 months on the staff of the RAAF Staff College, prior to taking up the appointment as Director Maritime Studies. Previous articles on maritime strategy and history have been published in the Journal of the Australian Naval Institute, and a working paper on Australia-Indonesia Security Relationship is pending publication by the Defence Studies Centre at ADFA.
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Human Immunodeficiency Virus (HIV) Testing in the Australian Defence Force

By Lieutenant Colonel Kevin Farrell, RAAMC

Introduction

The year 1992 marks the 500th anniversary of the occupation of Naples by the Army of Charles VIII of France. At that time, an epidemic of syphilis broke out in the city and the resulting disability caused the operation to be abandoned. The European pandemic of syphilis that followed was believed to be due largely to the spread of the disease by soldiers upon the disbanding of that Army. Syphilis was not well known in Europe before that time as it had only just been introduced by sailors and soldiers returning from the West Indies.

In the present century, and only in the last decade or two, HIV infection, an hitherto unknown disease, has arisen and reached pandemic proportions. It is of military importance, particularly in Africa and to a lesser degree in South East Asia and America. It has the potential to affect our Defence Force, especially if transmission in the heterosexual population becomes significant, as it has in a number of countries where our troops could operate, albeit in a peace-keeping role.

HIV infection, like syphilis, has been spread along lines of communication by both civilian and military personnel. The early spread of the infection in Africa is believed to be due largely to truck drivers, and spread to other countries has been due in part to military personnel, for example by Cubans returning from Angola and a Soviet Military Adviser returning home from Africa. The virus has also been reportedly spread around US bases in Guam and the Philippines. More recently, the infection has been imported to Australia by travellers returning from South East Asia including a member of the ADF (contact at end of 1988).

HIV is transmitted through the exchange of genital secretions during sexual intercourse, the sharing of needles and syringes by intravenous drug users, needlestick injury, the transfusion of infected blood and some blood products, and from mother to infant before or during birth. Homosexual and bisexual men form the largest risk group. Acquired immune deficiency syndrome (AIDS) is the most severe clinical expression of infection with HIV. In Australia, 88% of cases of AIDS are homosexual or bisexual men. The period of communicability of the infection extends from early after its onset to the end of life.

HIV classically produces a glandular-fever-like illness one to six weeks after infection, but this stage may go unrecognised. This illness can be associated with a temporary compromise of the body’s immune system. After resolution of the acute illness, a variable, apparently dormant period follows. This period may last less than one year but possibly over 10 years, with the clinical features being confined to lymphadenopathy (swelling of lymph nodes), one or more episodes of shingles, and other minor manifestations. In due course, constitutional symptoms develop (usually insidiously) and AIDS-defining conditions present such as wasting, secondary infections, cancer or dementia. Neurological complications may develop before any other symptoms. With antiviral and other therapy, improvement may occur and survival is steadily improving but eventually deterioration occurs progressively until death.

An HIV infected person has an increased risk of adverse effects of some vaccines, e.g. live virus vaccines, and a sub-optimal response to others. Such a person also has an increased risk of severe illness if exotic diseases such as malaria are contracted.

Public health measures used to control the epidemic in Australia include education campaigns, promotion of safer sexual practices, needle and syringe exchange programmes, and screening of blood donors. Most persons infected with HIV develop detectable antibodies (in their serum) within one to three months. As yet, there are no means
available for the sterilisation of whole blood, fresh plasma or cellular blood derivatives.

ADF Policy

ADF policy for the detection, prevention and administrative management of HIV infection was approved by the Minister for Defence Science and Personnel in January 1988. The policy was a result of extensive consultation between the Surgeon General of the Australian Defence Force and bodies such as NACAIDS, the Aids Task Force and the Department of Community Services and Health, and is designed to minimise the impact of the disease on the operational efficiency of the ADF and to promote safety.

The policy covers education, counselling, testing, contact tracing and administrative management of Service personnel affected by HIV, and was confirmed in July 1989 after a trial period. The main thrust of the policy is prevention through education and testing, but comment will be confined to the latter.

Acceptance of the rationale behind the policy may be assisted by an understanding of the features of military service that differentiate the profession of arms from civilian occupational pursuits. The purpose of a Defence Force is to train for war and to conduct military operations when so directed by Government. Military training and operations may be physically and psychologically demanding, requiring the completion of hazardous and, in many cases, high performance tasks, living and working under arduous conditions, for example in the field or at sea, and separation from family and friends. The demands are such that high medical standards for entry and employment are necessary and such employment tends to be most suitable to relatively young adults, who form the most sexually active part of the population.

Persons entering the Defence Force are immunised against common infectious diseases and Hepatitis B for protection in training under institutional conditions and such status is maintained during military service. Additional immunisations may be given for protection against exotic diseases as required in preparation for specific deployments, to minimise the non-battle casualty rate.

In mass-casualty situations in war, or on operations or exercises in foreign countries or remote locations, Australian Service personnel could be
required to provide their own blood donor pool, and immediate care of the injured may have to be provided in the form of ‘buddy’ aid or first aid by non-medical personnel, with the risk of direct blood contact. Furthermore, entry by Service personnel to many overseas countries is subject to being free of HIV infection.7

Other features of military service are the benefits provided to the individual such as education or training in skills that can often be used in the civil sector but for which a reasonable return of service is required, the provision of appropriate health care, generous ‘sick leave’, invalidity and death benefits, and access to compensation for illness and injury caused or aggravated by military service.

Now HIV infection, as yet, cannot be prevented by vaccination, has no cure and invariably proves fatal. Its presence is a cause of rejection at entry, as is the existence of any other serious or potentially serious disease. Serving personnel who are confirmed HIV positive are generally not retained in the ADF upon reaching the Group III stage of the disease under the US Centers for Disease Control System of Classification (persistent generalised lymphadenopathy).

Blood testing for HIV infection is therefore mandatory after entry to full time service in the ADF, and serving personnel are tested in the following situations;

- Deployment or likely deployment where emergency blood transfusions may be required;
- Occupations where performance decrement could compromise operational efficiency and safety;
- Selection for long courses of training;
- Postings to and from overseas;
- Specified overseas deployments;
- Accidental exposure to potential HIV infection;
- Sexual contact with an HIV infected person;
- Clinical indication, including existence of other STD; and
- On request.

All regular entrants are tested as soon as possible after their arrival at the initial training establishment. Applicants are informed, before entry, that such testing will take place as part of the routine post-entry medical check, and they are given the option to refuse and withdraw their application. As with newly inducted entrants in whom other potentially serious diseases are detected, personnel with HIV infection are discharged.
TABLE 3: NUMBER OF DIAGNOSES OF HIV INFECTION IN REGULAR ADF SERVING PERSONNEL BY AGE AND RISK GROUP, CUMULATIVE TO 30 JUN 91

<table>
<thead>
<tr>
<th>AGE</th>
<th>Ho/Bi</th>
<th>Ho/Bi+IDU</th>
<th>Het</th>
<th>RT</th>
<th>NS</th>
<th>TOTAL</th>
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<td>20-24</td>
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<td>3</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>25-29</td>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
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<tr>
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<td>1</td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>35-39</td>
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<td>45-49</td>
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<td>1</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>24</td>
</tr>
</tbody>
</table>

NOTE: 1. INCLUDES A RECRUIT WHO FAILED TO DISCLOSE (AT ENTRY) PRE-EXISTING HIV INFECTION

Results of testing

Screening for HIV antibodies in ADF laboratories is by the Elisa Test with reactives confirmed by Western Immunoblot in a civilian reference laboratory.

Data have been obtained from the Surgeon General’s Division of the ADF which receives reports from the Health Directorates of the three Services.

Between 1st April 1988 when entrant HIV screening was introduced and the end of June 1991, only one confirmed positive was reported (in early 1991) from a total of 22,561 tests. This equates to a seroprevalence of 0.04 per 1000 entrants (Table 1) or 4.43 per 100,000. Despite selection resulting from the medical and psychological examination of applicants, the prevalence of HIV infection is not significantly different to that found in blood donors under 40 years of age in Sydney and Brisbane in the period 1985-1990, which was 5.24 per 100,000. The rate is however much lower than that reported in young US male military applicants prior to 1989, which varied geographically between 80 and 230 per 100,000.

The first confirmed positive in a serving ADF regular member was reported in November 1985. To the end of June 1991, a total of 24 cases (all males) have been reported from 51,035 tests (Table 2). Just over half of the cases were reported prior to mid 1988, and since then, the average number of cases reported per year was 3 or 4. The rate of new diagnoses per 100,000 current population cumulative to the end of June 1991, of 35.3, is less than half that in the general Australian population.

Seropositivity is related to age with the majority of cases being diagnosed in the 20 to 29 year old group (Figure 1). The lower rate in the next older age groups is at variance with the findings in the general population, in which the peak rate in the 20-29 year group remains almost as high in the 30-39 year group.

The data on risk group or exposure category (Table 3) may not be meaningful in view of the large number of cases in which this was not specified and the potential for otherwise untruthful responses.
Conclusion

In conclusion, HIV infection is a negligible threat to ADF capability but this could change if the spread of the infection in the general heterosexual population accelerates and the rate of new infection in the recruiting pool increases or if ADF personnel deploy in large numbers to endemic areas. Testing has a role in the prevention of transmission of HIV, as have education and counselling, and it is considered prudent to continue testing in the ADF in accordance with existing policy.

NOTES

9. Gonzalez, J.J., op cit, p.34.

Lieutenant Colonel Farrell is a medical graduate of the University of Queensland (1967). Prior to commissioning into the RAAMC (ARA) in 1980, he worked in hospitals and in public health in Queensland and Papua New Guinea. He obtained the degree of Master of Public Health from the University of Sydney in 1990 and is a Fellow of the Australian Faculty of Public Health Medicine and an Associate of the Australasian College of Occupational Medicine. At the time of submission of the above article he was a Staff Officer (Medical Services) in the Directorate of Army Health Services, Personnel Division, Army Office, in Canberra.
Return to Greece is an Australian Defence Force Journal production highlighting the 50th Anniversary of the Australian Defence Force's participation in the Allied struggle of the Greek Campaign of World War II.

In 1941, Greece fought for survival against the might of Germany. The Greeks, aided by Australian, New Zealand and British forces fought to ward off the invasion of their homeland. Return to Greece tells of these battles and of the Allied evacuation.

Return to Greece revisits the sites of the battlefields through a selection of 50 water colours and drawings. The book takes the reader on a journey with the veterans of the Greek Campaign through the country where they fought valiantly with their Greek comrades in defence of democracy. It illustrates the pride and professionalism of today's Australian Defence Force personnel as they pay tribute to the memory of those who fought with such bravery and self sacrifice in the cause of freedom in the dark days of 1941.

This book will rekindle memories for those who took part in the campaign of 1941 and also for those who participated in the return pilgrimage in 1991.

Return to Greece is illustrated by Defence artist, Jeff Isaacs with text by Michael Tracey.

Return to Greece is available from the Australian Defence Force Journal at a cost of $20.00.
Why All This Stress About Stress At Work?

By Major G.P. Fogarty, RAA

Introduction

Today, most of us have a large number of pressures placed on us, both at work and in our private lives. A great number of these events are planned, but others occur unexpectedly. However, this experience of stress is not new. Our cave-dwelling ancestors faced stress every time they left their caves and encountered their enemies. The prehistoric animals are gone, but they have been replaced by other predators such as time deadlines, responsibility, retirement and divorce. These work and non-work predators interact and create stress for individuals on and off the job.

Stress means different things to many different people. As a result, numerous definitions of stress exist. I prefer Miner's definition in that it is... an adaptive response, mediated by individual characteristics and/or psychological processes, that is a consequence of any external action, situation or event that places special physical and/or psychological demands on a person.1 Although lengthy, this definition enables me to focus attention on specific environmental conditions that are sources of stress. This article will discuss why stress at work has evolved into a major concern for organisations and will also describe some of the environmental and organisational stressors present in the Australian Army. Finally, the article will offer strategies to overcome these stressors and improve effectiveness.

The Cost of Stress

The management of and concern about stress have recently become major issues in safety and health.2 This is not surprising, considering the massive amount of evidence that supports the assertion that stress is a major contributor to six of the leading causes of death in the United States.3 The three most frequently prescribed medications in the United States are an ulcer medication, a hypertension drug and a tranquiliser, and about two-thirds of the visits to family physicians are the results of stress-related symptoms.4

The costs of stress can be measured in monetary, medical and social terms, and can affect not only the individuals concerned, but also employers and society generally. Based on a variety of estimates and projections for government, industry and health groups, Ivancevich and Matterson place the cost of stress in the United States at approximately $100 billion annually.5 This estimate takes into account the dollar effects of reductions in operating effectiveness, poorer decision-making, decreases in creativity, mental and physical problems, hospital and medical costs, lost time and staff turnover.

It is also becoming apparent that courts are more receptive to claims for damages based on long-term stress and emotional duress. In the United States, courts have ruled that emotionally ill employees are entitled to workers' compensation awards for accumulated job stress. Recently, a spokesperson from a leading Adelaide law firm has warned that employers must take measures to reduce stress among employees or face severe penalties.6 In Australia, action can be taken against an employer over stress-related problems under the Occupational Health Safety and Welfare Act. Penalties for breaching the Act are significant with a maximum fine of $50,000 for a first offence and $100,000 for subsequent offences.7 Thus, there now may be another reason to be concerned with stress in the organisational environment, along with other economic and humanitarian reasons — the avoidance of litigation.8

Stressors

There are many potential sources of stress within organisations. For example, pay inequities, shift work, frequent relocation, poor communication and ineffective delegation. These stressors affect individuals in different ways and some people are more stress prone than others. Especially susceptible are individuals who display a series of traits known as type A personality. Type A's tend to be impatient, competitive individuals, who concentrate on doing several jobs at the same time and are constantly under time pressure. Less susceptible are individuals...
who possess a **type B personality**, these individuals are relatively more mild mannered, in less of a hurry and far less competitive. The majority of officers in the Army are type A personalities.

The detailed selection process for training and employment as an officer in the Australian Army is based on an individual's ability to respond effectively to stressful situations. The military, unlike other organisations, must also consider the effects of combat related stress and prepare its employees for the abnormal, overwhelming stressors encountered during battle. However, it is not the horrific nature of war that is affecting today's Army, it is the same environmental and organisational stressors that have become prevalent in most organisations. The major stressors experienced today include role overload, heavy responsibility, relocation, change and leader behaviour.

Role overload occurs when an individual is required to perform too many tasks in too short a period of time. Everyone has experienced role overload at one time or another. However, recent cuts in personnel strength levied on the Army have resulted in less personnel without the corresponding reduction of workload. The end result is an employee with more work to do, without more time or salary allocated. Studies as far back as 1958 established that this type of overload can lead to biochemical changes, specifically elevations in blood cholesterol levels. Coupled with role overload is role ambiguity. Role ambiguity is a lack of understanding about an individual's area of responsibility. Studies have revealed that role ambiguity is significantly related to low job satisfaction and to feelings of job threat. Furthermore, the more ambiguity experienced, the lower is the individual's utilisation of intellectual skills, knowledge and leadership skills.

The reduction in total personnel strength within the Army has also led to reduced promotion opportunities. Officers can no longer enjoy automatic promotion through junior ranks. There simply aren't enough positions to accommodate all officers and the less competitive officers will not be promoted. Additionally, the current economic climate in Australia has resulted in reduced resignations, which has further restricted promotion opportunity. All officers are becoming increasingly aware of the need to maintain high levels of performance in order to be competitive for promotion. Therefore, the personal consequences of incorrect decisions made at work can be staggering and the organisational climate is cultivating type A officers. The resulting responsibility felt by officers at all levels is immense.

The majority of officers in the Army change jobs every two years, with the change normally requiring relocation to another state. The stress induced by this requirement is felt by not only the officer, but his/her family, the other members of the organisation, who will now have to adapt to a new manager, and the organisation itself. The new manager's leadership style may induce stress and affect the subordinate's ability to use his/her knowledge and intellectual abilities. All these stressors can lead to dysfunctional medical, behavioural and organisational outcomes.

### The Management of Stress

Dealing with stress is a concern for the individual and the employing organisation. For individuals it is important because life, health, productivity and income can be affected. For organisations it is important because overall effectiveness will be affected when individuals are not performing at their best. Several approaches have been developed for dealing with stress. The good news is that stress can be reduced, however, this will require change to either the individual or the organisation, or both. Individual change focuses on reducing an individual's reactions to stressors and providing strategies to enable an individual to better cope with stress. The organisational approach focuses on reducing the cause of the stress.

The first place to begin any stress reducing program is with the organisation's managers. In the Army's case, it is with the officer corps. Officers must be well informed about what to look for. Mitchell et al, assert that there are both individual and organisational indicators of stress. For example, at the individual level — nervousness, absenteeism, decrease in performance and substance abuse are common indicators. At the organisational level many of the variables are the same. However, the indicators will occur on a broader scale. Stress management should be included in the curriculum at the Royal Military College. Graduating officers would then be in a position to recognise the symptoms of stress and would possess the necessary skills to deal with the associated problems.

As previously stated, medication is widely used in the United States to deal with the symptoms of stress. However, this approach is only short-term and will not remove the stressor or better equip an individual to cope with stress in the long-term. Individuals must be helped to manage their own...
work related stress. This can be done by the use of a unit stress management programme that incorporates techniques such as meditation, relaxation and time management. I have not included techniques such as physical fitness or interpersonal strategies as these should already be a part of every day unit life. As previously stated the Army consists of a large number of type A individuals and currently, a good deal of the stress is within the individuals and not the organisation.

I appreciate that several readers will snigger at the prospect of introducing transcendental meditation (TM) as a technique to reduce the effects of stress in the Army. I certainly did when I observed it being used at a US Air Defence school. However, the US Army has achieved success using TM and studies available indicate that TM practices are associated with reduced heart rate, lowered oxygen consumption and decreased blood pressure.

Similarly, several leading organisations are reporting successes with relaxation training. The aim of relaxation training is to reduce the individual's arousal level and bring about a calmer state of affairs. Relaxation techniques include breathing exercises, muscle relaxation and a variety of mental relaxation strategies, including imagery and visualisation.

Whilst a greater percentage of the stressors within the Army can be reduced by an effective unit stress management programme, further organisational change is also required. The most frequent forms of organisational change involve changing policies, organisational structure, providing employee health facilities, job enrichment and management by objectives. The stressors in the Army that can be reduced by some form of organisational change are: role ambiguity, change and relocation. Role ambiguity can be corrected by the establishment of 'role groups', where officers can meet and exchange information on their expectations and perceptions of others expectations. Mitchell et al. assert that exchanging such information, coupled with an action plan, can significantly reduce role problems.

Another important way the Army can help manage stress is through its handling of the change process. Reorganisations, new unit and sub-unit commanders and new regulations are all potentially stressful events. A number of factors can assist in reducing the stress involved in these events. Firstly, open discussion beforehand helps people to understand and contribute to the change process. Unfortunately, most managers within the Army are guilty of failing to do this. Secondly, when change is occurring management should keep lines of communication open, solicit input, be sensitive to complaints and keep track of peoples reactions. All too often too much energy is put into selling the idea of change and little or no energy into helping people accomplish it.

Finally, stress created by relocation can be alleviated by either reducing the frequency of all transfers to every three years, or better prepare soldiers and their families for the move. For example, the United States Air Force introduces military families who are about to be transferred to a new base to a local 'sponsor family' that is currently stationed at that base. This enables the departing family to obtain first-hand information about the kinds of problems that might be encountered in the new location and provides an established connection for them when they arrive.

### Conclusion

Stress is expensive if not managed effectively, taking its toll on both employee and organisational health. It is the cost of stress that has heightened corporate awareness and resulted in such an intense interest in the subject. Fortunately, there are numerous symptoms of stress that enable astute managers to identify patterns of behaviour. These patterns indicate problem areas that may be stress related. Yet in today's Army, the officers would be more inclined to search for traditional causes such as poor training or inadequate instructions. In all likelihood stress would not be on the list of possible problems.

The officers within the Army must learn to recognise the symptoms of stress if they are to be effective managers. They must become educated in stress management and implement programmes where they are required. The Royal Military College is the Institution where the education process should begin and it should continue through all formal levels of officer education. Stress is a growing corporate concern and already a plethora of research is available on the individual and organisational consequences of stress, as well as the degree of success that can be achieved through various stress management strategies. Let's not get left behind on this one!

### NOTES

7. Illoc cit.
18. Illoc cit.

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**Singapore Diary**

**AN ACCOUNT OF THE FALL OF SINGAPORE AND THE 50TH ANNIVERSARY COMMEMORATIONS.**

In February 1992, a group of World War II veterans made the pilgrimage back to Singapore to take part in the 50th Anniversary of the Fall of Singapore.

*Singapore Diary* is an *Australian Defence Force Journal* production. It highlights the fall of Singapore during World War II and the veterans of that campaign who returned to Singapore to commemorate the gallant struggle of that fateful time and to pay homage to their fallen comrades.

Illustrated by numerous drawings, *Singapore Diary* tells of the Japanese invasion of the Malay Peninsula culminating in the assault on Singapore Island in February 1942.

*Singapore Diary* will be available at a cost of $20.00.

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Australian Defence Contacts With Burma, 1945-1987

By Andrew Selth, Department of Defence

To most Australians, Burma is still associated with the Second World War, and in particular the infamous 'death railway' from Thailand. In May 1942 some 3000 Australian prisoners of war (POWs) were sent from Singapore, to provide labour for the construction of an airfield at Tavoy. They were subsequently joined by another 1800 or so Australians from Java, making a total in southern Burma of 4851 men. Together with other Allied prisoners and Burmese levies they were later put to work building a railway line over Three Pagodas Pass, to link Burma with the Siam-Malaya railway system. Before the project was completed in November 1943, 771 Australian POWs (nearly 16 per cent of those on the Burma side of the border) had died from disease, malnutrition and the brutality of their Japanese captors. Casualties among the POWs working on the railway in Thailand were even higher.

Thanks largely to the Fourteenth Army under Lieutenant-General William Slim (later Governor-General of Australia), Burma was eventually re-won by the Allies, but only after the longest campaign fought anywhere during the Second World War. In addition to the POWs, some 7,500 Australians from all three Services took part in the Burma campaign which, as Louis Allen has written, was arguably the war's fiercest and most varied, in both terrain and styles of fighting. There are now three large Commonwealth War Graves Commission cemeteries in Burma, which testify to the part played by Australian servicemen and women in the effort to free Burma from the Japanese, or to survive their long imprisonment there by them.

After the war, Burma did not figure highly in Canberra's defence priorities. Australia accepted that it was part of Asia, but tended to be preoccupied with issues such as the Allied occupation of Japan and the newly formed United Nations. The Chifley Labor Government publicly welcomed Burma's independence from Britain on 4 January 1948, but showed little initial interest in establishing a more substantial bilateral relationship.

Prompted by political, economic and social developments in the region, however, the official Australian view of Burma's strategic importance soon underwent a significant change. In October 1949, Mao Tse-tung and his followers declared a People's Republic in China. By 1950 there were communist-led insurgencies in Indochina, Thailand, Malaya, the Philippines, Indonesia and in Burma itself. It was widely accepted at the time that these troubles sprang from the 1948 Calcutta Conference of Asian communist parties (at which Australia was represented) and were orchestrated from Moscow. There was also evidence that, at Moscow's behest, they were being actively encouraged by China.

In such an atmosphere, Australian statesmen like Percy Spender became early proponents of what was later known as the 'domino theory'. In a speech to Parliament on 9 March 1950, for example, Spender said:

Should the forces of Communism prevail in Vietnam come under the heel of Communist China, Malaya is in danger of being outflanked and it, together with Thailand, Burma and Indonesia, will become the next direct object of further Communist activities.

At the time, Burma was wracked by several ethnic and ideological insurgencies, the most serious of which threatened the survival of the fledgling government in Rangoon. Until these troubles were overcome, little could be done to rehabilitate the country's war-torn economy or repair its tattered social fabric. With these issues in mind, Spender continued that:

Burma, in particular, is obviously in a condition where active Communist intervention from outside could bring all organised government to a halt.

He saw the disruption of valuable Burmese rice exports as another 'grave consequence' of the current unrest in the country.

These fears were shared by R.G. Casey, Spender's successor as External Affairs Minister. In his diary on 18 August 1951, for example, Casey equated Burma with Vietnam in its strategic significance. He wrote:

Relatively small Chinese forces might well tip the balance against the Burmese Government and win the day for Communism. If Burma or Tonkin were to fall, then it can be assumed that Siam would go, and the Siamese rice would be denied to us, which would be extremely serious as it now
feeds half of Malaya and is important to Indonesia, Borneo, the Philippines, Ceylon and Japan. Like Spender, Casey saw Burma as being particularly vulnerable. In Casey's estimation:

It is pretty clear that Burma is the weakest link in the South-East Asian chain of countries. . . . The Burmese Government has neither the political nor the military strength to clean up the mess and rule their own country. This concern was perhaps expressed most clearly in the Defence Committee's report on 'The Strategic Basis of Australian Defence Policy' for 1953. It stated inter alia:

From the point of view of the Anzam nations, the main dangers to be guarded against are — (a) the loss of Indo-China to communism and the collapse of Thailand and Burma. The Committee felt that it was important to assist anti-communist regimes in the region where practicable, including by the export of warlike stores and equipment. In this latter regard it concluded that:

Under anti-communist regimes, Burma, Thailand and Indo-China come under the category specified [by Cabinet in 1950] as countries "whose defence will assist the defence of Australia." As Malcolm Booker has pointed out, there was the clear assumption that if China achieved domination over the weaker states contiguous to its borders, like Burma, its chances of extending its power to Indonesia, and by extension to Australia, would be greatly increased.

This belief was accepted at the highest political level and, in part, lay behind the creation of the Colombo Plan aid scheme at a Commonwealth Foreign Ministers Conference in January 1950. Largely an Australian initiative, the scheme had genuinely altruistic motives but also recognised that the "tragic economic conditions" created by the recent world war "afforded a fertile breeding ground for political opportunities and disturbance". Burma had opted not to become a member of the British Commonwealth in 1948, but it too was invited to participate in the aid scheme. After some initial hesitation, it agreed to do so and became a full member in 1952. Australia quickly became one of Burma's most generous aid donors.

Australian assessments of Burma's strategic importance also lent considerable weight to arguments in favour of closer bilateral relations. As Casey confided to his diary on 19 August 1951, 'We should be represented in Indo-China and Burma, in order to keep our finger on the pulse of each of these countries'. He noted that the British Military Mission sent to Burma after the Second World War was not particularly effective, largely because the then Burmese Chief of Staff, General Ne Win, was not willing to take its advice. Casey put this down either to a clash of personalities or to fears that Britain may still have ambitions in its former colony. Whatever the reason, the situation offered an opportunity for Australia. Casey wrote:

It might well, in the circumstances, be useful to have an Australian Mission in Burma, as the ancient grudge would not be held against us. Despite Australia's generally good standing with Burma at the time, its position was clearly dictated by wider geopolitical concerns, and not by any specific bilateral political, economic or social considerations. The idea of an Australian Military Mission was not pursued, but the concerns which lay behind it gave further impetus to the consideration of formal diplomatic contacts.

In October 1951, Casey paid his first official visit to Burma. In a discussion with the Burmese Foreign Minister, Sao Hkun Hkio, he raised the question of the two countries entering into diplomatic relations. Sao Hkun Hkio welcomed the proposal, and in January the following year Casey announced that agreement had been reached on an exchange of diplomatic representatives. Four months later, in May 1952, an Australian Legation was opened in Rangoon under the care of Malcolm Booker, as Charge d'Affaires. Two years later, on 20 June 1954, C.T. Moodie presented his credentials to the President of the Union as Australia's first Minister. A Burmese Legation was established in Canberra in March 1954 by U Sain Bwa, as Charge d'Affaires. On 17 May the following year he presented his credentials to Governor General Sir William Slim as Burmese Minister to Australia. On 17 April 1956, Casey announced that the Australian Legation in Rangoon was to be raised to full Embassy status. Reflecting Australia's mixed interests in Burma, the Minister for External Affairs said that:

Burma occupies a key place in South-East Asia and is taking an active part in the affairs of a region which is becoming increasingly important in Asia and to Australia. . . . Burma and Australia were building up a steadily closer association through the Colombo Plan and otherwise, and [he] looked forward to an extension of this cooperation in the future. Colin Moodie, the Australian Minister in Rangoon, was to remain as Ambassador. The Burmese
The Attache's formal role was to advise the Australian Head of Mission on issues of a military nature and to report back to Canberra on developments of strategic significance. Given that the mission in Rangoon was viewed primarily as 'an additional listening post in a country bordering Communist China', it can be assumed that Burma's relations with the People's Republic and the progress of the communist insurgency in the north-east of Burma were particular concerns. Complicating the situation was the presence in the same region of some 12,000 Nationalist Chinese (Kuomintang, or KMT) troops who had crossed into Burma from Yunnan after 1950. Given the continuing support for the Nationalist Chinese by the United States, the problems caused by these troops were of particular interest to Australia. The Services Attache was also charged with providing advice to the Burma Armed Forces (BAF) and assisting in training matters.

In early 1952, the Burmese approached General Temple, leader of the British Military Mission in Rangoon, and raised the question of Burmese army officers receiving military training in other Commonwealth countries. The Burmese sought several places on senior officers courses at staff colleges or at senior officers schools. The War Office had made one such place available in Britain each year since 1949, but this was considered insufficient to meet Burma's growing needs. Temple passed the Burmese request on to London, and the British High Commission in Canberra was instructed to raise the matter with the Australian Government. In a letter to the Secretary of the Prime Minister's Department that April, the High Commission expressed the hope that:

In view of the progress made in training Burmese civilians under the Colombo Plan, this suggestion may receive favourable consideration in this country.

The proposal was also supported by the Department of External Affairs, which saw it as akin to the scheme under which selected officers from India and Pakistan already received military training in Australia.

After consideration by the Defence Committee, the proposal was also supported by the Department of Defence, subject to vacancies occurring at Australian training establishments. One place on the Australian Army Staff College's 1953 course was subsequently set aside for a Burmese officer. Due to a misunderstanding between the Department of External Affairs and Department of the Army, however, advice of this decision was passed to the British Service Liaison Staff in Melbourne, with the result that the offer of an Australian training position was ultimately made to the Burmese by the British Military Mission in Rangoon. This elicited a testy memorandum from External Affairs:

It is felt that the method of making this offer may have lost to Australia the initial goodwill which could have been expected from it and that the credit has perhaps gone to the British Services Mission rather than to Australia.

All future offers of training places for members of the Burmese armed forces were to be made through the Department of External Affairs and the Australian Legation in Rangoon.

In the event, the British Military Mission was not to remain in Burma much longer. Established soon after the Second World War, the Mission had implemented a comprehensive program of training and other assistance. Following its policy of strict neutrality and disengagement from either major power bloc, however, the government of Prime Minister U Nu 'began at an early date to look with some misgiving at the Military Mission and the identification with British defence arrangements which it seemed to reflect'. As Casey had found during his 1951 visit to Rangoon, there were also suspicions (particularly in senior Burma Army circles) that the British had not entirely abandoned their old colonial attitudes. At the request of the Burmese, the Mission was terminated, and formally ceased operations on 4 January 1954.

Renewed efforts were made to ensure that when foreign military advice was required it came from 'uncommitted' countries, like Israel and Yugoslavia.

To a lesser extent, Australia too was seen in this light. In November 1953, two senior Burma Army officers, Colonel Maung Maung and Lieutenant Colonel Tin Swe, unexpectedly visited Australia for
consultations. They were met on their arrival in Melbourne by the Duty Officer at Army Headquarters, Lieutenant Colonel F.P. ('Ted') Serong. As they explained to Serong, the impending departure of the British Mission would leave Burma with few contacts with the military world. The Burmese were anxious to strengthen their defence links with Australia and other friendly countries. By coincidence, Serong was also GSO1 in the Australian Army's Directorate of Military Training, and thus in a good position to give the Burmese the advice they needed. He subsequently handled much of the paperwork which flowed from the placement of Burmese military trainees in Australia.33

In August 1954, the Minister for the Army announced that there were then 16 Burmese Army officers training in Australia. Three officers and six non-commissioned officers had already completed their training and returned to Burma.34 Australia also made training places available to a number of Burma Air Force personnel — both flying officers and other ranks. When a delay in processing some Burmese applications seemed liable to cause problems for the Royal Australian Air Force's School of Technical Training at Wagga, the Department of External Affairs reminded the Department of Air:

we feel that the political advantages to be derived from the success of these training arrangements are so important as to warrant taking special measures, such as are necessary, to ensure that they work as smoothly as possible.35

Arrangements were subsequently made to accommodate the late arrivals. The Burmese also requested training for members of the Burma Navy, but this seems to have been resisted by the Royal Australian Navy.

Such was the value placed on this training by the Burmese that those who successfully completed Australian courses were usually assured of promotion. The courses were also very popular. After a call on the Burma Armed Forces Chiefs of Staff in June 1956, the Australian Services Attache in Rangoon reported that:

keen interest and satisfaction in the training of Burmese servicemen in Australia was evinced... returning trainees, by their praise, appear to have been a very good advertisement for Australia generally.36

When Richard Casey paid another visit to Rangoon in October 1955 he was told by U Ba Swe, the Minister for Defence and Mines, that the Burmese were 'delighted' with the training of Burmese service personnel in Australia. The Minister added that Australia was now more popular as a training place than England.37 By 1957, Australia had provided training for over 90 members of the Burmese armed forces.38

The costs incurred by this military training were carried by the Burmese themselves and did not fall under Colombo Plan aid arrangements. Also, when the training program was first considered, the Australian Defence Committee had insisted that:

as a condition of meeting Burmese requests for facilities, the Burmese should set up liaison machinery to look after the domestic arrangements, pay, travel etc of Burmese trainees in Australia.39

In accordance with this requirement a Military Liaison Office was opened in Melbourne, to work with Australian Defence Headquarters. The Office was staffed initially by a Burmese Navy Captain. The Burmese Government did not formally establish a Military Attaché's position at their diplomatic mission in Canberra until 1954. The first incumbent, Major Aye Ngwe of the Burma Army, took up his post in July that year, accompanied by three staff.40

Not long afterwards, the Burmese Government requested the governments of several countries to send specialists to Burma as instructors for the Burma Armed Forces (BAF). From Australia, the Burmese sought the release of Ted Serong to act as a guest instructor at a pilot course run for senior officers by the Burma National Defence College at Mingaladon, outside Rangoon. By then a Colonel, Serong had already begun to acquire a reputation as one of the Australian Army's more colourful and controversial figures.41 He was also considered an expert in counter-insurgent warfare. In 1955, he re-established Australia's Jungle Training Centre at Canungra in Queensland, and was appointed its first Commandant. His primary role at the Centre was to train Australian battalions before they were sent to Malaya for operations against the communist guerrillas, a task that prepared him admirably for a posting to Burma.42

The request for Serong by name, considered rather unusual at the time, seems to have owed much to his continuing friendship with Colonel Maung Maung, then the BAF's Director of Military Training. The request was not exclusive, however, and the Burmese made it clear they were prepared to accept another Australian officer if Serong could not be spared.43 The request for an instructor was readily supported by the Australian Ambassador in Rangoon, Colin Moodie, who felt such an attachment would:
give us a first-class chance of getting close to the
Burma Army on their own ground so far denied
to others, except the Yugoslavs since Burma
terminated the British Military Mission in 1953.44
This view was shared by the Department of External
Affairs in Canberra, which also told the Department
of the Army that 'there appears to be worthwhile
political advantages in the proposal'.45 The Ministers
for the Army and Defence both agreed, and the
Burmese request was quickly approved. Serong
arrived in Rangoon in June 1957.

Although the Defence College course was official­
ly designed 'to improve the capacity of the BAF to
conduct the current anti-insurgent operations', its
real aim seemed to be to formulate a strategic
concept for the defence of Burma's eastern frontier.
Burma shared a 2,000 kilometre border with China
and, despite negotiations dating back to 1886, much
of it had never been clearly defined. Parts of north­
eastern Burma were still claimed by China and from
1951 there were numerous violations of Burmese
territory. As late as 1955 there were armed clashes
between Burmese and communist Chinese troops.46
While they still faced a number of serious in­
surgeries, Serong found the danger of a full-scale
confrontation with China clearly uppermost in the
minds of the Burmese authorities. In addition to his
lectures about counter-insurgency, Serong spoke to
the Burmese armed forces about such subjects as the
battle of Kapyong, Chinese tactics during the
Korean War and the French defeat at Dien Bien Phu.47

By the time he left Burma in August 1957, Serong
had addressed almost all the major military
educational institutions there, accounting for over
one third of the Burma Army officer corps. Many of
his lectures were also attended by members of the
Burma Navy and Burma Air Force. Unlike other
guest instructors, such as those from Israel and
Yugoslavia, Serong chose to live with the Burmese
and share their conditions. He also travelled widely
throughout the country, seeing for himself the
conditions under which the Burmese were called
upon to fight. His interest in the Burmese and
sympathy for their problems won him many friends,
including General Ne Win, whom he found 'friendly
to Australia'.48 On his return to Australia, Serong
prepared a series of reports for government depart­
ments and intelligence agencies with an interest in
the Burmese armed forces and developments in
Burma.49

Such was the impression he made with the BAF,
that Serong was later invited back to Burma. In
October 1959, the new Australian Ambassador in
Rangoon, A.H. Loomes, received a formal request
for 'the services of Colonel Serong as adviser on
infantry tactics for six months, commencing January
1960'.50 It was envisaged that he would lecture on
tactics at various Burma Army training establish­
ments, including in the field. He was also to act as
personal adviser on tactical training to the Chief of
Staff and Director of Military Training.51 At
Serong's own request, the Burmese Defence Ministry
later amended this proposal to an attachment for
twelve months, beginning the following March. The
request was supported by both the Ambassador and
Defence Attaché, who once again recognised the
value to Australia of having a trained military
observer in such a privileged position. The Depart­
ments of External Affairs and Defence agreed and
gave the request their endorsement. The Depart­
ment of the Army gave its formal approval that
November.

In March 1960, Serong was attached to the
Australian Embassy in Rangoon as a tactical
adviser to the Burma Armed Forces.52 At the
request of the Burmese, his posting was later extended
for a second year. Serong has tended to
exaggerate his role during this period, but he clearly
managed to get close to the Burmese armed forces.
He also had a marked effect on their approach to
jungle warfare and counter-insurgency. He built two
training establishments along the lines of the
Canungra jungle training centre, one in the north of
Burma, the other in the south. Through them, he
was able to set operational standards and teach
tactical procedures. According to Serong, courses at
these camps were followed by combat assignments
under his supervision, to drive home the lessons
learnt in an operational environment.53 He was also
able to keep the Australian Government closely
informed of Burma's defence capabilities and, in
particular, its progress against the Chinese-supported
insurgents still active in the north-east of the
country.

Serong's assignment in Burma might have been
extended for a third year. This possibility dis­
appeared, however, with General Ne Win's military
coup in March 1962 and his anxiety to improve
Burma's relations with China. Serong's friend and
patron Maung Maung had become a Brigadier in
1960, but fell from favour, ostensibly for being anti­
Chinese. In 1961, he was sent away as Burma's
ambassador to Israel (and was later assigned to
Canberra as Burmese ambassador to Australia).54
Although Serong later stated that he was 'pulled out'
from Burma by the Australian Government for
duties in Vietnam, he has said more recently that his
Quiberon visited Rangoon on a five-day goodwill mission. In February 1960 this visit was reciprocated by the UBS Mayu, a 'River' class frigate which had been acquired from Britain in 1948, renamed and designated the Burma Navy's flagship. This was the first Burmese naval vessel to call into Australia. There does not appear to have been any naval ship visits by either country since then.

There was another important side to the defence relationship between Australia and Burma at this time. Throughout the 1950s, Australian foreign affairs and intelligence analysts devoted considerable time and effort to the study of strategic trends in Southeast Asia. This naturally included the progress of Burma's several ethnic and ideological insurgencies. That of the Burma Communist Party in the Shan States was of particular concern, as it tended to be viewed as part of China's wider plans for subversion and control of the region. The United States, for example, firmly believed that:

should Burma come under communist domination, a communist military advance through Thailand might make Indochina, including Tonkin, militarily indefensible.

Acting under its broad charter to prevent such developments, the South East Asia Treaty Organisation (SEATO), of which Australia was a founding member, subjected Burma to close scrutiny. In addition to the insurgent problem, analysts both at SEATO's Bangkok headquarters and in Australia also kept a close watch on drug production in the Golden Triangle (or tri-border area, as it was then known). Not only did the local drug lords play a strategic role in the region, but the narcotics trade was also a lucrative source of funds for arms and other military equipment.

By the early 1960s, Burma's strategic and political importance seemed to wane, and the initial impetus behind Australian interest in the country started to decline. The communist insurgencies in Malaya and the Philippines had been successfully contained and, while still troublesome, those in Thailand and Burma had failed to achieve any notable progress. Further east, the victory of the Viet Minh over the French in 1954 and the growing threat of communism in the new state of South Vietnam attracted greater official attention. Colonel Serong, who had helped encourage bilateral defence ties, was posted to Vietnam as Commander of the Australian Army Training Team. Earlier hopes for profitable trading links with Burma had dissipated. In addition, after General Ne Win seized power in 1962, Burma in many respects withdrew from the international community.

One early casualty of Ne Win's isolationist policies and fear of China was defence links with Australia, which virtually ceased after the coup. When Serong's...
attachment ended in April 1962, no replacement was sought and contacts with the Defence Attache in Rangoon were discouraged. Burmese officers were no longer sent for training in Australia. The Burmese Defence Attache's position in Canberra was abolished in January 1966. While officially described as a response to the negligible defence contacts then shared with Australia, the post was closed in rather controversial circumstances. In late 1965, the last incumbent, Colonel Thomas Barrington, refused to return to Burma, and was deemed by the Burmese Government to have 'defected' to Australia. Around this time, however, Burmese defence relations with other countries were also being dramatically reduced.

At one stage, it looked as if defence contacts with Australia might be renewed. In August 1974, in a major change of policy, the Burmese Government formally asked the Australian Defence Attache in Rangoon if Australia could provide a wide range of training for its servicemen. The Burmese not only expressed an interest in courses at Australian Army and Air Force staff colleges, but also pilot training, technical training for aircraft engineers, specialist artillery and mortar training, and even training in the use of armoured vehicles and anti-aircraft weapons. The emphasis was to be on the training of officers who could return to Burma as qualified instructors. It appears that the visit of Prime Minister Gough Whitlam to Burma in January that year, and President Ne Win's later visit to Australia, were major factors behind the Defence Ministry's request. Under the Labor Party, Australia's foreign policy position had drawn closer to Burma's claimed non-alignment, and to its perspective on a number of other important issues, such as the recognition of China. Australia was also seen as an interested but non-controversial country where Burmese officers could be exposed to a modern overseas environment without becoming politicised.

Australia subsequently agreed to provide a small number of training places for members of the Burmese armed forces. This apparent return to the close defence relationship of the past, however, was short-lived. The offer of training places was never taken up. The sudden change of heart in Rangoon was probably because of political developments in Australia in 1975, when the Whitlam Government was dismissed by the country's Governor-General. At the same time, there was a return to a climate of tight repression in Burma (including suggestions of an attempted military coup by a group of young officers in 1976).

There was a faint possibility in the early 1980s that this, or a similar training proposal might be revived, but once again it seems to have come to nothing. The only other notable contact between Australia and Burma in the defence field was the sale to Burma of six 'Carpentaria' class inshore patrol boats, for use by the Burma Navy. The first two were delivered in 1979, the remainder in 1980. This was a straightforward commercial transaction, however, and carried no bilateral defence connotations. The 52 metre, 26 ton boats were subsequently used for fisheries and coastal surveillance.

In June 1973, the Services Attache's position in Rangoon had been downgraded from Colonel to Lieutenant-Colonel level. At the same time, its occupant — by then always an army officer — was renamed the Defence Attache. Strategic developments in Burma became such a low priority, however, that on 15 February 1979 the Attache's post was abolished altogether. Since then, Australia's Defence Attache in Bangkok has been dually accredited to Rangoon. While preoccupied mainly with events in Thailand and Indochina, he pays occasional visits to Burma for discussions with local officials and resident Defence representatives at friendly diplomatic missions. No Burmese Defence official is currently accredited to Australia.

Australia's early interest in Burma stemmed primarily from its geostrategic position at a time of widespread political and social unrest. It was widely accepted that, if Burma fell to Chinese communist subversion, the security of other Southeast Asian states closer to Australia would also be threatened. To Australia's strategic planners, efforts to strengthen Burma would assist in the defence of Australia itself. This belief lay behind initial moves to establish diplomatic relations with Rangoon. For all the personal links forged at the time, it also lay behind subsequent defence contacts and, through the Colombo Plan aid scheme, Australian efforts to help the Burmese develop a more stable and prosperous society.

As Burma's internal security situation improved, the Chinese threat diminished and Ne Win's xenophobic policies isolated Burma from the rest of the region, so Burma's strategic importance waned. Hopes for a revival of interest in Australian training or materiel never materialised and defence contacts were reduced to a minimum. By then, however, the bilateral relationship had picked up a momentum of its own and Australia's broad interests could be pursued in more diverse ways. As far as the Burmese Government allowed, links continued to grow, mainly through the aid program.

By 1987, Australia was viewed by Burma as a friendly regional neighbour sympathetic to its con-
cerns and prepared to offer development assistance on very generous terms. However slight they may have been since 1962, defence exchanges made an important contribution to the development of this bilateral relationship. Many of the military officers trained in Australia went on to assume high rank in the Burmese armed forces in recent years, particularly those who have been since 1962, defence exchanges made an offer on very generous terms. However slight they may have been, the military officers concerned were prepared to offer development assistance under their role in crushing the 1988 democratic revolution, should be responsible for bringing the bilateral relationship to its lowest point since 1945.

NOTES

1. A longer version of this article was first published as a Working Paper by the Australian National University's Strategic and Defence Studies Centre in 1990. It was later published in Modern Asian Studies. The version appears with the permission of Cambridge University Press and the editor of Modern Asian Studies. The article reflects the author's own views, and draws entirely on public sources. It has no official status or endorsement.


8. With independence, the new Burmese government inherited two rebellions, one by the Trotskyist Communist Party (Burma) (known as the ‘Red Flags’), and another by the (Muslim) Mujahids in the Arakan region. It also faced growing problems with the People’s Volunteer Organisation (later the People’s Comrades Party), made up of disaffected remnants of Burma’s wartime independence army. The most serious challenge to government authority, however, came from the Karen National Defence Organisation (KNDO). These groups were later joined by the Maoist Burma Communist Party (‘White Flags’), the Kachin Independence Army and Mon National Defence Organisation (among others). Almost every ethnic group in Burma has taken up arms against the central government at some time.


14. Ibid.

15. Ibid.


17. Millar, Australian Foreign Minister, pp.37.


20. This date has been cited incorrectly as 4 January 1951 in some official Australian publications. See, for example, ‘Burma’, Current Notes on International Affairs 26:8 (1955), pp.555-556.

21. Ibid.


23. File: ‘Service Attache at Rangoon’, Australian Archives A5954/1, Box 93/14.

24. Ibid., and File: ‘Appointment of Australian Service Attaches to Thailand and Burma’, Australian Archives A5954/1, Box 93/14.


26. In 1953 and 1954 Australia strongly supported Burmese demands in the United Nations for these KMT remnants to be removed, even to the point of criticising the United States, from whom they received covert military assistance.


28. Lawrence McIntyre to Secretary, Prime Minister’s Department, 5 May 1952, ibid.

29. This officer was Kyi Win, who rose to become a Colonel in the Burma Army.

30. Ralph Harry to Secretary, Department of the Army, 6 November 1952. File: ‘War and Defence — Miscellaneous, Facilities for Members of the Burma Armed Forces in Australian Training Establishments’.

31. The Australian Government later stated in public, however, that the offer was made through the Australian Legation in Rangoon. See ‘Training of Burmese Army Officers in Australia’, Statement by the Minister for External Affairs, R.G. Casey, 2 December 1952, Current Notes on International Affairs 23:12 (December 1952).

32. Tinker, p.332.

33. Serong to the author, 26 April 1990. Serong also maintained a personal correspondence with Colonel Maung Maung from that date.

34. ‘Burmese Officers Training in Australia’, Statement by the...
37

AUSTRALIAN DEFENCE CONTACTS WITH BURMA, 1945-1987

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35. Secretary, Department of External Affairs to Secretary, Department of Air, 25 May 1955. File: 'Training of Burmese Air Force Personnel in Australia', Australian Archives A7051 1, 208/1 2555. See also Tinker, The Union of Burma, p.332.


37. Millar, Australian Foreign Minister, p.220.


39. File: 'Proposed Appointment of Burmese Military Attaché in Australia', Australian Archives A5954/1, Box 93.

40. Ibid.

41. Writing later about Serong's part in the Vietnam War, the Australian journalist Denis Warner described him as 'brave, brilliant, patronising and well informed, with a matching ego'. See Denis Warner, Certain Victory: How Hanoi Won the War (Sheed Andrews and McMeel, Kansas, 1978), p.13.


44. Australian Embassy in Rangoon to the Department of External Affairs, 11 February 1957, op.cit.

45. Secretary, Department of External Affairs, to the Secretary, Department of the Army, 18 February 1957. See also Secretary, Department of Defence, to the Minister for Defence, 4 March 1957, op.cit.


47. The lessons of the Korean War and the French experience in Indochina were standard material in Australian infantry and military intelligence training courses at the time. Serong was under instructions, however, not to reveal information with a security classification higher than Confidential, the level accorded Burmese trainees in Australia.


49. Ibid.


51. Col Maung Maung, Director of Military Training, to Australian Embassy, Rangoon, 26 October 1959, op.cit.

52. Serong has repeatedly described himself as a 'strategic adviser' during this period, a title also used by Michael Fogarty in his biographical article 'Ted Serong: An Army Career', Defence Force Journal 56 (January-February 1986), p.8. The official citation for Serong's OBE in 1962, however, accords with the Burmese description of him as a 'Tactical Adviser'.


54. Maung Maung was Burma's ambassador to Australia from May 1972 to August 1975. In between these appointments he was Burmese Ambassador to Yugoslavia and Indonesia.


56. Fogarty, p.8.

57. The British provided the Burmese with a wide range of military equipment, including aircraft, artillery and small arms.


60. On 28 June 1950, in its decision on 'Export of Arms and Warlike Stores from Australia in Time of Peace', Cabinet laid down the conditions under which such sales might be made.

61. File: 'Supply of Military Equipment to Burma'.

62. Launched in May 1944, the UBS Jims was the former HMS Ful.


64. Ashton, p.18.

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Could Iraq Have Made Better Use of its Air Force and Missile Technology During the Air War?

By Squadron Leader R.W. Reading, RAAF

"From the Royal Air Force point of view, the Battle of France was a complete shambles. There was no intelligence. Communications were poor. Everything appeared to be ad hoc. Things were laid on at very short notice. The roads were crammed with refugees."

FLTLT Frederick Rosier, 'Scramble', 1940

Cautions must be applied in drawing lessons from the Gulf War — only a fraction of evidence has been obtained and this conflict was unique (like all wars). Also, like all wars the 'fog and friction of war' itself will no doubt have significant effects on recollections and history. Long-term lessons are not yet clear. Iraq had invested billions of dollars in military hardware and infrastructure and was sure it could deal a 'Vietnam' blow to the US and its western allies. The prospect of the US committing forces to the Gulf had reopened old wounds left over from the experiences of the Vietnam conflict. The USA was supported by a Coalition of 35 nations against Iraq. The extent of the combined logistics support including that provided by the host nations was phenomenal. High technology (weapons, command and control systems, intelligence) revolutionised the nature of the war. Changes to force structure, acquisition policy, military doctrine and tactics will result for many nations, including the former USSR.

One early lesson which has become clear is that money spent on planning, training and strategy is as valuable as the weapons themselves. Future emphasis, therefore, should be on people, concepts, battle management (wargaming), industrial preparedness, intelligence and high profile weapons. The next war may be won by people not machines. In the future, a balance is needed then between technology, training and other manpower developments, interservice and international exercises and logistical preparation and cost.

The process of modern warfare is a highly complex business and any nation undertaking one on its own, as Saddam Hussein did, should examine all its doctrine and infrastructure as well as those of potential adversaries if it is to have any hope of success. I argue that the failure of the Iraqi air defence system and the Iraqi Air Force (IZAF) to defeat the Coalition air attacks was not just the failure of the systems themselves but of the doctrine and philosophy behind their employment.

Overview

Introduction

My article will cover three main topics in the examination of why Iraq did not make better use of its air force and missile technology. The first is Iraq's potential to make war and its apparent intentions. This will include a discussion of Iraqi strategy, capabilities, vulnerabilities and a brief consideration of Saddam Hussein's probable strategic thinking. Secondly, the military objectives and strategy of the Coalition will be examined. A brief order of battle will be mentioned, before describing the conduct of the air campaign in some detail. This is necessary to present a comprehensive picture of the size and complexity of modern air warfare. Lastly, my article will examine some other influences and factors which were major issues. These include a look at former Soviet methods and the use of deception and disinformation by both sides. Finally, I will examine how the Coalition used new ideas to develop air power and some emerging observations especially regarding military performance.

My approach will be to suggest that whilst the Iraqi Air Force (IZAF) possessed a formidable capability, its lack of appropriate training, correct preparation and understanding of the importance that new ideas and doctrine play in long-term force development were the fundamental flaws in their military preparedness.

The Potential and Intentions of Iraq

Iraq emerged from the eight-year war with Iran with battle-tested armed forces of over one million
SZU-23-4P Shilka AAA.

SA-6 Gainful SAM.
men. That war, Saddam’s territorial ambitions, and his determination to be the dominant regional power had driven him to invest heavily in his military.

The Iraqi Capability

The Iraqi army had shown itself capable of conducting effective operations even after sustaining heavy casualties, and the Iraqi leadership proclaimed its willingness to accept more. The Iraqi army had modified its defensive strategy to include offensive combined arms strategy supported by massive arms fire from artillery and air power. The IZAF was not one of Iraq's strengths, nevertheless, Iraq had obtained late-generation Soviet and French fighter aircraft, including the MiG-29 Fulcrum, Su-24 Fencer and the versatile, multi-role Mirage F-1 aircraft. Iraqi pilots had conducted air strikes on Iranian facilities at a range of 1,000 kms through the use of extensive aerial refuelling. Finally, the Iraqis had demonstrated their capability to employ chemical weapons, and were believed to have a limited capability to use chemical or perhaps even biological weapons on their SCUD missile fleet. It was the most powerful military force in the Arabian Gulf area. In the Middle East, only Israel possessed a more capable force, although, other forces such as the Syrian and Egyptian ones were also large and experienced in battle.

Iraq had also developed a sophisticated system of both airbases and ground defences that threatened to make a frontal assault by the Coalition very costly. The Iraqi army was the fourth largest army in the world and had employed defensive warfare operations extensively during the war with Iran. The air defence system was modern and had many redundant features, making it a formidable force. For example, it featured a multi-layered, automatic data linked detection and command and control systems (see Map No. 1). It integrated over 700 non-shoulder launched surface-to-air missile (SAM) launchers and 6,000 anti-aircraft artillery (AAA) (23mm and larger) pieces with an air force of 550 combat aircraft.

Iraq also placed significant emphasis on developing a secure, redundant communications system. This multi-layered system included many built-in back-ups. If one layer were disrupted, other layers would theoretically take up the slack. In addition to a civilian telephone system which carried more than half of the military's communications, there was a microwave system, and a high capacity fibre optics network. Much of this system was buried or dispersed.

By October, Saddam had over 3,000,000 troops on the ground in Kuwait, dug in and arrayed in mutually supporting defences in depth (see Map No. 2). By January 1991, this number was believed to be over 500,000 formed around defensive belts. Iraq had an impressive system of infrastructure built for war with Iran. Additionally, Iraq had built over 80 modern and hardened airfields, some with several international length runways which were judged far more sophisticated than anything in NATO (see Map No. 3). A system of roads, buried communications and supply depots facilities multiplied the combat power of an already powerful defence force. Stocks of supplies in Kuwait or just north of the Iraqi-Kuwait border were estimated to be sufficient to last through a month or more of combat without replenishment, and many of these stocks had been dispersed to make targeting and destruction more difficult.

The Iraqi Vulnerabilities

Despite Iraq’s numerical strength, Saddam’s forces had vulnerabilities. Iraqi forces were not able to work autonomously relying instead on a rigid top-down nature of command and control inherited from the Soviet Union. The air defence system could be surprised by stealth and overwhelmed by massive lethal and electronic warfare air attacks. Iraq was inexperienced in sustaining air power over great distances, and in spite of pre-stocking was susceptible to an overextended and cumbersome logistics system. Iraq did not have a full operational understanding of the Coalition capabilities, and lacked the ability to interfere with space-based assets. Moreover, Iraq possessed a limited air offensive capability and ineffective foreign intelligence. Lastly, although Iraq had seen the remarkably effective use of electronic countermeasures by the Israelis in past campaigns first to blind and then to destroy the air defences of the Syrians and Egyptians, she (Iraq) still relied to a very large extent on electronic systems.

In addition to these weaknesses, the Coalition had identified Iraq’s centre of gravity. The centre of gravity of a nation is defined as “those vital elements within a nation or an alliance which, in comparison to others, are more important to effective operations and, if destroyed, damaged or lost will wreak havoc of a disproportionate effect.” These elements provide
Mikoyan MiG-29 Fulcrum.

Sukhoi Su-24 Fencer.
'the central focus of attack of any offensive action.' For an air force, the centre of gravity might well be its airfields or even its sustaining logistics support infrastructure. For Iraq the centre of gravity was its command and control system as designed by the Soviet Union.

**Saddam Hussein’s Military Dilemma**

Increasingly Saddam was presented with a strategic dilemma despite the significant capabilities of his forces. To the east were three carrier battle groups with 180 combat aircraft. To the west lay unfriendly regional states — with the exception of Jordan, whose capabilities were limited and who offered Iraq little real support. To the north was Turkey and its military forces as well as over 100 USAF combat aircraft and support from NATO countries. In the Red Sea were three more aircraft carrier battle groups with a further 180 USAF combat aircraft. To the south, inside Saudi Arabia, were the bulk of the Coalition air and ground forces. There was the equivalent of more than 20 US fighter wings throughout the theatre (including more than 600 aircraft from 11 allied countries). Additionally, there was a network of sensors and aircraft that could map, and examine or threaten every square yard of exposed Iraqi territory, and its occupation army in Kuwait. Finally, outside the region there were over 60 USAF B-52 bombers that were able to carry out punishing attacks on Iraqi military area targets, and beyond this were the bulk of the forces of the non-regional Coalition nations.12

**Saddam Hussein’s Strategy**

We have only limited insight into Saddam’s strategy. Many attempts to guess at his thinking during the course of the crisis proved mistaken. Nevertheless, the main outlines of Saddam’s thinking would seem to have been as follows: First, he sought to prevent the formation of the Coalition and the introduction of the significant US forces into Saudi Arabia, and later he sought to split the Coalition. He sought to accomplish these goals by stirring the resentment of Kuwait as unworthy of support and by asserting historical rights, by calling on Arab unity, by appealing to radical Arab populations to undercut moderate Arab governments, by outlasting the embargo, by threatening a costly war of attrition, and by involving Israel in the crisis,
Patriot Missile.
The assessments that Saddam might buckle to the pressure and withdraw from southern Kuwait and Kuwait City, while retaining the strategic islands and the valuable northern Kuwaiti oilfields proved wrong. What is clear from some writings, however, is that Saddam Hussein had great confidence in the effectiveness of his Integrated Air Defence System (IADS) and may have believed in its integrity because it was the best that money could buy from the Soviet Union.

Moreover, Saddam never withdrew his forces from Kuwait prior to Coalition attacks and he never carried out his threat to use Chemical Weapons. One theory which is yet to be verified is simply that he never believed he would ever be attacked by any force sufficiently strong to defeat his defences. More credible, however, is that Saddam’s actions were completely consistent with the Arab culture. Arabs respect power and authority and have a long history of violence in the settling of old scores with their enemies such as the Kuwaitis. For Saddam Hussein the prospect of losing face within his own elites probably was by far his greatest motive in remaining in Kuwait.

Regarding the non-use of Chemical weapons, Saddam was only too well aware of the immense importance of winning the propaganda war in the West. His manipulation of the ‘hostages’ and photo opportunities in staged situations reinforces this theory. His failure, however, to exploit fully these events further demonstrates his failure to modify the lessons of the past. It may have worked well for the North Vietnamese but times have changed.

Moreover, western populations have changed and perhaps are more aware and sceptical than they once were of manipulation by the media. Saddam’s ‘guestages’ propaganda was a public relations disaster in the west. Aimed at the uncommitted, this approach misjudged the tide of feeling sweeping the world against armed aggression to solve international disputes.

The overall offensive strategy was designed according to tested principles of applying strength against the enemy’s weakness, while preventing him from doing the same to the Coalition forces. As early as Jan 90, US Defence planning guidance called for an increased focus on the Arabian Peninsula against non-Soviet regional threats. A long-standing US presence, and program planning for SW Asian contingencies together with major exercises, provided an important baseline of experience and capabilities in the region.

The key theatre military objectives were listed in the Operation Order 91-001 of 17 Jan 91 which stated that the Iraqi centres of gravity to be targeted were: command and control and leadership of Saddam’s regime, weapons of mass destruction and The Republican Guard. The overall philosophy was to exploit Iraqi weaknesses whilst disguising those of the Coalition, such as inferior numbers in vital locations.

The Coalition nevertheless enjoyed a number of advantages such as superior intelligence and clear international support. The Iraq and Coalition Orders of Battle are shown at Enclosure No. 1. The Coalition enjoyed massive material support, far greater numbers and almost bottomless resupply. On the other hand, Saddam Hussein was encircled and had little or no resupply from outside Iraq because of the effectiveness of the UN sanctions.

The IZAF was largely untested in air combat and possessed many western technologies, but the air campaign plan was to isolate and incapacitate the Iraqi regime and gain control of the air before attacking the Iraqi army. This was to be achieved by three phases; Phase 1 the strategic air campaign, Phase 2 achieve control of the air in the Kuwait Theatre of Operations (KTO) and Phase 3 attack the Republican Guard.
The ground campaign plan was to be based on a deception plan. An amphibious landing together with a direct attack on occupied Kuwait from the south was to be published when in fact the real plan was to outflank the Iraqi forces in the west and split Iraqi forces in two. This plan relied on speed and surprise for its success to avoid fixed defences with a flanking manoeuvre and became known as the 'left-hook'. Moreover, of vital importance throughout was the plan to keep Israel out of all the hostilities and thus to deny Saddam Hussein the chance to justify a Jihad or Holy War.

The Air Campaign

'The only security upon which sound military principles will rely is that you should be master of your own air.'

Winston Spencer Churchill

The air campaign was developed to attack critical Iraqi centres of gravity with overwhelming combat power. The strategy was designed to paralyse the Iraqi leadership’s ability to command and control the operations of its forces both offensively and defensively, to render Iraqi forces in the KTO ineffective and to destroy the Iraqi capability to threaten the security and stability of the region. Success of the air campaign revolved around the incapacitation of the Iraqi command and control
F-117 Stealth Aircraft.

Apache Helicopter.
COULD IRAQ HAVE MADE BETTER USE OF ITS AIR FORCE DURING THE GULF WAR?

F-15A.

EF-111A Raven Aircraft.
system and degrading and demoralising Iraqi forces primarily through the employment of massive air resources. Strategic deception was important. The goals outlined above gave rise to lists of key target sets (like leadership command facilities) that would be attacked. (Degradation of a target set would achieve more than one goal). The goals of the air campaign thus followed the air power doctrine that to gain and to maintain control of the air was the prime campaign.

Concurrently, attacks would be made on the strategic targets in Iraq and the work of the surface forces would be facilitated by combat air support. This would be achieved by attacking leadership command facilities, power production and military related communications systems, as well as strategic air defence systems including radar sites and air defence control centres, airfields and aircraft. If the IZAF came up to meet the Coalition air forces then an air battle would ensue and the Coalition was prepared for major "dogfighting". If not, then the IZAF would be destroyed where it stood. Iraq's offensive capability was to be eliminated by destroying major portions of Iraqi key military production, infrastructure, and power projection capabilities, SCUD missile production and storage facilities, naval forces and port facilities, and oil-refining and distribution facilities.

Once the air campaign began, Saddam Hussein was faced with the prospect of fighting the war in a manner not of his choosing. During the first 24 hours, over 1,300 combat sorties were flown by US and Coalition air forces, including 812 strike sorties by fixed wing aircraft. Additionally, the US Navy launched 106 Tomahawk missiles. After disrupting the Iraqi regime's vital functions, strategic air attacks continued throughout the war to prevent reconstruction, to restrike targets not completely destroyed, and to destroy other newly identified targets supporting the Iraqi war effort. In the aggregate, over 18,000 attack sorties were flown against strategic targets.

Phase 1 of Operation Desert Storm attacks began well before sunrise on the morning of 17 January 1991. Prior to H-Hour, US Army Apache helicopters led by USAF MH-53J Pave Low helicopters from the US Special Operations Command, struck Iraqi early warning radar sites along the Iraqi border with Hellfire missiles. Minutes before H-Hour, a USAF F-117A Stealth fighter destroyed a hardened air defence operations control centre in Southern Iraq (see Map No. 5). The Coalition achieved strategic, operational and tactical surprise with these first attacks.

At H-Hour (see Map No. 6), other F-117A aircraft having passed undetected through Iraqi air defences, struck selected targets in Baghdad. Precision Guided Munitions (PGMs) were dropped on specific points of buildings housing communications, command and control facilities and headquarters of the security and intelligence organisation. All the attacks were conducted at night. Simultaneously, large numbers of attack and support aircraft closed on strategic targets in Iraq and Kuwait, focusing on the Integrated Air Defence System (IADS) and Iraq's command and control infrastructure, including its communications and electrical power distribution systems which supported Iraqi military operations. The IADS which was partially blinded by the first attacks was overwhelmed by the sheer number of attacking aircraft (see Maps 7 to 9). Nothing approaching the depth, breadth, magnitude
and coherence of this coordinated air attack had ever been previously achieved. The Iraqi air defence control could not coordinate a defence let alone control a response.

Although his forces were being punished constantly by aerial bombardment, Saddam Hussein continued to present Coalition planners with a number of concerns (see Map No. 10). His SCUD attacks failed to bring Israel into the war but the mobile missiles proved difficult to locate and destroy and diverted significant Coalition resources away from other tasks. The anti-tactical ballistic missiles capability needed improvement, and, well hidden NBC production was difficult to locate and halt.

The IZAF made a brief attempt to fight, but 35 IZAF aircraft were shot down after failing to inflict any losses on Coalition aircraft. Six Iraqi helicopters were also shot down. As a result after the first week the IZAF began to hide in hardened shelters, but the Coalition air forces systematically began to destroy them with shelter-busting munitions, prompting the IZAF 'flight to Iran'. The Coalition feared Iraq might be able to launch one massive strike against Coalition bases and create the effect of an 'Air Tet'— similar to the Vietnam war’s Tet offensive of 1968 which achieved limited success but embarrassed the US and caused an erosion of public support for the war. Ultimately, the threat that the Iraqis might use biological or chemical weapons was always present.

The result of this massive and concentrated application of air power together with surprise was quick attainment of air supremacy over Iraq and the KTO, enabling use of the air for Coalition purposes while denying it to the enemy. The application was short and sharp — like a hammer-blow, to ensure maximum impact on morale. The purpose was to prepare for the third phase of the air campaign by enabling the operation of fixed and rotary wing aircraft at medium altitudes where Iraq's extensive network of anti-aircraft artillery (AAA) would be less effective and bombing accuracy would be improved.

By the 10th day of the air campaign, air supremacy over Iraq and Kuwait was declared. The preparation for the ground battle could begin (see Map No. 11).

OTHER MAJOR INFLUENCES AND FACTORS

Performance Assessment of the Military Forces

Iraq possessed a considerable amount of Coalition equipment; such as, the French KARI air defence system, Mirage F-1 aircraft, Exocet air-to-surface...
The missile and the Milan anti-tank system. Night Vision Goggles (NVGs) were also held by Iraqi forces. The poor performance by Iraqi forces may have been the result of shortcomings in tactics and training, lack of technical expertise in operating and maintaining weapon systems, lack of technical sophistication to exploit capabilities and discern limitations of equipment. Moreover, US equipment captured from Kuwait by Iraq (e.g. US Hawk missile system) was not effectively exploited. It is believed that French companies which produced these equipments may have supplied the Coalition with electronic data needed to neutralise them, if only because French forces were in the campaign.

Nevertheless, deception has long been used as a 'force multiplier', i.e. a way to increase effectiveness of friendly forces and to decrease effectiveness of the enemy. Iraq had some success in tactical deception (unconventional weapons facilities, mobile SCUDs and leadership facilities). Iraq also conducted extensive deception reflecting Soviet methods to reduce effectiveness of Coalition air strikes, enhance survivability, destabilise Coalition and increase uncertainty about Iraq's intentions. These deception methods included:
- Use of decoys and disinformation programs.
- Painting false bomb craters.
- Construction of false positions including dummy missile sites.
- Burning tyres to simulate heat signatures.
- Decoy SCUD missile sites with active generators.
- Concealing unconventional weapons facilities, e.g. hiding biological agent production as an infant formula facility.

Additionally Iraqi disinformation methods included:
- Simulated destruction of a mosque.
- Damage to civilian properties which was actually caused by SAMs without guidance.
- Reports of US military consorting with Egyptian concubines, shooting Moroccan soldiers or desecrating Islamic holy sites.
- Predictions of 'the mother of all battles', '10,000 US casualties in a single day' and the 'destruction of the Arab nation.'
- Iraqi threats to use Biological and Chemical weapons.

On the other hand, Coalition deception measures were designed to keep enemy off balance and ignorant of actual strength, location and intentions of Coalition forces such as:
- Use of rehearsals, training locations, AAR and AEW&C orbits, air combat exercises and trench warfare training to disguise the 'left hook'.
- After hostilities began, border probes, artillery raids, feints and air strike packages.
- Exercise Imminent Thunder (amphibious assault).
- Weekly sortie surges and periodic mass aircraft launches before air campaign launched.
- Use of media like CNN Television.

When Coalition ground forces entered Kuwait they found that the Iraqi forces were expecting an attack from the sea and had prepared their defences facing the wrong way. This demonstrated to all the Coalition forces how effective their tactical deception measures had been. Moreover, the Soviets are believed to be reviewing their air defences in the light of the Gulf war. Further evidence, perhaps, of the extraordinary effectiveness of speed and surprise as the correct philosophy in the application of modern combat forces.

However, the euphoria of the Coalition was shortlived when evidence from United Nations inspecting teams revealed after the war that the most sophisticated intelligence gathering systems failed to reveal the full extent of the Iraqi nuclear, chemical and biological threat that really existed. A national strategy of deception raises quite different military problems.

The Soviet Air Defence Doctrines and the Importance of History

Because so much of the Iraqi equipment and doctrine was inherited from the former Soviet Union, and given the reported review now being undertaken of the Soviet air defence systems, questions must be asked about the performance of the Russian systems, as well as the amount of innovative capabilities employed. The previous emphasis within the Soviet military on political control meant that Iraqi ideological supervision of the troops was paramount. However, the political education undertaken by the 'Party' Political officers appears to have lacked military professionalism, and to have been given to the Iraqi troops differently at different levels. Moreover, with hindsight patriotic education, controlled centrally, may not have been the most easily exported philosophy with which to prepare a nation with warfighting capability.

Modern combat systems require the greatest degree of autonomy for the frontline troops. The Iraqi command with its emphasis on rigid central control rather than the autonomous use of flexible combat units was susceptible to disruption and inadequate information if attacked with massive and accurate force. The Iraqis possessed a formid-
able Integrated Air Defence System (IADS) which contained all the latest Soviet equipment. However, Iraq misjudged the way the US Coalition would fight, its massive application of firepower and the need to exploit an enemy’s weaknesses, and lacked realistic training.33

Even lessons of the history of warfare in the Middle East pointed to the importance of studying military concepts and their application. For example, in the October 1973 Yom Kippur War and the Bekaa’ Valley in 1983, the Israelis systematically knocked out the Syrian SAM systems and their countermeasures by using a variety of innovative electronic techniques.34 The Israelis deployed Unmanned Aerial Vehicles (UAV’s) to expose radar frequencies and their locations before destroying them with air-to-ground missiles.35 Even an examination of the doctrine of this modern electronic combat together with an assessment of the advances the US had made since 1973 in the development of precision guidance of munitions and the development of the ‘Stealth’ capability, would have given the Iraqis comprehensive warning. The same tactics were used by the Coalition, albeit with more advanced systems, as were used by the Israeli Air Force.36 Israeli electronic warfare tactics came from the USA.

Moreover, the Coalition were vulnerable to terrorist activity37 and could easily have been caught offguard if their centre of gravity, such as the air bases, port facilities and international shipping had been seriously affected. More importantly, why didn’t Saddam Hussein pull his forces out of Kuwait at the last minute? The Coalition would have been seriously affected by a long drawn-out threat and many countries may then have withdrawn support. Lastly, the SCUDs could have been developed with more accurate guidance and longer range to target the Saudi airfields.38 If the Coalition airfields had been effectively attacked, particularly with Chemical Weapons, their ability to launch strike packages would have been seriously degraded. History has shown on numerous occasions the lesson of the vulnerability of airfields in mounting air operations.39

The density of surface-to-air defences around Iraq were seven times that around Hanoi during the Vietnam War and twice that around any Soviet city. Stealth and precision were fundamental to countering such density. The Iraqis, with their Soviet systems and advisers (some of the latter are believed to have stayed in Iraq during the war) completely underestimated the importance of the lessons of history in the development of new ideas in the strategy of modern warfare.40

### The Value of New Ideas and the Modelling of Air Operations

‘At the very heart of war lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilisation of men, equipment and tactics. It is fundamental to sound judgement.’

**General Curtis E LeMay**

One final aspect of Iraqi weakness and US/Coalition strength is the comprehensive research and development that has been undertaken into the modelling of air operations and the associated command, control and leadership ‘wargaming’ that has been carried out by research schools like the RAND Corporation of California, CADRE and DARPA. Seemingly innocuous, this research effort has been going on since World War II. The use of air power was seen to fail in Vietnam which prompted major research into the future employment of air power base and the development of doctrine and strategic thought.

Models were developed to react quickly to rapidly changing operational circumstances.41 High-level models, designed to incorporate the underlying strategy of an air campaign, how it can be executed, and what the available options are, were ‘wargamed’ over and over again to test every known parameter and possible outcome. In this respect modelling and ideas (or doctrine) have quite definite links. The overall objectives of an air campaign, such as airfield attack, air support for combat forces, deep interdiction etc, must be able to be varied depending on the strategic and operational circumstances at the time. In this way, the capabilities of air power (flexibility, speed, ubiquity, range, and shock effect) could be maximised.

What this very extensive research did was to give commanders different options and various outcomes from which to base their decisions. For example, they were able to decide that an attrition war (used in air campaigns of the past) would not work against Iraq’s concentrated and redundant IADS. Instead, a massive use of air power to destroy, damage and disrupt vital Iraqi nodes would gain an incremental advantage from which Iraq would never recover. Coupled with the facility to test all the available ‘what if’ questions of the particular commanders, this gaming of options was the foundation on which the air campaign was launched against Iraq.
A decade or more of planning, wargaming and exercising in realistic conditions characterised the preparations made, including the high level training and testing of up and coming staff officers like Norman Schwarzkopf. Exercises included Bright Star in Egypt which involved a Divisional air drop by the 82nd Airborne who had flown directly from the USA. Moreover, deep examination of previous failures characterised this new breed of ‘operational’ leaders in periods of long peace. In this war, the Americans came to terms with the unsavoury aspects of past military incompetence. The Iraqis, on the other hand, remained committed to doctrines and strategies characterised by obsolete concepts and moribund leadership, albeit through a national strategy of deception and coercion.

Conclusion

The answer to the question posed has to be a resounding ‘yes’, if the assumption is made that Iraq could and should have kept pace with modern technological advances in the development of air power. Additionally, we have to look not only at the strategy of the various forces but also at the plans and doctrine they employed and the research they made into modern warfare. The last aspect is one that has not been widely discussed in the post-war euphoria of the popular press.

Iraq was a nation that had adopted a First World War mentality to fight a Third World War battle. The experiences of the Iran-Iraq War had been those of trench warfare of fixed ‘mindsets.’ The intensity of the warfare the Coalition unleashed was of a twenty-first century character. The benefit of a number of limited conflicts in a wide variety of environments helped form the operational and tactical ideas that proved so appropriate in this Gulf war. Coupled with the massive advances in technology and operational thought, the Iraqis really didn’t stand a chance, although post-war inspections have revealed that their extraordinary confidence was born more of a belief in deception than capability. Moreover, the Iraqis had not learnt from their own regional history. Their failure was, in my opinion, therefore primarily a failure of ideas and strategy; or combat competence, if you will.

The Iraqi IADS may never have been able to resist the onslaught unleashed against it by Coalition air power given the sheer size and capability of the accumulated force packages marshalled against it. Nevertheless, given more research into strategy and more emphasis on realistic training, Iraq may have been able to exploit coalition weaknesses better, and thus offer more than just a token resistance.

NOTES

3. Eshel, op cit, pp.33-34.
5. See The Air Power Manual, AAP 1000, chapters 1 to 4 for a description of War and the Nation, and how air power impacts upon national strategic thinking.


12. The information contained in this paragraph has all been obtained from open sources throughout a number of published magazines, for example Time Magazine.


14. See The London Gazette of Friday, 28th June 1991, Number 52589, for a comprehensive account of the commitment made by the British Government and Forces to the whole Gulf War effort.

15. 'Therefore a victorious army first wins and then seeks battle; a defeated army first battles and then seeks victory.' The Art of War, Sun Tzu, Translated by Thomas Cleary, Shambhala Pocket Classics, London, 1991, p.29.


17. This term is believed to have been used first by personnel in the Coalition military planning staff and thereafter in the popular press.

18. Interim Report to Congress, op cit, p.4-2.

19. Loc cit, p.4-2.

20. AAP1000, p.41, para. 2.79 (a).


22. See Deadly Darkness, Flight International 10-16 July, 1991, pp.33-34, for one description of the way the Coalition attacked the targets and the tactics used.


24. Bermudez, Joseph S. Jr. Ballistic Missiles in the Third World, a portion of which appeared in Air Forces Monthly, March 1991, pp.20-23. Iraq launched an average of one SCUD every day throughout the campaign from Soviet MAZ-731 OLTM Mobile launchers. Both the al Hussein and al Abbas SCUD B missiles were launched. The missiles were aimed at Israel and Saudi Arabia (63 each) during 'The War of the Cities'.

25. See Air Forces Monthly, March 1991, pp.60-62, for a comprehensive daily account of the aircraft losses suffered by all sides, with details of the date, aircraft type, location, circumstances and crew involved for each one.


27. Assessing The Victory, op cit, p.53.


30. This is my own conjecture based on the freedom with which CNN reporters appeared to gain access to what should have been Top Secret information during the period prior to the Coalition ground attacks. With hindsight many so-called 'Exclusive' reports were probably leaked to create false impressions and save lives.

31. Cook, Nick, Soviet Air Chief Pushes for Quality, Jane's Defence Weekly, 10 August 1991, p.220, '...to improve the structure of the air force to simplify control over units and formations.'


35. Assessing The Victory, op cit, p.87, for a description of how these Remotely Piloted Vehicles (RPVs) were used for intelligence gathering and electronic warfare.


37. Although comprehensive precautions would have been undertaken together with extensive protection measures of all facilities and movements, the possibilities for terrorist attack of the type we have seen in the world was surely a major possibility.

38. See Iraq's 'Scud' Programme The Tip of the Iceberg, Jane's Defence Weekly, 2 March 1991, pp.301-303. Further, information which has surfaced in the popular press since the UN Inspections have been carried out show that Iraqi developments may have been even more advanced than was previously thought.

39. I refer here to the occasion during The Battle of Britain when the Germans switched their air attacks on mainland Britain from the RAF airfields to bombing London. Estimates show that had Germany continued these attacks, the RAF might very well have been forced to capitulate.

40. These later details were obtained from anecdotal evidence.

41. Waters, Gary, Wing Commander, Combat History and its Modelling for an Air Force, Short Paper for Combat History and Analysis Seminar to be given at ADFA on 2 October 1991, in particular pp.7-14. Aspects of the Air War were modelled including Attrition Analysis using C3ISIM, and specific attacks on the Iraqi Strategic Air Defences (p.13).

42. See Why America Doesn't Win, Military Incompetence, by Richard A. Gabriel.

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Squadron Leader Roger Reading served in the RAF from 1968 to 1988 as a supply and movements officer throughout the UK and the Middle East. He served on operational tours in the Persian or Arabian Gulf including frequent detachments to the Oman province of Dhofar during that region’s internal crisis.

Since joining the RAAF in 1988, Roger has served in Air Force Office on logistics exercise and contingency planning, and he is now the logistics member of the RAAF Air Power Studies Centre at RAAF Base Fairbairn.

Roger holds a Bachelor of Arts degree and is currently studying a Masters of Defence Studies course at ADEA. In his spare time Roger enjoys windsurfing and rowing, and is a qualified coach in Canberra.
IRAQI ARMY DEPLOYMENT: FEBRUARY 24, 1991

MAP 2
Al SI RALIAN OEFFNC E FORCE JOURNAL NO. 94 MAY JUNE 1992

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Flying over SAUDI ARAB without prior permission and>el outside routes li/strictly PROH

Consult NOTAMj and Flight Infoi

WARNING


WARNING

Flying over SAUDI ARABIAN without prior permission and outside routes is strictly PROHIBITED. Consult NOTAMS and Flight Information.

IRAQI AIRFIELDS

MAP 3
**IRAQI PICTURE (BEFORE H-HOUR)**

**H-HOUR ATTACKS**

**MAP 5**

**MAP 6**
COULD IRAQ HAVE MADE BETTER USE OF ITS AIR FORCE DURING THE GULF WAR?

**FIRST HOUR**

**MAP 7**

**NEXT 23 HOURS**

**MAP 8**

**ISOLATED & INCAPACITATED IRAQI COMMAND STRUCTURE**

**MAP 9**
OPERATIONAL PROCEDURES FOR SCUD CHASING

MAP 10

FOLLOW-ON ATTACKS

MAP 11
ORDER OF BATTLE

IRAQ

GDP 1988c: D 14,333bn ($46,09bn)
1989c: $ 12,82bn ($55,54bn)
Growth 1988c: 2.0% 1989c: 3.5%
Inflation 1988c: 22% 1989c: 20%
Debt 1988c: $75-80bn
Def exp 1987c: D 4.38bn ($19,99bn)
1988c: D 4.08bn ($12,87bn)
Def bdgt 1990: D 4.15bn ($13,38bn)
$1 = Dinar (1989-90: 0.3109

Population: 19,986,009

13-17 18-22 23-32
Men 1,120,000 904,000 1,364,000
Women 1,071,000 868,000 1,301,000

TOTAL ARMED FORCES:

Active: 1,000,000.
Terms of service: 21-24 months.
Reserves: People’s Army 850,000
(see also Para-military).

AIR FORCE:
40,000 incl 10,000 AD personnel;
689 off crf, no arm heli.
Bombers: 2 sqn:
1 with 8 Tu-22; 1 with 4 Tu-16, 4 Ch H-6D.
FGA: 22 sqn:
with 30 J-6;
5 with 90 MiG-23;
4 with 64 Mirage EQS/200;
2 with 30 Su-7;
4 with 70 Su-20;
1 with 16 Su-24;
4 with 60 Su-25.
Fighter: 17 sqn with some 40 Ch J-7, 150
MiG-21, 25 MiG-25, 30 Mirage F-1EQ,
30 MiG-29.
Recce: 1 sqn with 5 MiG-21, 7 MiG-25.
AEW: 2 11-16 Adnan.
TKR: 1 11-76 Tornier.
Transport: 2 sqn: 10 An-2; 10 An-12;
6 An-24; 2 An-26; 19 11-76.
Training: 35 AS-202; 78 EMB-312; 50 L-29,
40 L-39; 16 MB-253, 16 Mirage F-1EQ,
50 P-7; 30 P-9; Su-7B, 2 Tu-22,
10 Yak-11.
Missiles:
ASM: AM-39, AS-4, AS-5, AS-11, AS-12,
AS-30L, AS-30R.

HELICOPTERS: 489 (159 armed).
Attack: 56 Bo-105 with AS-11/HOT,
40 Mi-24, 30 SA-316 with AS-12,
SA-321 (some with Exocet), 20 SA-342.
Transport: by: 15 Mi-6; med: 40 Bell;
214 ST, 140 Mi-8/17, 5 AS-61;
20 SA-330, 20 Mi-4; it: 3 109;
5 AS-212, 20 Hughes 500C/400D,
25 530F, 30 SA-342.
AD GUNS: 4,000: 23mm: SUZU-33-3 SP;
37mm: M-1939 and twin; 57mm: incl
ZSU-57-2 SP, 85mm; 100mm: 130mm.
SAM: 160 SA-2, 140 SA-3, about 300
SA-6/8-9-14, plus SA-7-14, 100
Roland.

COALITION

United States Air Force
Aircraft No. Type Units
F-15C 144 Fighter 1,336.36 TFW
F-4G 48 Wild Weasel 36,52 TFW
F-16 298 Fir/Attack 50,503.998, 401 TFW
A-10 192 Attack 10,23.354 TFW
F-117A 44 Bomber 37 TFW
F-15E 72 Bomber 4 TFW
F-111F 36 Bomber 48 TFW
B-52 807 Bomber
TR-1A 6 Recon 17 RW
RF-4 48 Recon 117 TFW
RC-135 ? Recon
E-3 5 Surv & Ctrl 552 AWCC
E-8 2 Surv & Ctrl
OA-10 24 Surv & Ctrl 23 TACS
EF-111 12 Elec Cmbt 366 TFW
EC-135 ? Elec Cmbt
KC-135 162 Aerial Refuel
KC-10 288 Tact Airlift

US Navy
Six of the US Navy’s 12 operational aircraft
battle groups fought in Desert Storm. They were:
In the Red Sea
In the Gulf
US SAR America
US Saratoga
US Kennedy
The composition of carrier air wings may
vary. The following figures are approximable
(antisubmarine aircraft not listed).
Aircraft No. Type
F-14 144 Fighter/Interceptor
F-18 120 Fighter/Attack
A-7 24 Fighter/Attack
A-6E 60 Bomber
E-2C 24 Survey & Control
EA-6B 24 Electronic Combat
KA-6D 24 Tanker

US Marine Corps
Based on the number of marine ground
units that participated in Desert Storm, the
following are plausible numbers for participating
marine aircraft.
Aircraft No. Type
F/A-18 120 Fighter/Attack
(A some may be embarked on carriers)
AV-8B 168 Attack
OV-10 30 Survey & Control

United Kingdom
Aircraft No. Type
Tornado F3 18 Interceptor/Fighter
Jaguar GR1 12 Attack
Tornado GR1 63 Bomber
Buccaneer 4 Bomber
VC-10K ? Tanker

France
Aircraft No. Type
Mirage 2000 12 Fighter

Canada
Aircraft No. Type
F/A-18 24 Fighter/Attack

Saudi Arabia
Aircraft No. Type
F-15 57 Fighter
(All may have received 12 more before Desert
Storm; Saudi F-15s have some ground
attack capability.)
Tornado F3 2 Fighter
(All may not have been delivered)
F-5E 70 Fighter/Attack
Tornado GR1 48 Bomber
(All may not have been delivered)
RF-5E 10 Reconnaissance
E-3A 10 Surv & Control
KE-3A ? Tanker
KC-135 6 Tanker
KC-130H 8 Tanker
C-130 35 Transports

Italy
Aircraft No. Type
Tornado GR1 10 Bomber

Kuwait
Many KAF aircraft were destroyed in
August.

Aircraft No. Type
Mirage F-1CK 32 Fighter/Interceptor
A-4KU 30 Attack

Bahrain
Aircraft No. Type
Mirage F-1 12 Fighter/Attack
Hunter 2 Fighter/Attack
AlphaJet 6 AlphaJet

United Arab Emirates (UAE)
Aircraft No. Type
Mirage 5 29 Interceptor
AlphaJet 3 Attack
C-130 5 Transport
C-130 3 Transport

Oman
Aircraft No. Type
Jaguar 20 Attack
Hunter 12 Attack
C-130 3 Transport
C-130 2 Transport

South Korea
Aircraft No. Type
C-130 6 Transport

Turkey
Aircraft of the Turkish Air Force and
combat aircraft sent from several NATO
nations to Turkey are not included be-
cause, while ready to respond to an attack
on Turkey, they did not take part in
Operation Desert Storm.

Reviewed by Lieutenant Colonel G.J. McKay, MC

This monograph on the bloody and courageous battle for Pt 317 in October 1951 during the Korean War is the inaugural attempt at publishing by Doctrine Branch of HQ Training Command. Edited by LtCol Bob Breen, an author in his own right, this book is a team effort by the staff at the HQ of Training Command to bring together the writings in official histories, battalion diaries and most importantly of all, the recollections of the veterans who took part in this vicious and uncompromising battle.

This book is not another dry military history of a distant battle some 40 years ago. It is an exciting, interesting and absorbing account of a battle and the three elements that make up combat power, namely firepower, manoeuvre and morale. This is a highly readable, clear and concise account of how 3 RAR took the Maryang San feature in October 1951. This book is designed to be consumed by those Army readers who are furthering their studies as part of the CGS's Current Affairs and Military History Programme. However, I am sure that this well written and finely illustrated book will find a place on many bookshelves amongst readers at large.

This book gives a good account of the 28th Commonwealth Brigade's part in Operation Commando, a general Army offensive which was designed to wrest control of the Kowang San — Maryang San massif from the 191st Chinese Communist Forces Division. The 28th Commonwealth Brigade comprised 1st Battalion, The King's Own Scottish Borderers (1 KOSB), the 1st Battalion, The King's Shropshire Light Infantry (1 KSLI) and the 3rd Battalion, The Royal Australian Regiment (3 RAR). In addition the 1st Battalion, Royal Northumberland Fusiliers (1 RNF) was detached from the 29th Commonwealth Infantry Brigade for the operation and the 16th Field Regiment, RNZAF provided the artillery support.

There is a good precis of the preparation and execution of the attacks and the stout and solid defence of the Hill 317 feature against overwhelming odds which followed. It is not the intention of this reviewer to give an account of the Battle of Maryang San, that is the purpose of the book, but there are some important features that this book highlights and make it so enjoyable and fascinating to read. All of the lessons that are taught about good reconnaissance, clear orders, strict discipline and maintenance of morale are here to see, and practically illustrated. The necessity for developing initiative, delegating responsibility, fostering esprit de corps and teamwork are portrayed graphically and exemplified as the battle unfolds. The final chapter gives the reader a good feel for one of the most elusive matters to grasp as a leader — that of the position of the commander in battle. The experience of these veterans from Maryang San will give positive guidance to our future commanders.

The editor has weaved together the fabric of the battle gleaned from official sources and has embroidered this with the personal accounts of the officers and men who fought for the Maryang San feature. These accounts give the book an edge over other historical accounts as the recollections and memories of the combatants breathe life into this heroic tale. As Robert O'Neill, Official Historian of the Korea war writes, 'Probably the greatest single feat of the Australian Army during the Korean War'. One of the company commanders, Major Jack Gerke, DSO, a veteran of the New Guinea campaign and Balikpapan in Borneo, and a company commander at Kapyong, recalled that, 'Maryang San was the best conducted and most successful battle of them all'.

For those with a bent for statistics, in this seven day battle the 28th Brigade suffered 58 killed in action and 257 wounded. The Fusiliers suffered ten killed and 85 wounded and the Australians lost 20 killed and 89 wounded. The casualties of the Shropshires and the Borderers totalled 28 killed and 83 wounded. Amazingly in this incredibly steep and rugged terrain, the New Zealand artillery fired some 50,000 rounds and in all some 900,000 rounds of small arms ammunition, 7000 mortar bombs and 5000 grenades were manhandled forward to companies during the operation by Korean porters.
All of the elements for a best seller are in this monograph of a battle that should have earned the 3rd Battalion, the Royal Australian Regiment a battle honour in its own right. The quality of production in this very reasonably priced volume should ensure success for HQ Training Command who are to be congratulated for bringing interest and life to military history. A companion volume on the battle of Kapyong is planned for the future and if the publishers first effort is any guide, it should be necessary reading for all junior leaders.


Reviewed by Colin Blair

As RAAF senior public relations officer Ken Llewellyn admits in the preface, Flight into the Ages is a labour of love. It is also a fascinating dip into that grey area of paranormal activities.

Specifically, Ken has garnered from around the world a series of amazing stories from people, predominantly with a military aviation background who have experienced unexplainable happenings.

Unexplainable, that is, unless of course one accepts that there are paranormal forces out there which are frequently re-shaping people’s lives and beliefs.

Flight into the Ages is Ken’s first (but he assures us not his last) work on the paranormal and it’s a good first effort, particularly in the way he has woven together the numerous accounts of weird, wonderful or sad or even tragic incidents for which there is no apparent explanation.

The book is at its most entertaining when Ken relates in his informal, readable style, how he went in search of his previous soul. His research, if somewhat incomplete at the time of publication, will probably stir some parallel thoughts from readers who suspect there is something lurking in their personal cupboard which also needs explaining.

There is also a rich collection of paranormal stories, all well sourced and topical. If there is a common thread, one is advised to keep well clear of WWII airfields and Air Force museums. (Sorry, to discover why, you must get the book).

The hard-line sceptics may dismiss Ken’s first work but they cannot fault the author’s attention to detail and his global quest for hard facts to substantiate the descriptions he gleaned from the spirit world about his former life as a Luftwaffe bomber pilot who perished aboard a twin-engined bomber in WWII.

There is also the question mark over the author’s unsuccessful attempt to gain his wings as a student pilot with the RAF in the 1960s.

He raises the real question of whether his recurring and uncontrollable unease at the controls of a RAF jet trainer which probably upset his career as a Service pilot, could be linked to his previous short life in the Luftwaffe.

Chances are he will probably never find the answer but readers are left with the distinct impression he is not about to give up the search.


Reviewed by Captain G.J. Harper

This book, as the title claims, is a comprehensive guide to the battlefields of the Somme region of France. It is not a military history but it details in a very readable and succinct manner “every place in the . . . Somme where some reminder of war can be seen”. This is the fundamental aim of the book and it is more than adequately achieved within the pages of the work.

Martin Middlebrook was a former poultry farmer who was so moved by a visit to the First World War Battlefields of France and Belgium in 1967 that he wrote a book about the experiences of those involved in the carnage entitled The First Day on the Somme. The success of this book enabled Middlebrook to give up poultry farming and become a full time writer. Middlebrook continues to write on military matters and also runs a small battlefield touring organisation. Middlebrook’s wife, Mary, has also contributed to this book by helping with the research and most of the excellent maps and photographs that accompany the text are her productions.

Apart from detailing the 242 First World War British Commonwealth cemeteries on the Somme this book contains a wealth of detail about military matters relevant to the region. An example of this is that in describing how to get to the Somme from the United Kingdom (with accompanying maps) Middlebrook points out the locations of other significant features while en route to the Somme. A person following his directions could stop off to look at Chateau Beaurepaire, Field Marshal Haig’s centrally heated Headquarters for most of the war or stop to look at the V1 and V2 rocket launching sites also en route to the Somme.
Of particular interest are the graves of well-known people buried in the Somme cemeteries and these are well documented in the book. For example the grave of Private Whitlock, the first British soldier to die on the Somme, is located as is the grave of the Canadian doctor LTCOL John McCrae who wrote the very moving poem In Flanders Fields; a description of the poppies growing among the crosses of the graves outside his Dressing Station at Essex Farm in the Ypres salient. Another poet, “the American Rupert Brooke” — Alan Seeger is buried in a mass grave in the Lihons National Cemetery but a memorial is erected to him in the village church at Belloy-en-Santerre. Seeger’s best known poem is “Rendezvous” and the first two lines of the poem read:

I have a rendezvous with Death
At some disputed barricade . . .

The poem ends with the line I shall not fail that rendezvous.

Seeger did keep his rendezvous and was killed on Independence Day 1916 while serving in the French Foreign Legion.

Of particular interest to Australian readers will be the Pozieres Windmill Memorial. This is the highest point on the Somme battlefield, some 160 metres above sea level, and the grass-covered ruins of the site of the Pozieres windmill have been left undisturbed since the fierce fighting ended. The stone tablet on the spot states that at this battle site Australian soldiers “fell more thickly on this ridge than on any other battlefield of the war”.

The other place of interest to Australians is the area about Villers-Bretonneux. Although the fighting did not reach this area until 1918 two major battles were fought here which altered the course of the war. The first battle halted the German Spring Offensive in April and the second battle in August was the start of the Allied offensive which did not halt until the end of the war in November — the first successfully sustained offensive on the Western Front of the war. The Australian divisions played a crucial role in both of these decisive battles and there are more than 12,000 Australian war dead buried in the surrounding cemeteries.

The book provides a wealth of detail for those interested in the war history of this one small region of France and provides a stark reminder of the tragic price war inflicts on those who participate. It is well-written and contains many photographs and easily understood maps. Those contemplating a visit to the Somme battlefields in the future should not leave home until they have read this book.

DEAR MOTHER by Tom Austen, Published by St. Georges Books, 219 St George’s Terrace, Perth W.A. 6000, RRP $19.95.

Reviewed by John Buckley, OBE

Bruce Ruxton has written an excellent foreword which sets the stage for the human tragedy of the story, not only for Will Dunn — the 19-year-old boy from Finlay Street, Albert Park, Victoria — but for the thousands of young men who gave their lives at Gallipoli and elsewhere.

It is a most appropriate book to be published during the 75th Anniversary of the landing. At the outset I was most impressed with the depth and accuracy of Austen’s research. Whilst Will Dunn’s letters are the basis of the story, the important incidents which occurred during the time period from his enlistment until his death are brought into the narrative to give it added interest and depth. This is most successful.

Some of these important occurrences were: the sinking of the Emden; the battle of Coronel; the Falklands Islands; the departure of the largest convoy ever to leave Australia (38 troopships containing 30,000 troops and 12,000 horses left Albany on 1st November, 1914); life in training camps in Egypt.

HMAT Orvieto was the flagship, with Major General Bridges, G.O.C., 1 Aust. Division and his staff on board. So also was the 5th Battalion, in which Will Dunn served. My wife’s father, Captain Vernon Sturdee (later Lieut. General Sir Vernon Sturdee) was also in the ship and his father, Colonel Alfred Sturdee, was in the same convoy in the Wiltshire. The story of “Father and Son” on Gallipoli was a feature story in the special issue of the Defence Force Journal published to commemorate the 75th Anniversary of Anzac. Having written that story, I can readily appreciate the terrific amount of work Austen has put into Dear Mother. I am most impressed with his excellent narrative, presented with great ability.

Austen tells us much about the life and times of the people living in Albert Park, South Melbourne and Port Melbourne in 1914. Irrespective of race or religion, they were very patriotic, good citizens. He also tells us in stark reality how the people left at home worried about their relatives overseas. It was the clergyman’s job to notify relatives of the death of a loved one in battle. Naturally, the sight of the clergyman walking along a street was the cause of grave concern in any area.

Will Dunn seemed to spend much of his leisure
writing letters to all of his scattered family and friends, but always Dear Mother was flooded with letters with details of his experiences and impressions. There was plenty to write about officers and others. Bean got several "bucketings" during his early period in Egypt, but, as we all know, he was to become Australia's greatest war historian.

Reading this excellent book made me very sad to think of all those other brave "Will Dunns" who gave their lives at Gallipoli and all the other battlegrounds.

At the landing on Gallipoli, young Will "... took a few paces up the stone-strewn beach. Alongside him was Charlie Fincher. Close behind ... was Nick Lucas. ... Snipers' rifles and a machine-gun were firing at them. Will and Charlie ... died instantly."

It seems incredible, but Will's mother did not get official notification of his death for more than two months (however, through grapevine sources, they were told three weeks after he was killed).

It's a very good but very sad book, which I enjoyed very much. I hope Tom Austen continues to write military history — there is still plenty of scope and material for such a calculated writer. The outstanding quality of this book is complimented by the most appropriate foreword.


Reviewed by LTCOL R. E. Bradford

The 2/4 Light Anti-Aircraft Regiment was raised in January 1942 in the Middle East from elements of the 1st Australian Anti-Aircraft Brigade. It was an unusual unit in that unlike the other AA Regiments it was formed in the Middle East at a time of crisis, it had no particular 'home state affiliation and it was accorded the privilege of wearing a 9th Division colour patch which it retained for the remainder of the war. No other AA Regiment was accorded this honour. Before it was able to complete to the satisfaction of the CO the necessary unit training, the regiment was committed to the crucial battle of El Alamein.

During the battle the batteries of the regiment were deployed to provide anti-aircraft cover to field regiments and HQ elements of the 9th Division. The regiment was to fight with distinction in the battle earning both casualties and commendations. El Alamein was the beginning of the end of the war in the Middle East and as a consequence the regiment along with other Australian elements returned to Australia in February 1943.

After a period of leave, the regiment was reformed on the Atherton Tablelands in North Queensland, in preparation for deployment to New Guinea. Elements of the regiment were trained in air mobile operations. The difficulties in dismantling the gun, loading it onto the aircraft and reassembly is well covered in the book, and would be of interest to those who conduct similar activities today. Other elements of the regiment were trained in amphibious operations, helping to highlight the difficulties undertaken to fit the regiment for a different kind of war most unlike their previous battle experience.

The unit was deployed to New Guinea in July and August of 1943 and thus completed the transition from a unit trained in desert warfare fighting an enemy at a distance and usually visible, to a jungle fighting unit against an enemy who was nearby and almost invisible. The illnesses associated with desert warfare were swapped for those of the jungle which were often more of a hazard than enemy fire.

Francis West has produced a most readable history of the 2/4 Light Anti-Aircraft Regiment. While it is not long at 160 pages, it includes a wealth of information on the regiment, and more importantly on those who served in the unit. I found the comparisons made between desert and jungle warfare most interesting and worthy of note, especially in relation to the amount of training required for the unit to become effective in each environment against an enemy using vastly different tactics. This book would be a welcome addition in a library of those who value the military history and heritage of Australia.


Reviewed by Greg Johannes, Department of Defence

Throughout the post war era Western military eyes were trained on the missile arsenals of the Superpowers. Concerned primarily with the balance here, American planners and their allies relied on cumbersome bureaucratic mechanisms to prevent the diffusion of missile technology to the Third World. The futility of such efforts was brought home recently in the Gulf War. Here the weapons
feared most by the Coalition forces were short-range ballistic missiles.

At least 15 Third World arsenals, including those of Brazil, Argentina, Taiwan, Yemen and Libya, boast ballistic missiles. William Webster, director of the CIA, estimates that 8 of these missile-states are attempting to develop biological weapons. At least 10 already possess stockpiles of chemical warheads.

The quest to acquire missile technology is showing no signs of abating. Thus, on his recent visit to Australia, the Commander in Chief of the United States Pacific Command, Admiral Charles Larson, estimated that by the year 2000, more than two dozen developing nations will have ballistic missiles, and at least 15 of these will be producing their own.

It is with such statistics in mind that Janne Nolan, with *Trappings of Power*, sets out to explore the implications of ballistic missile proliferation in the Third World for Western military planning. In it she looks not only at the military and psychological utility of ballistic missile systems, and the reasons for the West’s inability to prevent their proliferation, but also at the factors that motivate Third World leaders to acquire them.

Ballistic missiles are clearly changing the face of modern war. Indeed, one need only look at their ability to penetrate conventional air defences, where many aircraft cannot, to realise how militarily destabilising their presence in an aggressor’s arsenal can be. They bring many previously unattainable targets into range, and invite a pre-emptive strike.

It is their political utility, however, that Nolan finds most destabilising. Thus she cites Iraq’s use of ballistic missiles against Israel as having posed the greatest threat to Western victory in the Gulf. Here Iraq, in attempting to incite Israeli involvement by using such systems, threatened to break the resolve of Arab members to remain in the coalition.

Ballistic missiles have yet to prove the decisive force in any major conflict. Nonetheless, the possibility of their being married to non-conventional warheads, and their spread to politically volatile theatres, is changing conventional definitions of regional security.

Nolan draws few specific conclusions in *Trappings of Power*. Unfortunately, many of the conclusions she does draw are hidden in 36 pages of explanatory footnotes. However, her descriptions of the role of ballistic missiles in modern warfare, and the anachronistic nature of the regime instituted by the West to control their proliferation, should both give Australian strategists cause to stop and reflect.
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