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All contributions and correspondence should be addressed to:
The Managing Editor
Australian Defence Force Journal
Building B-4-26
Russell Offices
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(02) 6265 2682 or 6265 2999
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A Joint RAN TMS Success

The PETREL 5424 three dimensional sonar design is the result of a three year development undertaken in Australia by Thomson Marconi Sonar Pty in conjunction with the Royal Australian Navy (RAN) and the Australian Department of Defence Industrial Development programme. This development grew out of the RAN's operational requirement to optimise mine avoidance in coastal waters, by use of a high frequency, high resolution system. Analysis found traditional lower frequency systems were less effective in coastal waters. The provision of a capability to provide real time three dimensional mapping of the sea-bed was seen as important, given the large areas of shallow and unsurveyed waters within Australia’s area of direct military interest.

A Unique Sonar

The PETREL has been designed to provide an instantaneous, high fidelity resolution of range, bearing and elevation within a 60° sector ahead of the vessel to ranges as great as 700m. PETREL creates this volume by use of patented Volumetric Acoustic Processing technology. This capability allows the separation of sea-surface, sea-bed and water column returns, and allows for the reduction of reverberation and other artefacts by isolation of these into separate matrix areas. The latter capability is important as it means that PETREL is insensitive to changing water conditions and subsequently performance is robust in warm coastal waters. Detection probability is rated as 95% 2 sigma with extremely low false alarm rates of 1 in 50 hours. The PETREL data is processed to display a real-time spatial three dimensional data-set of sea-bed data ahead of the vessel and also icon prompted representation of point contacts such as mines.

Designed for Optimum Vessel Safety

The PETREL is designed for navigational safety and mine avoidance in both surface and submarine military applications. The primary display and operator interface is on the Bridge and it is designed to minimise time demand on the mariner by providing automatic monitoring of features of a depth less than an operator selected limit and by providing continuous search for point contacts with icon prompting and alarm for rapid operator recognition. PETREL is designed for the following roles: (1) Mine and natural Obstacle avoidance; PETREL detects surface, moored and bottom mines and will provide high resolution real-time spatial mapping for safe navigation in poorly chartered or coral waters. (2) Shallow water hydrographic feature detection; PETREL detects sea-bed features as small as one cubic metre for subsequent examination by multi-beam echo sounding systems. This detection is undertaken ahead of the vessel for optimised survey vessel safety and mission efficiency. (3) Amphibious warfare; PETREL provides real-time intuitive data on landing beach gradient and amphibious entry/egress routes. PETREL is fully retractable and can be operated by beaching craft. (4) Warship defence from swimmer attack at anchor; PETREL will scan 180 degrees in six seconds and will detect the diver’s lung cavity and diving apparatus. Attacking divers can be three-dimensional tracked and the availability of depth data permits optimised anti-diver charge fuse timing. (5) Shallow Water Anti-submarine warfare: PETREL will detect bottomed small submarines including bottom crawling clandestine craft in shallow water.

Proven in Operations

The PETREL has successfully completed all sea operations and demonstrations to senior defence acquisition office personnel and to Royal Australian Navy specialists. Operations were undertaken onboard the Defence Science Technology Organisation (DSTO) trials vessel, M.V. Kimbla, and included:

Detection of small mid-water, surface and sea-bed contacts at ranges in excess of modelling in depths of water from 80 to10 metres, including mine-like objects, divers and sea-bed features as small as 1m³.

Real-time three dimensional intuitive display and mapping of the sea-bed including complex structures such as reefs and rock, to optimise navigation safety.

Robust operation in various sea conditions up to and including 10 degrees of roll and pitch.
PETREL is a revolutionary forward looking three dimensional sonar for navigation, obstacle and mine avoidance.

PETREL's real time intuitive displays of the sea bed and features such as mines and other navigational hazards now provides ease of passage through poorly chartered waters.

THOMSON MARCONI SONAR

274 Victoria Road
Rydalmere NSW 2116
Australia
Tel: (+61 2) 9848 3500
Fax: (+61 2) 9848 3888
Dear Editor,

I was most pleased to see the front cover of the Australian Defence Force Journal No 128 Jan/Feb of ‘98 highlighting the truce monitoring group at Bougainville. I noted the wedding ring on one of the soldiers.

In my service in South Vietnam I had a finger in a jar with the ring still on after a degloving injuring jumping off the back of a truck. Could I make a plea for all Commanders to make sure that all members on active duty in Australia or overseas do not wear rings.

R. N. Atkinson, Colonel RAAMC
Director Regional Health Support Agency - SA/NT (Orthopaedic Surgeon)

Dear Editor,

I was interested to read Lieutenant Colonel Orme’s latest article (published in ADFJ No. 129 March/April 1998) in which he proffers the thesis that “…(national) success is a function of strategic and economic strength and intelligence is just one of the components which comprise national power”.

While this is inconsistent with his introductory admonishment of Paul Kennedy for his apparent failure in The Rise and Fall of the Great Powers to “…attribute sufficient importance to a nation’s intelligence capability as a determinant of success”, the author’s own conclusion also fails to precisely contextualise the importance of a nation’s intelligence capability in relation to its economic strength.

The author’s claim that it is arguable that Israel’s survival as a nation is foremostly attributable to its intelligence efforts is by no means conclusive or universally accepted. Has not Israel’s survivability as a nation had more to do with its successful application of foreign policy in a complex regional and international political paradigm in order to avoid war than its admittedly formidable intelligence capacity? Perhaps the fact that Israel has avoided war is a reflection of the international support she has generated for herself. Or perhaps it is the contemporary lack of enthusiasm that the Arab states have demonstrated for the forming of a coalition for total war that has been a more important determinant of Israeli national survival. It is interesting to note that the recent assassination of Israeli Prime Minister Yitzak Rabin precipitated what was thought to be a long overdue reassessment of Israel’s security and intelligence services.

A thorough reading of Kennedy’s survey (beyond the introduction) demonstrates that he is on much firmer historical ground than Lieutenant Colonel Orme when he contends that the economic strength of a nation is its fundamental source of national power in war. As such, it seems to follow that a nation’s total capacity for war and the maintenance of security forces (including intelligence forces) is also ultimately derived from that nation’s economic capacity – rather than being on a par with it.

Further, are not other factors such as a nation’s capacity to embrace technology, educate its citizens and to develop the national support and logistic arrangements to sustain itself in war also derived from its economic capacity? Are not these, and “intelligence capacity”, just some of the many capabilities ultimately premised on the economic health of a nation?

While the notion that “intelligence capacity” contributes to national security is quite dated (and universally accepted), the importance of “intelligence capacity” (including Israel’s) should not be arbitrarily elevated to the status enjoyed by “economic capacity” as a determinant of national power in order for upwardly mobile military officers to satisfy the word count requirements of their post-graduate studies.

D. Weir
School of Australian and Strategic Studies
Deakin University
Separation for a New Career – Military or Community Responsibility?

By Captain T.J. Darby (Rtd) and Dr. J.D. Spencer

The article discusses factual and desirable relationships between Integrity Recruiting Group (IRG), a privately owned US organisation and a community involvement ideal.

Introduction

One of the main functions of any educational system is to prepare individuals in a manner that will enable them to serve and contribute to both the community and society in general. A Concept of Community Involvement, initially based upon the relationship between Australian schools and their communities, emphasises the establishment and/or maximisation of interaction between the two, for the benefit of both parties (Spencer 1994, p.246). For example, administrative cells within schools need to be encouraged to open lines of communication between themselves and the community, the ultimate objective being to create an environment that is conducive to fostering cooperation between the two entities. Important members within the community, such as parents and business leaders, should have access and input to the education of tomorrow’s community and business leaders. A reciprocal arrangement is for schools to have input into the resources and other needs which exist within the business community. The interaction between the two enables current influences and changes to be highlighted and discussed, with appropriate modifying action being taken if necessary. The end result should be a more effective education system, enabling the business community to benefit through receiving a better product – and the students gaining a more accurate insight and focus within the business environment, enabling them to make career choices earlier in their education and making the process of securing employment more promising.

Military and the Community Involvement Concept

This Concept has direct and positive applicability to the successful separation of military personnel into the civilian community. Logic suggests that such personnel need an effective and specific preparation for a successful transition – one in which they will be valued for the many skills attained during their military service.

What is happening and what interaction currently operates between the two major stake-holders – the business community and the military?

During 1997, approximately 306,000 military members will separate from the US Armed Forces and return to civilian life. Approximately 200,000 of these professionals will have completed one term of enlistment. Most will be in their early to mid-twenties, seeking long-term challenging career positions. Another 75,000 will have served more than one term of service, while about 40,000 will have completed at least 20 years of service. All will be looking forward to starting a second career (US Department of Defense, 1995).

The pressure of global competition is increasing while the pool of qualified labor is declining. The US Department of Labor’s study, Workforce 2000 (1995), predicts workers between the ages of twenty-five to thirty-four years of age will decrease by approximately 4 million over the next five years – and the current labor force is already poorly equipped to meet increasingly sophisticated requirements. The Wall Street Journal (January 26, 1996), described how several companies couldn’t fill jobs from a field of twenty thousand applicants, few of whom could perform the high-school math needed in a modern high-tech factory! It also stated that many companies were recruiting in India and Korea to survive – and quoted a recent Arthur Anderson survey to the effect that 25 per cent of small companies will curtail future growth due to an inability to find acceptable workers.

This situation reflects a dearth of interaction between both the business community and the military. A skilled resource is available and is clearly
demanded. Yet, *The Chicago Sun-Times* (November 21, 1995) can report that one in twelve unemployed Americans are from the military!

**Why is this the case?**

There are two relevant themes, the first corroborating a flaw in the Australian education system (Spencer *ibid* pp. 244-247), where many schools demonstrate a propensity for deliberately isolating themselves from the community – in fear of outside interference in “their specialist and expert field”. The same applies to the relationship between the military and the business community. The military system generates amongst “its own” an impression that the business community (and society in general) has nothing to offer it.

The second theme is even more serious. Military’s primary task of protecting the civilian community can readily (if not rationally) create an attitude of superiority among its members – an attitude which can become resistance towards any “interfering” community interaction – an attitude experienced in both Australian and US Armed Forces. Hence, a climate which is sympathetic to any type of effective interaction is most unlikely.

From where does this attitude originate and why does the business community feel both unwelcome and interfering when it makes any sort of approach to the military?

“Is This Today’s Military?” a feature article in *The Wall Street Journal* (September 21, 1995), was structured around a group of young men who had just left civilian life and entered the United States Marine Corps. They were first interviewed prior to commencing their initial training at The Basic School, Quantico, Virginia and again at the half-way mark, 22 weeks later. Prior to enlistment they all had beliefs, value systems and a lifestyle considered to be acceptable within the overall American community. They were considered to be members of the community, not just because they were the “right fit”, but because they were practising the society-stipulated behavioural norms for young males. They had just finished school – gratefully – were involved with sports, had just purchased their first car and were in search of girlfriends.

Half way through their Marine Corps training, their attitudes had changed dramatically. In general, these recruits now felt contempt for their society. Its drug, homelessness, prostitution and crime problems had now become symbols to the recruits that society fosters dishonest behaviour and is weak. It had become intolerable to them. They now considered themselves superior to the community and its members. The article concluded with two questions: 1. What was the military system doing to these young men that gave them a hatred of their fellow community members as a whole? and 2. Why was it necessary to “brainwash” the military youth of America and make them social misfits?

**Military Eliteness**

The answers lie in the fact that military training instills these recruits with an eliteness which assures them that they *are* superior to the rest of society. How could normal community members become so elitist? Simple – immerse them in a physically and mentally demanding program that teaches them to have complete faith in themselves and their comrades, to make them believe that they are 10 feet tall and bullet proof. These soldiers face the possibility of assaulting and securing an enemy strong-hold, usually a well established and prepared beach-head under the complete control of the enemy. In such a task, the US Marine Corps High Command considers that 80 per cent casualties in the first three waves of assault acceptable. This is common knowledge among the Corps and treated in a nonchalant manner. Sporting teams the world over apply a slightly watered-down version of this strategy at finals time – if the team can play above its known ability, it might just get up and win!

A suggestion that the deliberate transformation process constitutes a social crime against the community, has some validity. Unfortunately, the marines interviewed only believed that they were better than the rest of society because they were in the military. This did not auger well for understanding between the community and the military, nor was there any suggestion that the military wanted to be perceived in any other light than as a bunch of elite killers. The Marine Corps has given the impression publicly that this is the attitude of the entire United States military. One wonders how the responsible personnel could authorize the release of the Report, apparently unread? The right of free speech and free press should not permit the promotion of a poor and misleading image of the armed forces within the society it is resourced to protect.

There is an interesting parallel in many education systems (Spencer *ibid* p. 249) where, with limited
foresight, administrators effectively isolate their sub-organisation from its supporting community and cause their students to become torn between their own unrealistic learning environment and the society which sustains them. This is certainly the case with these young marines, despite the original legitimate reason for their training. The military system has allowed a damaging impression to be imposed upon the very community it expects to employ and sustain these marines, once they have finished their military service. Or perhaps it doesn’t really care what happens to them after they separate?

Such training is obviously not designed to alienate the military from the community – but is society aware of this? In the United States in 1945, one in every ten people had served in the military and the community was in a position to better understand the purposes of military training. By 1994, the ratio was one in every 147 people (US Department of Labor, 1995) and no infrastructure to promote community involvement between the military and the business community had, or has yet been, introduced!

Yet, there are definite signs that such an infrastructure would be welcome and effective. Many successful businesses, in both the United States and Australia, organise military style “training camps” for their organisation’s leaders focusing, in a stressful environment, upon the application of many of the battle-proven military principles such as flexibility, manoeuvrability, imagination, cooperation etc., to encourage team-building – a learning experience which, hopefully, is then taken back to the business environment and applied to administration and management.

Arguably, the only venture by military to interact with and learn from the business community was the brief flirtation with the trendy concept of Total Quality Management. After buying heavily into that concept through well paid consultants, both US and Australian forces realized that they had been using the same leadership and management principles for generations previously, but using different terminology!

The United States military system is not doing enough to foster or encourage its members to understand the functioning and importance of the community in which it operates. Nor does it make more than a token effort to promote its talented resource pool to the business community. Yet it allows misconceptions of military philosophy and process to be imposed upon and consolidated by the community. This, unbelievably, at the very time when drastic down-sizing is being forced upon all of the armed forces. Would it not be more rational and productive to promote the military as being nothing less than an extension of the community?

A more positive, planned and perhaps formal commitment to interaction between the military and the business community must be provided. Currently any practical implementation of anything like the Community Involvement Concept is virtually non-existent. For example, the financial and other resources allocated by the military system to release one of its members from service is infinitesimal compared with its original outlay on the induction of that one member. Why should military induction effort into the Services not be reciprocated by an equal effort to prepare members for release back into the community?

Greater emphasis on the appropriate preparation of service personnel for separation and transition back into the community is imperative – but how, where, and in what form?

1. The business community should have an active and positive input into the preparation of military personnel for their return to the community.
2. The military system should begin to publicly promote its own excellent workforce, trained at taxpayer’s expense.

As a consequence, the business community would obtain a better prepared product, ready to make an immediate transition and a positive contribution to the community workforce; the military system would be able to promote itself, not only as the defender of the nation, but as a provider of professional skills easily transferable to good civilian careers. This is where the Community Involvement Concept is vital.

It is not as if nothing is being done! Something is. Each military service has what is called a “transition site” located on military bases. Their primary function is preparing service men and women for separation from the military and entry into the civilian workforce – teaching them important skills such as résumé writing, interview techniques and job-hunting strategies, which will assist them to gain employment. In addition, personal counselling and access to job vacancies both statewide and nationally are provided. However, there are problems with this system.
First, attendance at the transition site is, in effect, optional. When they were inducted from the community into the military, there were no “optional” classes! While attendance does not automatically lead to successful careers in the civilian workforce, it does reveal the extent of the task ahead and provides opportunity to acquire many skills necessary for success. Many who do not attend suffer from a lack of direction and insight as to how to tackle the problem.

Second, the business community has little, if any, input into either the curriculum or the selection of the operational manager of each transition site. If it did, it would not only expose transitioning members to current attitudes and influences within the business community, but the interaction between the two would create more opportunities for both parties.

Third, there are no guidelines, agreed standards of performance, or curriculum uniformity among the many transition sites. Each individual Service has a separate system with separate objectives to achieve the same purpose. Some transition sites measure their effectiveness by the number who pass through the program. Some are run by former military personnel who have had neither exposure to, nor developed any empathy and rapport with the business community. Even a common professional curriculum could not be taught effectively with such inconsistent organisation and in the absence of deliberate interaction with the business community.

Fourth, no provision has been made for the professional development of transition site staff members – a critical deficiency and a vital aspect of the administration of any organisation. Both curriculum and staff development can be achieved simultaneously by involving the community (Spencer ibid, p.248) and using the invited collaboration of business leaders.

At least the situation has not gone completely unnoticed and a report is currently being prepared for the United States Senate which is focusing on these problems.

---

**Getting the Act Together**

Much of the business community is unaware of the resource pool represented by today’s transitioning military. The human resources industry, as with the education system, is comfortably structured and any perceived threat to the status quo, such as an initiative to encourage community involvement, can often result in resentment, especially from one’s colleagues. But if the initiator’s role can be seen to embrace both that of educator and community member, this resentment or suspicion can be avoided – at least, that is the Integrity Recruiting Group (IRG) experience which we can consider in relation to six groups and/or processes.

**Networking**

The only effective instrument for promoting the military’s talented, separating resource, is networking, implemented from the “educator”, Operations Manager role. Just like teachers, liaising with various businesses and encouraging them to visit their school, speak with their students and fellow staff members, making themselves aware of the educational environment and how they can have input to it as well as also benefiting from the end-product, IRG is constantly attending business network groups, fundraising activities and various Human Resources gatherings to promote interaction between the military candidate-pool and the business community. It is not a one way street of information. We constantly seek opinions and feedback as to the business community’s perceptions and dealings with military members. The information gathered not only improves us as an organisation, but is passed on to both military members and the transition site staff. Resentment is minimised because all interaction is conducted as part of the business community.

**Funding**

Policy writers and cheque book holders of the military system (those responsible for the entire transitioning process) should communicate and cooperate. Any chance of increasing interaction between the military separation infrastructure and the business community, must be initiated by the military. The aim is to create a shared vision and a common direction (Kanter 1992, p.383). By inviting and encouraging input from the business community, the military is not relinquishing control, but improving both parties by creating a sense of “joint-ownership” in a plan where both will benefit.

**Hiring Managers**

Business sector managers responsible for hiring new personnel have usually had very little exposure to the military and often expect all military people to be rigid, loud-mouthed, drill-sergeant-type characters who thrive on the use of discipline and authority. How can people who have only operated in Manz and Sims’ (1989, p.145) “environment of uncreativity”, work in my Company? Articles like that from the Wall Street Journal certainly foster this narrow
misconception. The reality is that this type of individual occurs in most organisations – the military is a reflection of society and vice versa.

One focal point of IRG is upon reminding employing-managers that transitioning military people were once participating members of the broader community. Military training, despite being of a regimented nature, has instilled in them substantial and additional attributes such as, leadership, integrity, a strong work ethic and self-discipline, together with attitudinal principles that are vital to business success.

Transition Sites

Operations Manager is a unique position for bringing the business community and military resource together, but lack of guidelines and structured curriculum in the transition sites hinders successful transition. The IRG operation attempts to counteract this situation by maintaining contact with transition sites, nationwide and overseas, by assessing new developments and changes in the business community, collecting feedback from the hiring experiences of business sector managers and by attending numerous “job fairs” held throughout the nation and liaising with their staffs. All of this intelligence is passed back to transition site staff who we encouraged, in turn, to share that information with separating personnel.

The purpose of a “job fair” is to introduce candidates to employers. Simple in theory? At a recent “job-fair” in Boston both Spencer’s “outside interference” (ibid, p.246) and Hultman’s “resistance to change” (1979, pp.52-60) were encountered – two of the most destructive influences upon organisational effectiveness, causing individuals and groups to resist change, whether it be beneficial or not. The transition site manager assumed that his classroom was being taken away from him and so advised all concerned in the Massachusetts region that IRG charges veterans a fee to place them in the work-force. Not true! IRG is employer fee-based.

If the military system was initiating the interaction process, there is a strong chance that this type of suspicion and resistance would become less prevalent, if not eliminated.

Transition Site Managers and Staff

More can be learned from this Boston experience. The role of the transition site manager and staff is to “teach” separating personnel – give them understanding of the business community and provide them with such skills as will make them attractive to hiring-managers. As the above incident unravelled, it exposed a teaching establishment which had lost sight of its real objective and viewed any other “players” as interfering “enemy”. Staffed by Government employees who saw no need to liaise with the business community, had no goals, standards, or objectives to meet, it was a completely non-performance based organisation. The students, the separating personnel, are always the prime losers. But the business community loses also.

While this type of resistance is not widespread, sub-standard levels of instruction and education in transition sites are! Hence the need for the military to give urgent and specific attention to the selection of managers who will commit their sites to matching transitioning members with business community needs and work consistently to achieve effective cooperation with as many individuals and interest groups as possible within that community.

Military members

Many separating personnel do not attend a transition site and many others attend a site similar to that described above. The resulting lack of specific job-search knowledge and skills can be the critical factor in failing to secure appropriate employment.

IRG is attempting to counter this by publishing a monthly newsletter for distribution to every United States military base, national and international. Much of the content focuses on understanding the business environment and preparations essential for a successful transition from the military. Résumé and introductory letter writing, current trends in the job-market, common misconceptions of military members held by hiring-managers, as well as common misconceptions which military personnel have of the civilian work-force, are dealt with extensively.

We include also the most recent success stories of military people we have placed in the work-force not only to congratulate them, but to encourage those yet to achieve that goal.

Conclusion

The focus of this discussion has been the relevance of a Concept of Community Involvement to benefit both the United States Military and the business community. From the perspective of a former military and now business community member, solutions to current transition problems have been highlighted in pursuit of a positive employment environment. The Operations Manager for IRG is, on
the one hand, involved in the role of “teacher” to transitioning military members and, on the other, is part of the business community, canvassing educational establishments for opportunities to make an input. In each case the primary aim is to maximise the interaction between these two critical entities and to effect the successful entry of separating military personnel into the civilian work-force.

It can be a precarious position because of the present lack of communication and cooperative involvement between these two entities and their suspicion of anyone who attempts to initiate or promote interaction.

The level of interaction is not going to dramatically increase overnight. Organisations like IRG can help in the interim, but the definitive initiative must come from the military system. It must invite and encourage the business community to have significant and continuous input into the process whereby this valuable military resource rapidly becomes an equally valuable business community resource.

The transition from being a highly trained and professional protector of the total community to being a satisfied and productive employee in the business community, will only be effected through the acceptance of a concept of community involvement which is a two-way street – a military-initiated and cooperatively planned effort between the two. This is a conclusion endorsed by the IRG experience.

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Virtually all activities conducted by the RAAF are technology dependent
Computer Crime and the Impact of Interfering with RAAF Information Systems

By Wing Commander Peter Wythes, RAAF

Introduction

According to the futurists Alvin and Heidi Toffler, society now lives in the dawn of the Information Age where the wealth generation capacity of individuals, businesses and nations is becoming dependent on the integrity of their information systems. Given the parasitic relationship between crime and wealth, those criminal elements of society who are attracted to accumulating wealth by improperly exploiting or abusing these systems must be thwarted, and the vulnerabilities of the information society protected.

The RAAF, which is an organisation that administers and consumes a sizeable portion of the national treasure (intrinsically making it an attractive target for crime), is heavily dependent on information technology. In the Information Age it is safe to assume that any attack on the nation will begin (and in the future may, of itself, be sufficient to end) with an attack on the national information infrastructure. Consequently, it is important for organisations like the RAAF to quickly identify interference with its information systems to distinguish between criminal activity, and activity that is a security threat, a precursor to conflict, or even a form of information warfare.

In this article, aspects of computer crime that impact on the RAAF are addressed by examining the scope of computer crime through the paradigm of computer related economic crimes, computer related infringement of privacy and further abuses, as well as examining the perpetrators of computer crime and the methods used.

Background and Scope of Computer Crime

Virtually all activities conducted by the RAAF are technology dependent. From Computer Aided Maintenance Management to materiel acquisition and resupply, and weapons guidance to personnel management, the microchip and computers, along with their associated communication links, play a significant and pivotal role. Developments that have a major impact on air warfare include advances in sensors, data fusion and information handling techniques. These developments profoundly influence smart weapons, aircraft systems, command and control systems, knowledge dominance, and support systems relying on information technology. Conceivably, the RAAF could be rendered ineffective as an air force by a major degradation in, or a denial of access to, its information systems. Specific examples of the RAAF’s dependency on information technology, and the consequent vulnerability this presents, will be used throughout this article to illustrate the scope of computer crime’s potential impact on the RAAF.

Different authorities use various criteria to categorise computer crime. Icove, Seger and Von Storch tend to classify computer crime in relation to breaches of protective security measures, while others treat it from the perspective of the laws broken, or the methods used to commit the crime. This discussion is based on the three categories of computer crime identified by Sullivan as computer related economic crimes, computer related infringement of privacy and further abuses. It also addresses the methods used by different types of computer crime offenders.

Computer Related Economic Crimes

In the first category of computer related economic crimes there are five sub-categories of fraud by computer manipulation, computer espionage and software piracy, theft of services, unauthorised access, and use of the computer as a tool for traditional business offences.

Fraudulent adjustment of information and records to disguise the theft of stores and equipment, or to falsely create entitlements, can be performed by RAAF personnel and other Defence employees. Also,
data held in RAAF information systems could be fraudulently adjusted to disguise improper or negligent maintenance practises. For example, warehouse staff might adjust records relating to the integrity of an aircraft component which they substituted to make up a shortfall in a stocktake. Although the item might be something as simple as a bolt, and of relatively minor value, subsequent fitment of the undetected facsimile component to an aircraft could result in a catastrophic failure, leading to the loss of a valuable asset and possibly the lives of the aircrew. Fraud by computer manipulation can lead to loss in three ways: direct loss by theft, loss through inefficiencies (waste, duplication or failure to complete work), and consequential (though unintended) loss of assets.

Software piracy is not a particularly significant issue for the RAAF. RAAF proprietary software has little utility beyond air force purposes, and the more popular commercial software used by the RAAF is generally held under a licence that permits RAAF personnel to use the products on their own computers. The greater danger to the RAAF is users who illegally copy and use licensed software in the work place. Inadequate supervision of software licence agreements could result in a breach of licence with consequent damages and penalties.

On the other hand, computer espionage is an extremely significant issue for the RAAF. In the military domain, classified information such as capabilities, vulnerability, strategies and dispositions may be extracted or manipulated. Substantial resources are expended in the development and application of layered security systems to prevent unauthorised access to classified information systems because the loss or compromise of classified information could have a disastrous impact on the RAAF and the defence of Australia. Systems that cost a fortune to develop could be rendered obsolete, and complete weapons systems could be neutralised. For instance, the consequent loss to the nation, in losing a system such as JORN, is incalculable. The loss or inability to use a weapon system or platform, if associated with conflict, could result literally in “losing the farm”.

With regard to theft of services, the RAAF needs to be alert to unauthorised use (both internal and external) of its discrete communications systems, which range from satellite links to the more prosaic microwave and landline systems. While the theft of computer time is insignificant, when compared to the damage or compromise that could result from unauthorised access to RAAF information systems, improper use of these systems is a menace that must be prevented. For instance, the use of Internet services in USA Government experience indicates that as much as 30 per cent of employee’s time is spent at entertainment or non work-related websites. This sort of improper use of facilities is wasteful of a range of resources from the employee’s time and the costs of providing the service, through to the induced delays for other work-related users, and cannot be ignored.

The threat of unauthorised access to its information systems, by far, has the greatest impact on the RAAF. As discussed earlier, unauthorised access to classified material compromises that material. The consequences of compromise vary depending on the nature of the material and the unauthorised access. For example, compromise of codes renders the whole code series invalid, whereas the recent disclosure of personality profiles from an intelligence summary simply caused embarrassment for the Government. Access to unclassified information can also be detrimental to the RAAF, for example, logistics information on resupply to an activity or location can disclose consumption rates and rates of effort. Analysis of this information can provide details of the mean-time-between-failure of components, indicate the weakest areas in weapons systems, and also disclose details of a Defence contract. Besides the prevailing threat of foreign espionage attacks, a likely motive for unauthorised access to RAAF information systems is to gain commercial advantages among the many organisations that provide goods and services to the RAAF, and whose profitability is dependent on Defence contracts.

In considering the computer as a tool for committing traditional offences such as embezzlement, larceny and forgery, the RAAF’s reliance on information technology has not diminished its susceptibility to these forms of offences; principally committed by its own personnel. General evidence indicates that the vulnerability to this type of crime is greatest when the new technology and systems are introduced. For example, the introduction in the early 1990s of Electronic Purchasing by Unit (EPU), whilst improving stores resupply efficiency, eliminated several layers of checks and visibility of what Units were acquiring. This new technology and stores resupply system provided a greater number of people who were inclined to abuse the system with the opportunity to do so; opportunities that hitherto were denied them. In streamlining a system a risk analysis must be performed to determine acceptable risk, and to identify ways to prevent abuse in susceptible areas of the new process.
The second computer crime category, computer related infringement of privacy, is divided into four sub-categories: use of incorrect data, illegal collection and storage of data, illegal disclosure and misuse of data, and infringement of privacy laws.

A simple illustration that shows the critical need to have correct and assured data in certain RAAF computers is demonstrated when any incompatible data in a modern fighter aircraft Mission Computer will prevent operation of the aircraft. This example reveals how any corruption of the data bases that feed the Mission Computers used in such aircraft could ground the fleet just as effectively as destroying each aircraft. Such an attack on this weapons system and platform, through its information systems, would be more sinister, and could be performed remotely, but are equally devastating as a physical attack. Several devices currently available can negate, destroy or incapacitate computers and information systems, and many more are being developed. Successful use of these devices causes temporary or permanent failure of electronic circuits, and they can be broadly grouped into three main types, viz, RF Directed Energy Weapons, Electromagnetic Bombs and other general information weapons. Further developments in the theme of computer sabotage include experiments in the US to “counter-attack hackers” where the United States Air Force has devised ways of physically damaging computers used in [hacker] cracker attacks.

The methods of attack described in the preceding paragraph have a significant impact on the RAAF. Not only information technology, but all equipment that has electronic components is vulnerable to RF Directed Energy Weapons and Electromagnetic Bombs, which have the potential to disable everything from wrist watches to the flight controls on some aircraft types. The objective of achieving service denial is probably the main motivation for people who would use these methods against the RAAF. However, these methods of attack, when applied to information systems, are ideal tools for use by individuals or groups to commit conventional crimes like extortion. Although the RAAF is an unlikely target for extortion, it is a prime target for service denial, especially in a period of tension or hostilities.

Types of Offenders and Their Methods

Icove, Seger and Von Storch categorise the types of computer offenders as crackers, criminals and vandals, but, recognising substantial overlap in these descriptions, refine the categories according to motivation with “The main motivation of a cracker is
access to a system or data; the main motivation of a criminal is gain; the main motivation of a vandal is damage. Crackers and criminals present the greatest threat to the RAAF. Motivated by the intellectual challenge of breaking into a system, crackers, if successful, can compromise classified information, even though they may not have intended any harm. The attendant costs and repercussions of compromising classified information have been highlighted. Similarly, with criminals intent on stealing information by espionage, or material of value through fraud and abuse, the threat to the RAAF is significant, as are the potential losses. Another type of sabotage threat confronting the RAAF, that is more than just vandalism, is action to disable or neutralise the RAAF’s information technology and computers (including computer reliant equipment and platforms). Depending on the context, such an attack could be tantamount to an act of war. On the other hand, vandals, which Icove divides into “users and strangers”, while presenting a real threat whose repercussions can equal those of crackers and criminals, pose a nuisance, more than a capability denial threat. Although some could argue in general that if the damage is done the motivation is immaterial, in the case of the RAAF it is imperative to quickly establish the motivation behind such attacks to identify the indications (for national security) the attack might represent.

Various methods are used to commit computer related crime, and can be categorised as cracking (or access), programmatic attacks, chipping and information weapons. Cracking applies to the methods used by crackers to gain unauthorised access to computers and information systems. Besides the cracker who gains physical access to a computer, and through it access to a connected system, the proliferation of larger regional, national and international networks provides extensive pathways for crackers to any system that has a gateway to these networks. Any system that is connected to an external system is vulnerable to cracking. While a specific system may not be connected to an international network (e.g., bitnet or internet), if it is connected to another system that is, then there is a route for a cracker, who may be continents away, to gain access to that system. Programmatic attack refers to the use of programs specifically designed to disrupt the operations of, or provide access into, victim computer systems by exploiting weaknesses in the design of the target operating system or application software. These attacks include virus, worm, logic bomb, trojan horse and trap-door attack. Where programmatic attacks target software, chipping attacks the integrated circuits or microchips. Chipping is accomplished at the design stage by the inclusion of circuits that initiate unexpected events at a specific time, or are triggered by specific circumstances. The presence of such defective chips in part of an aircraft’s flight control system, or as part of a missile guidance system could incapacitate that platform or weapon. Information weapons include high energy radio frequency (HERF) guns, electromagnetic bombs, electromagnetic pulse (EMP) and high power microwave (HPM) munitions, low energy lasers and electrical power disruption technologies.

Any combination of the types of perpetrators, using a combination of methods, has the potential to adversely impact on the national information infrastructure and the RAAF (as part of that infrastructure). When such attacks occur, investigators must determine whether it is criminal in nature, and hence the responsibility of a police force, or if a military force response is required. As Westwood observes, “the jurisdictional boundaries that separate civil and military security responsibilities are blurring as the Information Age evolves.”

**Conclusion**

Computer crime can come in many guises in the RAAF, but generally leads to one or more forms of direct or indirect loss by theft, inefficiencies or consequential loss. Among these crimes computer espionage and unauthorised access to its information systems is the predominant threat confronting the RAAF. There are myriad systems relying on information technology that contribute to Australia’s military capability, and which are vulnerable to attacks on the information components of those systems. Computer crime offenders can be classified as crackers, criminals or vandals as defined by their motivation. Additionally, the RAAF must be alert to interference with its information systems that may be a precursor to aggression. Although information weapons are more likely to be used against the RAAF in battle, they nevertheless have criminal applications. The challenge for investigators examining interference with RAAF information systems is to quickly identify the offender and his or her motives to determine whether a police response to criminal matters is required, or a military response, to an attack on Australia, is justified.

**NOTES**

8. The inadvertent release of the FEMM document at the South Pacific Forum Economic Ministers meeting in Cairns on 11 July 1997.
9. EPU is a system where individual units can order goods electronically from a range of predetermined local suppliers. It replaced the less efficient system of units demanding goods from the Base central store, which in turn either placed consolidated orders with local suppliers, or obtained the materiel from Central Stores Depots.
10. McPherdan, I., “Australia ‘Not Ready’ For Cyber War”, *The Canberra Times*, 16 Sep 97. p.3. This article refers to an incident a couple of years ago when a service tunnel, carrying one of Telecom’s major communications network links in the Sydney CBD, was penetrated and the cables deliberately cut.
13. Cracker is the term used to refer to people who use their technical knowledge to gain unauthorised access to computer systems and perform mischievous or destructive activity. The media often use the term “hacker” to refer to such a person. The original definition of hacker was a person who spends many hours operating a computer by trial and error without first referring to the manual.
15. *ibid*, p.64.
17. *ibid*, p.66.

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Wing Commander Wythes joined the RAAF as an Administrative Officer in 1975 and has held Unit Administrative positions at CFS, 77SQN, RAAF COL and RAAF Wagga. He has gained further experience in a variety of instructional posts at SAN and RAAF COL, as well as recruiting, manpower planning and project management staff appointments. A graduate of the RAAF Command and Staff Course, Joint Services Staff College and Charles Sturt University, he is currently a member of the General Investigation and Review Branch in the Inspector-General Division, and is completing post-graduate qualifications in Investigation Management.
Many different ideas will abound about the future roles and nature of the military.

Photograph by: Corporal Patrina Malone
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political masters could make major mistakes. It was not that the US and its allies lost the war but rather that serious professional and ethical misjudgments were made.

- people have stopped looking forward to the next war. This process began during WW I but has now become firmly entrenched – above all when mass destruction, whether nuclear, chemical or biological, remains an ever present possibility. The internal wars that have become common in recent years offer even less to look forward to in the way of glory or patriotism.
- a greater reluctance to accept casualties – due to smaller families, a smaller proportion of young males in the population, and the all-volunteer force which puts at risk highly-paid, highly-trained, and hard-to-get individuals. The smaller the force, the higher the value on each individual life.
- the absence of direct threats to national security. This has been true of Australia for at least 25 years and is now true of many more countries as a result of the end of the Cold War.

Against this background the difficulties of maintaining a traditional institution with traditional values remains a difficult balancing act.

### A growing dichotomy between élite and military values can lead to tensions in three main areas: between the military organisation and the élite in general; between armed forces and the wider society; and between government and the military.

#### 1. Military and élites

It is easy for an élite to forget, ignore and deride the military. This creates several problems for both society and the Defence Force.

- The children of the élites do not join the Defence Force – a key indicator, as Charles Moskos has suggested, of élite attitudes towards the military. Conscription no longer ensures that all levels of society serve in uniform. Nor, it can be observed, do children of the élite join police forces.
- Academia is hostile to the military – this keeps two groups apart who could benefit from greater contact. Academia stays aloof because it identifies with élite values – to quote Moskos again: “Anti-militarism is the anti-Semitism of the intellectuals”. But academia misses out on studying phenomena such as group cohesion and tradition. For its part, the military is cut off from a large body of expertise which could be applied not only to strategy and technology but also to problems such as recruitment, retention, military families and so on.
- The media influences the mass view of the military – mostly adversely. The media tend to focus on (i) differences between élite values and military values, and (ii) failures in the military to live up to their own proclaimed values. Such a focus is natural and inevitable for the media, not perverse as those in the military sometimes believe.

#### 2. Military and society

If public attitudes towards the military, perhaps shaped by élite values, become indifferent or even hostile, several consequences can be expected:

- a loss of quality recruitment and retention – the best and brightest simply say “the military is not for me”.
- a loss of public support for the defence budget. Australia’s defence budget has held up remarkably well compared with all other Western countries but there are increasing signs of public unease about its sacred cow status – if newspaper cartoons are anything to go by.
- loss of public respect for the military profession. Most professions in Australia and elsewhere, including the police, church and doctors, have fallen in public esteem. The military profession has stood up reasonably well because it has maintained some integrity and commitment and because it is seen as basically useful. This esteem will need to be sustained in difficult times.

#### 3. Government and military

The dangers of a dichotomy between government and the military in Australia are more speculative. In the US, by contrast, the problem is more acute – partly, of course, because the military is far more powerful both at home and abroad.

- There is a danger of government misunderstanding the capabilities and the nature of the military. Governments may overestimate or underestimate what the military can achieve. In Australia this might result from the increasing lack of military background among decision-makers, notably politicians and probably the civilian side of the Department of Defence. Good advice can overcome this – but, of course, the Government must be willing to listen to that advice.
• There can be undue military influence over what the armed forces do or do not do – the converse of the previous point. In the US great concern was provoked by General Colin Powell’s effective “veto” over the use of American forces in Haiti and Former Yugoslavia. This is not an issue in Australia – at least not yet. The prospects, though, are enhanced by a more politically aware and politically sophisticated officer corps.

Once mutual misunderstanding sets in, it becomes difficult to reverse a process of increasing tension and suspicion.

Dilemmas for ADF

Developments of this kind create many dilemmas for the military. Three in particular can be mentioned:

1. **Warriors or “worriers”?** Can force structures, training, education, traditions and values serve both traditional and constabulary roles? Should the ADF seek to attract and train war-fighters – or people who “worry” about the Patagonian toothfish i.e. constables with expertise in the use of force? This is the question underlying much of the current debate about the value of traditional service academies both here and in the United States.

What will the ADF be doing in two or three decades time when current officer cadets are leading the Defence Force? What do they need to be educated and trained for?

2. **Just another job?** The ADF has to make itself more like society and its careers more like civilian ones in order to encourage recruitment and retention – for example, by developing “occupational” feature such as individual rights, equality for women and phased careers.

At the same time “the ADF” is becoming less like society as it focuses its structure more on combat. The Commercial Support Program and the Defence Reform Program are also reducing the tail and increasing the combat component of the ADF; bases are being closed; and personnel are being re-located in the North – away from the major population centres.

How does the ADF de-militarise and re-militarise at the same time?

3. **Whose side is the ADF on?** The law enforcement role says the Navy should protect the Indonesians if they are fishing legally and arrest the Australians. But would the public accept this? *Whose interests does the Navy protect?*

The ADF has responded to such dilemmas by adopting élite values and policies in certain areas – sometimes willingly, sometimes unwillingly – especially in relation to personnel matters. It has adjusted to some extent to “occupational” pressures. It has become engaged in law enforcement, especially offshore. How far it can go in each of these areas is questionable.

More generally, the Defence Force is at full stretch trying to perform three distinct roles. The inevitable conclusion is that any organisation taking on too many diverse roles, will do none of them well – especially if resources are limited. Yet now more than ever the public needs to be clear about the nature and purposes of its defence forces.

Conclusion

How these issues will be resolved is unclear. We are in an age of transition, partly due to the end of the Cold War but more importantly due to seemingly irresistible trends such as the revolution in communications, the globalisation of trade and the spread of democratic values. New concepts of security are emerging within societies as much as among governments. Yet few are confident that the need to defend national territory with traditional armed forces has disappeared entirely. Armed forces have yet to find their place in the emerging order.

One result will be that many different ideas will abound about the future roles and nature of the military. Writers, academics, commentators, denizens of think-tanks and perhaps some politicians will advocate different purposes for armed forces – dealing with the environment, unemployment, drugs, development and so on; proposals for international or UN “armies” of one kind or another will be put forward. Differing views about the future of the military will be barometers of wider political and social change.

Finally, it is important to remember that social change can happen very fast. We are accustomed to the speed of technological change – nuclear weapons, transportation, communications, computers and so on – but there is less readiness to accept the possibility of revolution in social, political or organisational affairs.

Yet there are several examples:

• the revolution in warfare between 1792 and 1815 which was due to political and social change, not
technology – a fundamental transformation of war occurred in the time it took for Clausewitz to advance from cadet to colonel.

- the end of the great European Empires in at most three decades after 1945 – due to political developments and in some cases despite strong military resistance.
- the end of the Cold War in the space of 4 or 5 years as a result of political and economic pressures – and the disappearance of the great dynamo behind military forces for nearly half a century.

Might we not see the transformation of the military – from defenders of national sovereignty to constables enforcing national and international laws – in the next 25 or 50 years? Perhaps society’s needs and expectations will lead the way?

Associate Professor Hugh Smith teaches in the School of Politics, University College, UNSW, Australian Defence Force Academy. A version of this article was first presented to the Australian Defence Studies Centre 10th Anniversary conference on Australian Security in a New Era—Reform or Revolution held in Canberra, November 1997. Copies of the report on the conference are available from the Centre.
Command and Leadership in the Australian Army

By Lieutenant Colonel David G. Blackwell, RAINF

Introduction

The Chief of the Defence Force (CDF), General Baker, said in Melbourne during an address at Victoria Barracks in October 1996, “… Army’s personnel management and leadership… is at least 20 years behind civilian models”.

General (later Field Marshal) Sir Archibald Wavell provided a detailed description of the qualities he considered to be essential in a good commander. The first quality was that of “robustness, the ability to withstand the shocks of war”. Field Marshal Montgomery characterised this quality as “toughness”; Napoleon Bonaparte described it as “possessing a cool head”. The other qualities identified by Wavell were boldness – the ability to make decisions based on a careful calculation of risk, physical and moral courage, the ability to inspire confidence in subordinates, the ability to judge character, energy and drive, and excellence in administration.

It is argued, and correctly, that the military is training for war, however, Australia has not had a war for over 30 years and the possibility of being involved in a major conflict is diminishing as time goes by. The Army, not only operates in a civilian environment but has over 50 per cent of its force as civilians, i.e., part-time soldiers. To be successful, Army must take a radical step and adopt the civilian qualities of leadership, as distinct from command, whilst at the same time, maintain the war-fighting qualities of command. This in itself is a leadership problem.

Leadership Theories

Every individual has their own perspectives of leadership and management – and how to go about it. As with all aspects of human behaviour, these perspectives are very subjective. The huge volumes of material generated on these topics since Plato over 2,500 years ago, suggests that there is almost nothing new about leadership and management. We have our own preferences for words, emphasis, actions and presentation and we recognise that there is no panacea or perfect formula for what we are seeking. However, we would all agree that there is one essential characteristic that stands out to separate good leadership from bad or indifferent leadership, and that is the best possible communications with the work group and the organisation.

If you are successful then your style of leadership and management may be working for you, however, the questions that must be asked are, is the style effective; is the style aimed to nurture and develop your team; is the style flexible to cope with stress and non-stress situations; do your people respect you? There are other people, however, who cannot find the right formula for themselves and because of this may have long lasting and costly negative affects on the people they lead.

Many people in the military, and on the periphery of military life, are now saying that the old paradigm of military leadership is failing and that it must give way to a new one. People in civilian organisations brand military people with the same brush of authoritative leadership. They often remark that people trained in the military do not have good people skills, that they issue orders instead of requesting, and they are bad communicators.

If we are going to behave in new ways, we first need to think in new ways. A paradigm becomes outmoded when the original problem condition changes and the original paradigm fails to change with it.

In Australia, there is a new recruiting base of young intelligent people, many with tertiary education and the ability and training to think and act for themselves. They don’t have the subservient mentality of the 20s, 30s and even 50s and 60s, and the class structure evident of that era. Army’s methods of leadership, and management thinking, has largely not moved with the change in the environment. The reliance on “power” can no longer be sustained. The armed services rely on the “power” of rank which many members revert to as their comfort zone.

As recent as February 1997, a prominent business leader was heard to say when he left the office of a
senior officer in Sydney “... How did that man ever get to the position he is in. In civilian life he would not last long”. A telling story, but one that is being heard more often.

Look around and observe our leaders, past and present. Some are visionary, some are there only for the power, some are there because they are inspirational, others because they charge and get the job done regardless of cost. They all have something, but they all cannot, and would not be successful, in all circumstances.

General George S Patton Jr was keenly aware of the power of a commander to influence his troops. “Leadership is a funny thing… I don’t know how I do it,” he once confessed to his wife.

To place leadership and management into the perspective of providing services to the community, the military leader of today requires to be conversant with, and understand, that effective leadership is an integral part of a modern organisation. It must have strong empathy with its customers, its own people and its systems. This empathy is depicted in the following model.

The model depicts a close and continual relationship at all levels and at all segments of the triangle.

At the highest level, strategists, need to interact with their customers; with the people and with the systems. People and systems interact with each other and with customers. Army cannot ignore the relationships shown in the model. On the contrary, Army must nurture and grow the relationships, as a commercial business must for acceptance, growth, and survival.

What follows therefore is that leaders, at all levels, must get out of their offices and command posts and visit their people and their customers. They should not be afraid to ask and enquire instead of relying on the filtered information received from their staff.

Identification of Leaders

Perhaps one of the most perplexing questions is how to identify leaders. Our officer and NCO training programs assist in some way, but often, the characteristics of the outstanding leaders are seen early in their selection and training. In others, the characteristics emerge when they are placed into more demanding fields of employment – usually later in life. On the converse side, characteristics are shown
early in selection or training, but rarely develop further from that point.

What other abilities do we need in our leaders? VISION, and a desire to articulate that vision, is a common denominator amongst leaders. As a result they have little misconception of where their organisation is going, and indeed, where they are going. And, most important of all, is that they are able to clearly communicate their vision in simple terms.

A vision is not worth much if there is not an appropriate and workable strategy. Leaders, however, go beyond this as their focus is to ensure that the vision is achieved and that the organisation gets there. This is described as the management of change.

In the Army, how can this simple ability be achieved successfully when our leaders and men are posted every two to three years. It is well known that a commander is working under the plan laid down by his/her successor for at least the first 12 months. The second year is the development and introduction of their own plan and they leave rarely without ever seeing a project or plan through to the end. We expect our officers to be the master of all they do, regardless of what posting they achieve, however, what we have got are officers that are “jack of all trades – but master of none”. This process leads to minimum accountability and responsibility to the public and to the soldiers.

Recent history in Australia is pointedly directed at the lack of planning and management ability of our military leaders. The problems with the purchase of the Black Hawk aircraft minus adequate servicing parts; movement of the Armoured Regiment to North Australia without adequate planning and research for vehicle and soldier capabilities and training facilities. The above are only a few that have hit the press, but others, in the name of restructuring, have not.

General Gordon Bennett wrote: “Civilians provide the manpower for our huge armies. Parents provide sons who fight. They make sacrifices, enormous sacrifices for the cause, hence, when they know that serious mistakes have been made they want to know why. After all they pay the cost for these mistakes”. Whilst General Bennet was talking about war, the same can be said today with material and personnel planning and management.

LISTENING TO AND RESPONDING TO THE NEEDS OF OTHERS. To appreciate leadership, it is necessary to understand the difference between leadership and arrogance. The latter requires the power and authority passed to the individual by the Army. The military leader possess constitutional power of a magnitude which surpasses that of leaders in most other human groups. If he/she cannot pull his/her followers by force of character, he/she can at least push them by force of law. A soldier must be provided – unless nature has done the job already – with a set of automatic inhibitions that will save the person in the moment of danger… from a collapse of the soldier’s own morale. Discipline, of course can hold the soldier steady from without; but the soldier’s one moral defence against internal weakness is the sense of honour. To arouse this sense in the ordinary soldier, cultivate it and, above all, inspire it by the leader’s own example is the leader’s highest duty; and to fulfil that duty he/she must have a sense of honour that is well developed, active and finely tuned.

Leadership therefore, is that empowerment which comes from those who choose to follow a leader. In recognising this point, leaders spend significant amounts of time listening to their people determine what their needs are. Leaders break loose from their advisers and go and find out for themselves as they are painfully aware that their advisers tell them only what they (the advisers) want them to hear. Leadership and effective listening to your people cannot be separated. There should be no confusion that this is not participative to decision making but gaining all the facts so effective leadership can prevail.

Leaders faced with ongoing change spend a great deal of time building trust, openness and honesty.

COMMUNICATING TO MAKE THINGS HAPPEN. Leaders make things happen. They do this by listening and talking to anybody and everybody important to the organisation’s objectives. They do not put on blinkers or bury their heads and sit in their office – but by going to the source of the problem, the basis of any information, no matter how unpalatable it may appear. Leaders cajole, stroke, negotiate, charm, order, bargain, reward and collaborate to get things done. They work both within the formal structure and outside of that structure. They work with both the short-term and the long-term in mind. Good leaders feel that they are not bound by the “chain-of-command,” which is often used as a retort for not doing anything.

Appropriate communication skills build trust, cement relationships and energise communication. Communication skills demand integrity, openness, honesty and adherence to organisational and personal values.

SELF-KNOWLEDGE. Leaders above all, know who they are. They manage their own careers as opposed to abdicating self-responsibility in the hope that the organisation will manage it for them. They are in charge of their own lives as opposed to allowing the circumstances of their lives to somehow
dictate how they should act. Equally apparent is the balancing of work, family responsibilities and social involvement. A balanced sense of self is a foundation of overall personal maturity and a springboard from which all other leadership actions flow.

This does not mean that leaders are always happy and never make mistakes. Good leaders may, in fact, make more mistakes than others because leadership often necessitates taking risks and initiatives, rather than highly analytical decision making. Self insight is an essential platform for pragmatic risk taking. Leaders learn from their mistakes, and the mistakes from those who have gone before them, and when proven wrong, admit their mistakes and continue on.

Are our “leaders” selected sometimes for the wrong reasons? One has to read descriptions of tertiary military training establishments to realise that in such places size, muscle and skill at games constitute one of the main criteria by which an officer is judged. Unfortunately, however, we see too often that people in leadership positions fall back to the power of rank and in doing so alienate themselves from their people.

Tertiary education of Army officers is often by fellow officers. Experience has shown that they are not professional educators and unfortunately, what is often taught, are largely the styles and foibles they have adopted during their own service life.

Arguably, Australia’s most prominent wartime and peacetime leader was General, Sir John Monash. His campaign carried the marks of meticulous planning and thorough execution. He was deeply aware of the efforts which his troops made to carry out his plans and his deep affection for the men he lead and commanded was reciprocated. Monash said that there were three great contributions to his success — integrity, even-mindness or wisdom, and untiring industry.

At this stage, it is worthwhile to reflect on the characteristics found by Norman Dixon that illustrate poor leadership, or as Dixon puts it, “incompetence.”

1. An underestimation, sometimes bordering on the arrogant, of the enemy.
2. An equating of war with sport.
3. An inability to profit from past experience.
4. A resistance to adopting and exploiting available technology and novel tactics.
5. An aversion to reconnaissance, coupled with a dislike of intelligence (in both senses of the word).
6. Great physical bravery but little moral courage.
7. An apparent imperviousness by commanders to loss of life and human suffering amongst their rank and file, or (its converse) an irrational and incapacitating state of compassion.
8. Passivity and indecisiveness in senior commanders.
9. A tendency to lay the blame on others.
10. A love of the frontal assault.
11. A love of “bull”, smartness, precision and strict preservation of the “military pecking order.”
12. A high regard for tradition and other aspects of conservatism.
13. A lack of creativity, improvisation, inventiveness and open-mindedness.
14. A tendency to eschew moderate risks for tasks so difficult that failure might seem excusable.
15. Procrastination.

Compare the above characteristics with the leadership qualities we have been discussing, and critically analyse where we stand in Army.

The “warrior” class of the Army is generally comfortable with most of the above traits identified by Dixon. However, when we look at the successful “commercial business people” of this world who deal with such high level strategy and tactics that Army only dreams of in TEWTS, who is left wanting?

Some of the greatest leaders have been those who have trained and have “cut their teeth” in the civilian business world. Men such as Lieutenant General Sir Leslie Morshead; Field Marshal Sir Thomas Blamey; General Sir John Monash; Lieutenant General the Honourable Sir Edmund Herring and the many others who fought only for the duration of the wars. To those with “open” minds this must mean something — and perhaps when the “call” comes again, history will repeat itself. James C. Sarros and Oleh Butchatsky in Leadership – Australia’s Top CEOs: Finding Out What Makes Them The Best (1996) say that Australia is coming of age in terms of business leadership. The report of the Industry Task Force on Leadership and Management Skills in Australia released on 26 April 1996 (Karpin 1995) identified the need for Australian managers to become globally competitive by developing a flexible and multicultural workforce, and adopting a “customer first” attitude. The message was clear, Australia needs leaders who have vision and the capacity to achieve that vision with the commitment and conviction of a challenged, educated, and energetic workforce.

Army needs leaders who are responsible, professional (in the true sense) and who could easily exchange places with professional business leaders – for this is the acid test.
It is a pity to see people not reach their full potential in any capacity, mental or physical. A missed opportunity for a person to develop leadership potential is all the more regrettable because of the lost opportunity to derive great personal satisfaction from being able to add value and feel the sense of achievement in getting better results working with and through other people.

Where an environment exists that restricts its leaders to experience the satisfaction of being responsible and accountable for their people, projects and the public then the “good” young members will leave to seek fulfilling professional careers. This is perhaps another way in which age determines military indifference in leadership and management, through the voluntary resignation of intelligent young officers. This suggests that the brighter ones resign as soon as they have completed their obligatory service, while those less well equipped remain.

As task specialist, a leader’s prime concern is to achieve the group’s ostensible goal – the case of the military – defeating the enemy. For such a role, being likeable is a rather less important trait than that of being more active, more intelligent and better informed than the followers. In the capacity of “social specialist”, a leader’s main function is to preserve good personal relations within the group, thereby maintaining morale so as to keep the group going.

The ideal military leader is, of course, one who manages to combine excellence as a task-specialist with an equal flair for the social or heroic aspects of leadership and command. In other words, a person who is comfortable in placing the emphasis of style in the right court depending on the prevailing environment.

The military have never smiled upon entrepreneurs and innovators. The cut and thrust of private enterprise, cleverness and even working too hard have not been deemed “good form”. This “culture” must change if the Army is to successfully advance into the 21st Century as the cultivation of bold, independent and imitative thinking is of the greatest importance if the security of the nation is to be advanced. Army’s Command and Leadership training must be flexible to provide learning and continual development of situational leadership styles. The leaders must be able to have the ability to switch from a task command and leadership style when on operations, and a relationship leadership style when not on operations.

Leadership cannot be separated from command. Unfortunately, there are still some misinformed members (members who are not able to or are incapable of accepting change) of the Defence fraternity who believe that leadership and military management should be taken out of the study of command. On the contrary, greater emphasis is required on leadership and management to minimise the failures and discontent found in the wider defence community.

These comments and observations apply at every level of an organisation, from the Section Commander to the Chief of the Army, and even to informal leaders in work groups. After all, these are commonsense observations related to the old maxims about doing things right, for the right reasons, and doing them well to achieve quiet pride and personal satisfaction, whatever the task, whatever the routine, as a personal statement about yourself and your values. Our people are looking for VISION, RESPONSIBILITY, COMMITMENT, INTEGRITY, CREATIVITY, and SENSITIVITY. As leaders, we must develop and practice these traits, whether-or-not you are a self proclaimed “warrior” and you will succeed not only in the military life but the civilian life which is where all Army members will finish in the long term.

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Lieutenant Colonel Blackwell joined the Army Reserve as a private soldier in 1967. He was promoted through the ranks to Sergeant in 1970 and left the service in 1971 to pursue tertiary studies. After this period he re-joined the Reserve through OCTU in 1978 and was commissioned into the Australian Intelligence Corps on graduation from OCTU in 1980. He later took a Corps transfer to the Royal Australian Infantry in 1981. Lieutenant Colonel Blackwell has had a wide and varied career in the Army Reserve.

In civilian life, Lieutenant Colonel Blackwell is the Financial Controller of Jesuit Social Services Limited.

Dr Chessell said he welcomed the agreement which would benefit DSTO’s 15-year Takari R&D Program which is designed to deliver to the Australian Defence Force a superior command, control, communication and intelligence (C31) capability.

“This agreement will be particularly useful in the areas of information management and strategic command support, and in C31 systems issues,” Dr Chessell said.

Mr Gray said the agreement would not only benefit defence, but would result in commercial developments relevant to the broader community.

“Boeing believes that the partnership formed by this agreement will also see development of applications in air traffic management, civil disaster control and global mobile communications,” he said.

An industry alliance is a specific agreement between DSTO and a company (or cluster of companies) which is designed to enhance communications and exchange of information over a long-term period, usually three to five years. Aims include early industry involvement in DSTO research activities, increased Defence awareness and enhancement of industry capabilities in areas of strategic importance to defence.
The Future Tank Capability for Australia

By Major Jason Thomas, ARMD REGT and Lieutenant Stephen De Marchi, 3TP BSQN

As the sentiments of Machiavelli indicated, then as today the debate was not couched entirely (cynics would say even mainly) in terms of military effectiveness as such, but included cultural, social, and political considerations, as well as special pleading of every kind.

Martin Van Creveld on Force Development

The current end of Life Of Type (LOT) for the Leopard AS1 MBT is 2010. This may have to be extended given the materiel procurement resources that the RAN and RAAF are receiving to protect the sea/air gap. Whilst the standard of training of the Australian tank soldier remains relatively high, the Leopard AS1 itself is in dire need of survivability, target acquisition and fire control upgrades. But what is to be the next step for the tank capability? In the 1970s we wisely chose Leopard over the M60. How wise will we be in 2010/20? The historic acceptance in Australia of heavy (or any) mechanised forces within Australian Defence Forces has always been poor.1

The tank is defined by the Macquarie Dictionary as “an armoured, self-propelled combat vehicle, armed with cannon and machine-guns and moving on caterpillar tracks”. For the military it is a highly protected, highly mobile, easily controlled, precision weapon system capable of delivering decisive combat power through the maximum utilisation of technology for a low manpower cost. It currently offers the only solution to protected close combat in the ADF.

Introduction

Operational Concept. While the table below is straight-forward, it arches over complex realities. The development of the Operational Concept must be holistic. For example, the capabilities of the infantry (Mechanised/Motorised/Dismounted), artillery (Towed/SP/AD) and offensive air (FGA/Atk Helo/Recon Helo) will have a drastic impact on what gaps the tank must fill in the combined arms team. The development of this concept is dependant on a clear vision of how we will fight. The concept must go beyond the current Fundamentals of Land Warfare, which is a well-written definition of terms and characteristics in the context of ODA. The Detect, Protect, Defend concept underpinning A21 is

<table>
<thead>
<tr>
<th>OPERATIONAL CONCEPT</th>
<th>DETAILED DESIGN</th>
<th>RESULT</th>
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<tr>
<td>GOOD</td>
<td>GOOD</td>
<td>COMBAT NIRVANA</td>
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<td>GOOD</td>
<td>POOR</td>
<td>LOW AVAILABILITY AND COSTLY IN-SERVICE EQUIPMENT</td>
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<td>POOR</td>
<td>GOOD</td>
<td>GOOD EQUIPMENT INCAPABLE OF PERFORMING ITS DESIGNATED ROLE</td>
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<td>POOR</td>
<td>POOR</td>
<td>JUNK</td>
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Table 1.1 Relationship between Operational Concept and Detailed Design
a start, hopefully the trials, creation of HQ AST and the new strategic guidance will develop a coherent operational concept.

**Detailed Design.** Detailed design not only includes precision in design and manufacture but other vital issues such as project management and logistic support. First-hand user experience of two recent major Army procurement programs indicates that integrated logistic support planning is a major weakness.

**Can Do.** The Australian ethos of making do with what we have got and using optimism as a combat multiplier are sound national traits that have lead to a fine fighting tradition. However, we also have a tradition of vague operational guidance, pedestrian force development and over time and over budget equipment. In the case of the future tank and other major projects we have both the time and situational awareness to remove these weaknesses. It is a matter of clear intent and adequate resources.

**The Attack Helicopter and Precision Guided Munitions.** In the introduction the capability the tank represents was defined. To discuss this capability in isolation to the development of the attack helicopter and precision-guided munitions is to be blinkered. In the land force of modern armies the attack helicopter is the most decisive arm. The concentration of firepower and high mobility it offers is unmatched. Its protection and endurance remain limited as does the stand-off endurance of precision munitions on the battlefield. It will not be for some time and pending some major technological innovations that these systems will achieve the endurance and protection to fully replace the tank capability.

### Anti-Tank Guns

Anti-Tank Guns in the past could take on many forms, they could be simple artillery pieces firing armour piercing projectiles or complex high velocity anti-aircraft guns firing purpose designed anti-tank projectiles. These guns can be mounted on improvised tracked vehicles or simple towed guns that are manhandled into position to duel with tanks.

The latest Soviet development of the anti-tank gun is the mounting of the 125 millimetre tank gun on a wheeled carriage. Information on this weapon system is very scarce but the gun would have the same performance as the T72’s main armament.

Anti-tank guns until 2010 will remain conventional guns of calibres ranging from as small as 45 millimetres to as large as 155 millimetres. However 140 millimetres is seen as the maximum able to fit in current generation tanks and anti-tank platforms.
Anti-Tank Missiles

Anti-Tank Missiles can take on many forms and are seen as the main threat to armoured vehicles. An important consideration when considering shaped charge warheads is that a warhead with less than 76mm will give poor lethality against tanks, warheads of the future will have to be at least 130mm to achieve good lethality. The warhead vs diameter lethality relationship is not linear and it begins to curve and flatten out at a warhead diameter of about 130mm.6

Numerous high technology anti-tank missiles have been developed in recent years and in general all these missiles have shaped charge warheads. The largest difference between them is the methods of delivery and the specific area of the armoured vehicle that they attack (most modern missiles are designed for top attack).

The latest development in missile technology however breaks away from the normal missile configuration in the fact that it uses kinetic energy to destroy the target. This missile system is called “Line of Sight Anti-Tank” (LOSAT). LOSAT has been claimed to defeat all predicted future armoured combat vehicles. LOSAT is a large weapon that has to be mounted on a vehicle such as the M2 Bradley or the HMMWV. The Kinetic Energy Missile (KEM) weighs approximately 90 kilograms, is 2.52 metres in length, has a maximum range of 4 000 metres plus, and requires a crew of at least 3 soldiers.

The future missiles will all most likely be fire and forget so as to increase the survivability of the missile crews, this however increases the possibilities for decoy systems on AFVs. Missiles and, when they can be spared, precision-guided munitions remain the greatest threat to tanks when delivered by attack helicopters or ground attack fixed wing aircraft.

Mines. Modern anti-tank mines are no longer the simple blast or shaped charge mines of the past. No longer do modern mines attack the tracks of AFVs but target the thin armour on the belly. Mines use a variety of sensors to attack the belly such as tilt rod fuses and acoustic sensors to sense the ground vibrations. Magnetic sensors pick up the magnetic field of the AFV hull or detect the warmth of the engine. Mines or area denial weapons will be a constant threat to AFVs now and in the future. It is unlikely that full countermeasures will be affordable for all tanks. Specific Special Equipment vehicles will probably remain the best way to counter these threats.

The threats to armour are great and varied and we have only touched on relatively few. At times it can seem that the scales are tipped to the side of the anti-tank weapons however, armour development continues to equal anti-tank weapon development (An M1A2 Abrams weighs 68 tonnes because of it’s armoured protection, it is able to defeat TOW I over the frontal arc).

When analysing the tank/anti-tank race we must ask why the competition? Each system is coming up with a counter to render the current generation of weapons obsolete. Only capabilities with a decisive effect on the battlefield drive such innovation. So far the tank within the combined arms team has always produced a counter to ensure its continued importance.

Emerging Technology

Mmmm...... Technology .......mmmmm

- General Homer Simpson

Van Creveld’ sees technology as being the servant of the military as it is in the civilian domain. However, we are too often blinded by science. To avoid the dazzle we must understand the emerging technologies at 2010. We must remember that the rate of development of specific military technologies has slowed drastically post-Cold War. The following discussion of these technologies is not all encompassing and quantitative in its assessment.

Active Protection. Basic defensive aid suites using a variety of decoys (soft kill) and guided explosive fragments (hard kill) are already in service in other armies. These systems will supplement passive/special/explosive armour suites. Laser beam riding weapons (both man portable [2-man team] and vehicle mounted) offer a near unjamable solution to missile guidance. Thus, it is highly likely that hard kill systems will be standard on most tanks of 2010. Threat warning and locating technology will have matured to be both accurate and reliable. Employment of composite armour technologies may offer up to a 33 per cent saving in weight.8

Agility. Whether it is gas turbine or diesel powered vehicles, the raw horsepower requirement for a tank will not be the technical hurdle it was in the 50s and 60s. A low risk option will be the continued use of a mechanical driveline with inactive suspension. Electric drivelines will be feasible in 2010 and will offer greater stealth and energy efficiency. Semi-active and/or de-coupled suspension technology will be mature enough to be reliable for military equipment. Even if the tank has to weigh 60-70 tonnes (the Leopard 2A5 procured by Sweden has
a combat weight of 62 tonnes) it will not be a great hulking beast.

**Target Acquisition (TA)**

One of the main drivers of A21/Force XXI is the rapid fusion of combat data to enable one thing – the application of the right amount of combat power at the right place at the right time. The tank of 2010 must have an Intra-Vehicular Information System (IVIS) that is AUSTACCS compatible. Features such as automatic logistic reports and full colour scrolling map displays will be standard. This is all the technology of 2005.

We can see the dawn of 2010 AFV TA in the next generation of air superiority fighter and modern naval combat vessels. Equipment such as Helmet Mounted Displays (HMD) are set to provide a marked advantage to those air forces equipped with and armed for them. The capability of “off-boresight” acquisition and engagement confers obvious flexibility in air combat. Both the French Rafale and the US F-22 Raptor will have first generation “First Look, First Kill” capabilities. Development of First Look, First Kill in an AFV is probably a less technically demanding task than that of the air superiority fighter. Combined with current generation auto-loaders the rapidity of engagement is something we can only currently imagine. The option of a First Look, First Kill system being at least Image Intensification/Day channel integrated is currently feasible and Thermal Image/Day should not be discounted.

“Through-Armour” video systems are emerging but I believe that a combination of these systems, current sights and human eye offer the best solution. Millimetric wave radar similar to that installed on the Apache Longbow Attack Helicopter may be available but at a high cost and given the less than ideal environment it will operate in, will be a high risk option. At the very least optical auto-track and engage will be standard on the next generation of tank.

**Firepower**

Very soon the Australian Army will become aware of major improvements in anti-tank missile technology, this of course being the Line Of Sight Anti Tank (LOSAT) system. LOSAT represents a major step forward in ATGM. LOSAT aside the tank gun still remains the most space efficient weapon for the destruction of hard targets. Advances in fire control and tank gun technology will push battle ranges out beyond 2000m and push the envelope of feasible solid propellant technology. Under Cold War conditions Electro-Magnetic Pulse weapons may have been available by 2010, this is now less likely. A powerful lightweight (relatively speaking) 120mm or 140mm gun possibly with electro-chemical propulsion and capable of long-range missile launch will stand at the pinnacle of direct fire weapon systems available at 2010.

Small to Medium Calibre cannons will continue to provide an exceptionally potent, compact weapon system. By 2010 a cannon may appear on the market specially designed for the AFV (most cannons are of naval or air/air defence in design origin). This will make system integration far easier. A combination of medium calibre cannon and ATGM (LOSAT) provide another configuration. A multi-mission LASER system (range-finder, IFF, wpn guidance, tgt designation and tgt illumination) will be feasible.

**Crew Endurance.** A more comfortable vehicle is imperative to improve both endurance and the ease of training of crew. Climate control/NBCD/crew ergonomics must be integrated to make the systems more usable. A better designed crew station not only increases endurance but decreases engagement time. It also supports that most intangible aspect of combat power, morale. It is the small design details of a tank, coupled with an overall confidence in the tanks power that make a tank soldier believe he is in a capable vehicle for combat. Who knows by 2010 an MBT crew may be all be able to sleep while the auto-detection system sits on sentry.

**Manufacture**

Australia will probably hold the manufacturing technology at the end of the current naval ship building surge to at least fit out if not construct a heavy AFV. Complete construction would be a high risk venture with the associate high costs, unless an export market could be found. We should not over simplify the level of technology and workmanship required to build a modern AFV. Design or sponsoring of an Australian specific design is unlikely to be financially feasible. Project WALER lies as a testament to an attempt to design an indigenous AFV in peacetime.

The most likely solution for manufacture of the tank is that which the ASLAV project is currently using. This solution being the fitting of the basic vehicle with Australian built components in-country. The benefit to Australian industry, through LOT will be one of the main factors in the selection of the vehicle type.
The table attached as Annex A indicates some possible basic configurations for the future Australian tank. The table reveals some of the merits and limitations of the various weight classes and configurations. There are far more advantages and disadvantages. Even being constrained to a foreign designed vehicle, the wide variety of options available reinforces the need for a clear operational concept for the tank capability.

**Flexibility**

Australian strategic guidance has accepted the concept of the multi-polar world we live in. Over the past decade, conflicts across the entire spectrum have occurred. To constrain the future tank’s capability to less than that of a 4th generation MBT is a high risk option. To do so would be to assume that we have the luxury of choosing the conflicts we will fight. This type of military strategy if acceptable, can place severe constraints on national strategy and undermines our allies faith in our land force capabilities.

Under A21 the Theatre Response Force is the only force with enough combat power to decisively win against a worst case enemy (An Infantry Battalion Group inserted with no disruption). The Armoured Gun System Company (Independent Tank Squadron) provides an essential component of this combat power. To risk the operational reserve’s chances of victory with a tank of limited capability is another risk that must be considered.

Some of the technologies mentioned in this article will cost a fortune and still be high risk in 2010, others are here now. By being isolated to modern Western Armies we see Leopard AS1 as the baseline MBT capability. In developed nations the baseline has moved well forward. The current generation MBT (Leopard 2A5, Merkava 3, M1A2, T-80U) are more capable than Leopard AS1, as Leopard AS1 was to Centurion Mk5. As a Defence Force we lack this awareness. The questions asked to us during various visits to the 1st Armoured Regiment (Tank) about the utility of the tank confirm this. These same questions were answered in 1917, 1940, 1944, 1951, 1968, 1973, and 1991.

The tank capabilities’ potential lies in the decisive effect it can have in close combat and its impact inside the minds of commanders. It is a key component in shaping the battlefield. We made the right choice in the current tank, Leopard AS1 is still capable of operating across the entire spectrum of conflict. The operational concept the future tank serves must be clear and robust. The tank capability represents a fusion of high protection levels, good communications, good mobility (in all levels of conflict if you equip yourself well logistically), potent and precise firepower in a technologically advanced land platform. This is the capability that will decide the close battle. This is what the future tank of Australia must embody. If we are too specific or do not integrate all combat systems into a potent and flexible force then we don’t place our lives at risk, but those of our sons and daughters.

**What do the Germans have most of?**

“Panthers. The Panther can slice through a Churchill like butter from a mile away.”

**And how does a Churchill get a Panther?**

“It creeps up on it. When it reaches close quarters, the gunner tries to bounce a shot off the underside of the Panther’s gun mantlet. If he’s lucky, it goes through a piece of thin armour above the driver’s head.”

**Has anybody ever done it?**

“Yes, Davis in ‘C’ Squadron. He’s back with headquarters now trying to recover his nerve.”

**What’s next on the list?**

“Tigers. The Tiger can get you from a mile and a half.”

**And how does a Churchill get a Tiger?**

“It’s supposed to get within 200 yards and put a shot through the periscope.”

**Has anyone ever done it?**

“No”

Recorded conversation by Andrew Wilson (from the Sharp End by John Ellis)
Annexes: A. Configuration Options for the Future Australian Tank

NOTES

1. There was no up to date armoured capability at the commencement of both World War II and the Korean War. It is also arguable, that even though the Centurion was an extremely capable vehicle, its design predated 1945 and was approaching obsolescence during the Vietnam War.

2. Taken from AFV design lectures given by Dr Jim Mackworth at RMCS Shrivenham Nov 92.


4. Ian Hogg, Tank Killing Anti-Tank Warfare by Men and Machines.


7. Van Creveld, Technology in War, Conclusions pp.311-320.


11. Engagement at battle range for a tank is the infantry equivalent of highly accurate instinctive shooting.

12. A popular idea among the members of the 1st Armoured Regiment (Tank).

13. Unless a multi-national project is developed for a common tank between enough nations to make a design financially viable. Given that this would be a first for Australia and the chequered history of such projects in other nations, this must be considered high risk. But it does offer the high return of a tank tailored to our operational concepts.

14. A scan of DARMD-A archives in 1993 indicated that most major Australian heavy manufacturers submitted feasibility studies, the overall quality of these studies was very high, including an in-depth analysis of function. The overall cost of complete design to manufacture ended this project. Informal discussions with those civilian industry personnel involved indicated fiscal fingers were severely burned by the cancellation.

15. The emphasis on coalition operations is likely to increase the climate of multi-national peacekeeping and constrained defence budgets.

16. LTCOL K.W. Corke’s prize-winning essay on a Future Tank Capability for Australia in Ironsides, 1994, provides an excellent insight into the importance of psychological effect and another possible configuration.

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Annex A

CONFIGURATION OPTIONS FOR THE FUTURE AUSTRALIAN TANK

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FIREFORCE</th>
<th>PROTECTION/ SURVIVABILITY</th>
<th>MOBILITY</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C-130 Portable.</td>
<td>Limited close combat capability.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Well protected against light threats</td>
<td>Adherence to weigh budget will make this configuration potentially high risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fully amphibious.</td>
<td>Probable that vehicle will not be originally designed as a “tank” and therefore base design may be suspect.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Firepower capable of overmatching all threats likely in ODA.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Suited to Peacekeeping</td>
<td></td>
</tr>
<tr>
<td>105mm Low recoil gun with auto-loader.</td>
<td>Passive Special and limited defensive aids suite.</td>
<td>Tracked with mechanical power train and de-coupled suspension.</td>
<td>C130 Portable.</td>
<td>Limited anti-armour capability.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Well protected against light threats</td>
<td>Max speed probably &lt;80km/hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Higher survivability in close combat.</td>
<td>Higher logistic costs in peacetime.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wide variety of ammunition natures available all adequate for a wide variety of ODA scenarios.</td>
<td>Expansion of capabilities will compromise air portability and be limited.</td>
</tr>
</tbody>
</table>

1. For the sake of clarity Target Acquisitions systems are not discussed in great depth. At least automatic tracking systems should be available in all configurations.
2. It is highly likely that most future generations cannons will initially be a conventional cartridge gun, a calibre increase being achieved through the use of Case Telescoped Ammunition (CTA) and a new barrel only.
3. The Centauro Wheeled Tank Destroyer was deployed to Somalia by the Italian Army, this is a similar configuration vehicle.
<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>FIREPOWER</th>
<th>PROTECTION/ SURVIVABILITY</th>
<th>MOBILITY</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 tonnes</td>
<td>35/60mm Rapid Fire Cannon &amp; LOSAT</td>
<td>Special armour with soft defensive aids suite.</td>
<td>Wheeled with mechanical power train and semi-active suspension.</td>
<td>Probably first weight class where sophisticated TA and engagement systems will not compromise overall design.</td>
<td>Wheeled vehicles at this weight will have limited mobility in wet conditions. Limited close combat capability.</td>
</tr>
<tr>
<td>120mm Lightweight Gun/Missile Launch Capable.</td>
<td>Special with full hard soft/kill defensive aids suite.</td>
<td>Tracked with diesel/electric drive train.</td>
<td>First configuration probably capable of operating across all threat spectrums 2010. Good expansion capability.</td>
<td>Unlikely foreign configuration. Max speed probably &lt;80km/hr. High consequences of blast if hard kill systems initiated to dismounts near veh.</td>
<td></td>
</tr>
<tr>
<td>35-50 tonnes</td>
<td>120mm Lightweight Gun/Missile Launch Capable.</td>
<td>Special armour with soft kill defensive aids suites.</td>
<td>Tracked with mechanical power train with de-coupled suspension.</td>
<td>Suited to Peacemaking. Low technical risk. Good protected close combat configuration. Good expansion capability. Highly likely to be most common configuration on market.</td>
<td>Max speed probably &lt;80km/hr. Higher cost option. Limited long-range deployability without specialised logistic support.</td>
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</table>

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<th>WEIGHT</th>
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Junior Leadership Training and Development in the Australian Army

By Major R.C. Moor, RAInf

There are many and varied theories of leadership. Some believe leadership is an innate trait; others argue it can be learned. In fact both may be true: a leader must have some inherent leadership qualities, yet raw charisma alone will not ensure success. Born or bred the essence of leadership is the ability to motivate people. A leader instils confidence in his superiors, peers and subordinates. A leader must know his business, himself and his men. (Baldwin, 1992: 82)

But how are leaders best trained? What development processes should be used? And what factors need to be considered?

Leadership training and development is not simply a matter of selecting and teaching suitable theories. It involves several interrelated concepts. First, professional competence must be attained. Then the organisational culture and workplace context, educational processes and personal motivation, group dynamic and leadership theories must be integrated into a holistic program. Finally, when the program is complete a systematic and thorough evaluation of efficiency and effectiveness must be conducted. This interrelationship is best explained by the model at figure 1.

Army’s Values and Ethos. Leaders are the product of their environment, therefore, before training leaders the individuals within the organisation must be developed. To do this the qualities and behaviour expected from soldiers, NCOs and officers must be clearly enunciated. These desired qualities and standards are contained in Army’s statement of values and ethos which are derived from society’s expectations, national history and the context in which soldiers are expected to work. All members of the Army should be expected to display loyalty, mateship, initiative, adaptability, honesty, determination, mental and physical toughness, stability under stress, morale and physical courage, teamwork, tolerance, patience and a sense of humour. These qualities must be inculcated throughout the organisation. They are the cultural glue that bonds the Army and form the keystone for leadership training and development.

Context. Several wide-ranging studies of the battlefield environment have been conducted over a number of years. From these studies a number of critical battlefield characteristics have been identified. These include the fog of war, appalling communications, exhaustion, danger and fear (Marshall, 1947), long periods of routine interspersed with intense activity, and the need for comradeship (Dinter, 1982: 6-12).

Fog of War. Chaos reigns supreme during intense combat. “Chaos, because nearly all the assessments of the situation are based on insufficient information, which the commander under severe pressures will in many cases misinterpret. Chaos,
because most of the planning will have little bearing on reality for the same reasons, and because most of the orders issued by higher headquarters cannot as a result, be carried out wholly or even in part. Chaos most of all, because chance plays a greater role here than anywhere else in life” (Dinter, 1982:10).

**Appalling Communications.** Battlefield noise and obscuration, enemy jamming, mechanical failure and the need to take cover all conspire to disrupt both personal and electronic communications. This contributes to the fog of war and causes personal misunderstandings and recriminations.

**Exhaustion, Danger and Fear.** A lack of food, drink and sleep coupled with hard physical work, exposure to danger and mental stress lower individual morale and weaken team cohesion. In times of duress the performance of individuals, teams and leaders will change and may become volatile and unpredictable.

**Routine Interspersed with Intense Activity.** While on operational service the average soldier is more likely to encounter the daily routine of cleaning weapons, checking equipment, building shelters or conducting routine patrols rather than active combat. In this environment every effort must be made to ensure that boredom does not develop with the resulting loss in discipline and readiness.

**Comradeship.** Soldiers fight for their mates not a cause. The establishment and maintenance of strong personal bonds lies at the heart of group cohesion. “Even if army units break up and retreat in a disorderly manner, old comrades will try to remain together” (Dinter, 1982:7). And this is why units quickly assembled from small groupings of stragglers have been able to fight with considerable success.

These characteristics set the scene. They are the context in which combat operations take place. To be an effective military force individuals, teams and leaders must be prepared to meet the demands of this environment. Training must be placed in context.

**Learning Domains.** The key to conducting an effective leadership training and development programs lies in understanding and utilising adult education theory and practice. Three components of
competence are recognised within Army: skills, attitude and knowledge. These components have been adapted from the psychomotor, affective and cognitive learning domains. When conducting leadership programs it is important to look beyond the concept of attitude. Instead an understanding of the more complex concept of the affective domain is required, as it encompasses interests, attitudes, values and the development of appreciation (Bloom et al, 1964). And herein lies the key to understanding individual motivation, group dynamics and interpersonal relationships.

**Attitudes and Behaviour.** In viewing the affective domain it is important to understand the linkage between attitude and behaviour. A poor attitude does not necessarily lead to poor behaviour, while a good attitude does not necessarily lead to good behaviour. People often say one thing and do another, they often believe in something yet act in a contrary manner. When this happens the individual experiences cognitive dissonance. He or she enters a state of internal disequilibria (Festinger, 1957). So while there is a relationship between attitudes and behaviour, this relationship is not fixed and it appears that how people behave has more influence on what they think than vice versa (Mackay, 1994) as depicted below (Fig 2).

This is an important observation as it suggests that by insisting on certain types of behaviour attitudes can be modified over time. Two simplistic examples of changes in public attitude following legislated changes in behaviour are the wearing of seat belts and smoking in public buildings.

**Experiential Learning Cycle.** As the name suggests experiential learning concerns learning from experience. The most commonly used model, shown in Figure 3, involves a cycle with four processes: concrete experience, reflective observation, abstract conceptualisation and active experimentation. Learning begins with concrete experience. A learner is then in a position to think about the experience, to observe oneself and others, to reflect on what is happening and why it happened. He or she will then compare the what and why to their knowledge of the world, to the internalised rules they use to make sense of life events. Where necessary they will review and modify their attitudes, values, opinions and beliefs. They will experiment with different ways of thinking and acting until the new beliefs are reflected in modified behavioural patterns (Kolb, 1984).

The importance of this concept when conducting a leadership training and development program is that practice precedes theory. For the theory is meaningless without experience upon which to reflect.

**Perspective Transformation.** Another key adult education concept is the importance of reflection in bringing about personal change. The ability to critically reflect on one’s experiences, assumptions, beliefs and values is empowering and enlightening. It has the potential to enable individuals to become aware of their own preferences, biases and prejudices. Over time they are able to develop a clearer

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**Figure 2. Relationship between attitudes and behaviour**
understanding of the way their perceptions influence their decisions and behaviour. They undergo a transformation whereby their perspectives become progressively more inclusive, discriminating and integrative of experience (Mezirow, 1981).

**Stages of Development.** The term training and development has been used in a singular sense in this submission. There is, however, an important distinction between the two. Throughout our lives we evolve a succession of meaning structures, which may be thought of as stages of development. Each stage is qualitatively distinct but depends on and, in fact, incorporates and transcends the previous one. A training program attempts to impart competencies within a person’s existing stage of development. Whereas a development program helps a person enter a new stage (Palus & Drath, 1995: 2-3). It aims to bring about a perspective transformation. A leadership training and development program is, therefore, by definition multifaceted and evolutionary. No singular event or action is of critical importance in isolation. Rather a holistic development process must be used. The process needs to link readiness for development with a period of training and guided discovery. The program must focus on the development of the individual as an effective and proven leader rather than with imparting select knowledge and skills.

**An Integrated Process.** The approach advocated in this article integrates several key educational concepts including experiential learning, cognitive dissonance and perspective transformation. At its core leadership is about empathising with, relating to and influencing people. It stems from the very soul of a person. It concerns an individual’s beliefs, attitudes and values and is reflected in some very basic and subliminal interpersonal interactions such as body language, pitch, tone, volume and speed of speech, listening ability, powers of observation, powers of persuasion and influence, speed of comprehension et cetera (Sofo, 1995: 30-37). To be truly effective leaders must establish authentic and genuine relationships with their followers. To do this they need to know themselves and have an intuitive feel for human nature. These skills are sometimes innate, but can also be developed through guided discovery that integrates experience with theory, that takes participants out of their psychological comfort zone, that allows time for reflection, and that encourages experimentation with alternate ways of thinking and acting. This concept is explained in outline by the following model (Fig 4).

**Readiness for Development.** The term readiness for development refers to a simple and important observation: there are developmental differences among people entering leadership development programs, and within individuals at different points in their lives. Before beginning a development program, therefore, some strategy for screening and sorting participants is required. In essence “where they’re at, what do they need, and how can these needs be satisfied” must be established (Palus & Drath, 1995: 4).

**Development Processes.** As previously noted the development process integrates the concepts of experiential learning, cognitive dissonance and perspective transformation. It is, however, embedded in a larger set of ongoing processes with respect to workplace, family, social and personal dynamics. In line with the educational concepts utilised, the program should aim to provide an engaging experience, which through increased arousal presents the participant with a disorientating dilemma. This dilemma is amplified when habitual decision making processes do not produce acceptable consequences. A state of mental anguish, of cognitive dissonance,
Figure 4. Affective Domain Learning Model

(Adapted from Boud, 1997; Palus & Drath, 1995; Handley, 1997; Apps, 1985; Mezirow, 1981; & Festinger, 1957)
will then often result. From this dissonance the potential for growth through reflection is established. Conversely the participant may undergo an enlightening experience. This often leads to growth through recognition of a critical value, attitude or concept. It is important to note that in developing new ways of thinking and acting participants will often need to experiment with alternate approaches. During such experimentation they may be psychologically vulnerable and at times regress. Care must be taken not to exploit this vulnerability or criticise any regression. Regression is at least an indication that the participant is trying and often leads in the longer term to a deeper understanding of oneself and others. *(ibid p.13-20)* Essentially “one should see the development sequence as one of coping with increasingly deeper problems rather than to see it as one of successful negotiation of solutions” *(ibid p.20: Loevinger & Wessler, 1970, p.7).* It should also be noted that there are many pathways an individual can follow during the process. Essentially it is the role of the program facilitators to mentor, coach, guide, support, encourage and sometimes push participants; to take them down the path of personal development and learning. Success is not guaranteed nor should it be expected all the time. The final outcome should be a more adaptable, responsive and circumspect person able to lead in a range of situations and environments.

**Content**

**Senior verses Junior Leadership.** As previously noted there are many and varied leadership theories and practices. It is not my intention to examine them in detail other than to note that they all have some merit and that personnel conducting leadership training and development programs should have a good understanding of their content and the philosophies underlying them. One distinction that needs to be clearly understood, however, concerns the different demands and requirements of junior and senior leadership roles. Junior leadership can generally be described as “direct leadership” in that the leader is in direct and reasonably constant contact with subordinates. The leader generally must lead by direct personal example, often demonstrate how to do the task and enforce authority on the spot. The relationship between the leader and the team is often of a transactional nature though over time it may become transformational.¹ Senior leadership is more indirect. It is characterised by some form of physical detachment, with the leader being responsible for shaping values, setting longer term goals and making longer term policies *(Wass de Czege, 1992: 28).* In addition it is often characterised by ambiguity and myriad interpersonal demands. Effective senior leaders are those individuals who are able to maintain good interpersonal relationships when faced with differing and often conflicting demands, while ensuring that the organisation is effective and prepared for the future. The relationship between the leader and immediate team is often of a transformational nature. In addition the leader will often need to develop quite sophisticated adaptive leadership strategies.²

**Functional Model.** The functional model used by the Army is a tried and tested approach. It has served us well and continues to be a valid junior leadership model. The model needs, however, to be better understood. While most junior leaders know that they need to define the task, maintain group cohesion and provide for individual needs, few really understand that they should adapt their style to the prevailing circumstance or realise that in addition to planning, initiating and controlling a mission they are also responsible for supporting, informing and evaluating the team.³ Perhaps the greatest problem with the model lies in our interpretation of the theory. The 1973 doctrine stridently advocates the use of certain styles in certain circumstances and condemns both the Situational Approach and the free rein style *(Leadership Theory and Practice, 1973).* Given our understanding of the reality of the combat environment and personal motivation such guidance appears to be inappropriate. Both the Situational Approach *(Blanchard, 1990: 79)* and the free rein style are valid and should be used in certain circumstances.

**Revised Army Model.** Recognising the limitations with the functional approach a new army leadership model was recently developed by a Centre for Command Studies working group⁴ and will be trialed shortly. The new approach builds on the strengths of both Adair’s functional approach and recently published research by Bass and Avolio *(Avolio, Waldman & Yammarino, 1991).* The new approach looks not only at the task, group maintenance and individual needs but also recognises the importance of establishing a vision, using a leadership style that is appropriate in the given situation and finally ensuring that the approach used is within the bounds set by the organisation’s culture. The revised approach is explained in outline by the following model (Fig 5).
One of the keys to the revised approach is the recognition that the most effective leaders are able to use a full range of leadership styles by adapting their approach to suit their own pre-disposition, the competence of the team and the particular demands of the situation at that given time and place. In essence the following three broad styles are recognised; laissez-faire, transactional and transformational. Of the three styles transformational leadership is the most inspirational and can lead to outstanding team performance. Transformational leaders take the time to instil pride in the team, provide a sense of purpose, are enthusiastic and motivate individuals, seek differing perspectives, re-examine critical assumptions, and develop their subordinates (Avolio, Waldman & Yammarino, 1991).

**Personal Motivation and Group Dynamics.** Of equal importance to adopting an appropriate leadership theory is the understanding of personal motivation and group dynamics. Again there are many theories and models from which to choose. In addition to being socially valid the theories adopted need to complement Army’s culture, work environment and leadership approach. Key issues that need to be considered include “why people are willing to risk their lives, to endure hardships, to seek the unknown and to fight. How do teams form, what processes do they go through, what internal roles need to be performed to maintain group cohesion, and how is team synergy obtained”.

**Evaluation**

Finally the program must be evaluated. And this is where the complexity begins. It is very difficult to evaluate personal development programs as they are not conducted in a vacuum. It is hard to discriminate between programmed and fortuitous events, between guided and life experiences. It is also hard to determine what acts as a catalyst to what. Every individual is different and unique. There is, therefore, potential for an infinite variety of responses to any given situation. This does not mean that evaluation is impossible. It simply means that it is difficult and requires a relatively sophisticated understanding of a variety of techniques. The evaluation process must first investigate the relationship between behaviour patterns, program objectives, the sequence of activities and participants’ perspectives. In doing so a
mixture of qualitative and quantitative assessment methodologies that utilise valid measurement instruments must be designed. In addition, methodologies to determine both the value of the program and the improvement range are required (Richards, 1997: 243-254). Finally, time and resources must be allocated. For best results a truncated time series evaluation should be used. This means that the evaluation will begin before the program starts and finish well after it has concluded.

**Further Considerations**

**Training Mediums.** There are both cognitive and the affective dimensions to military leadership training and development. The cognitive dimension encompasses the leadership styles and approaches adopted in any given situation and the integration of leadership theory and practice with professional knowledge and skills. The affective dimension encompasses the ability to cope with the potential work environment: with chaos; with appalling communications; with exhaustion, fear and boredom. To be effective, therefore, the training must replicate as near as possible both the cognitive and affective dimensions. There are no half measures. Exhaustion, fear and uncertainty cannot be simulated. To ensure success a combination of training mediums, such as military exercises, sport, adventurous training and high risk activities (for example parachuting, military flying, demolitions, live fire and movement, SCUBA diving, battle runs et cetera) must be used. Traditionally these activities tend to focus on task achievement. While this is important they provide an ideal medium in which to train, develop and assess current and future leaders. To obtain full value from such activities formal leadership development, assessment and feedback strategies should be put in place prior to their conduct.

**Conclusion**

Professional competence is the first and foremost requirement of effective leadership. If subordinates have faith in their leaders’ knowledge and abilities they will follow them with great confidence (Baldwin, 1992: 82). This is especially so in combat where individual survival often depends on a leader’s professional expertise. Leadership training and development cannot, therefore, be considered in isolation from the acquisition of expert professional knowledge. The two are interlinked.

Leadership training and development needs to take into account the organisation’s culture. The culture includes the organisation’s values and ethos and contains all the unwritten rules of behaviour. The program must also be placed in context. There are enormous differences between the demands placed on a leader in an office environment performing routine administrative duties and a leader in the field during combat operations. These differences need to be recognised and catered for during training.

Leadership training and development must be conducted as a holistic package concentrating not only on the development of effective leaders but also the development of teams and the individuals within those teams. They are interdependent and cannot be treated in isolation. There is no such thing as a good leader without a team. Leadership can only occur within a group setting. This might be self evident but all too often leadership training is conducted in isolation from team and individual development. In addition Army doctrine places little emphasis on group dynamics and personal motivation, development and behaviour. A good leader not only needs an understanding of leadership theory and practice but also how groups develop and function and what motivates individuals.

The final problem faced in conducting leadership training and development is the tendency to focus on leadership theories, models and practices. While an understanding of these issues is of critical importance they must be placed in perspective. They are little more than the subject to be taught, the educational content. Of equal importance is the educational process, that is how to teach leadership.

To be successful and credible in today’s world leadership development programs must adopt sophisticated and current educational practices. The program outlined in this submission is tailored to Army’s specific needs and incorporates a range of modern approaches to human development. In conducting leadership training and development it is important to link the context in which individuals are expected to operate with appropriate development processes and leadership theories. It is also important to incorporate personal and team development into the program. Finally it is important to remember the unique requirements of military service. In times of combat, Army leaders need to be able to lead, inspire and communicate while under great personal stress. Leadership training and assessment should, therefore, be conducted in an environment that reasonably
recreates the internal dilemmas faced by the individual on the battlefield.

NOTES
1. For a more detailed account of transactional and transformational leadership see Covey, Principle Centered Leadership pages 285 to 287 and Clay, Transformational Leadership: Implications for Military Leadership Training.
3. From the results of pre course questionnaires conducted at AATC from July 1996 to May 1997.

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Major Moor graduated from RMC in 1976. His formal qualifications include a BA(Mil) and Graduate Diploma in Adult Education. He has spent the majority of his career with Special Forces and has participated in and led many adventurous training exercises both in Australia and overseas. Major Moor is currently the Officer Commanding and Chief Instructor of the Army Adventurous Training Centre.
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The Relevance of the Defence Cooperation Program Between Australia and Indonesia

By Lieutenant R.A. Niessl, RAInf

Introduction

Ancient Indian scholars espoused the philosophy that neighbouring states should be seen as enemies or at least potential enemies and that countries beyond the neighbouring states considered as allies. Many would argue that this has been the case when considering Australia’s past relationship with Indonesia, as opinion polls during the 1980s indicated that the Australian public viewed Indonesia as the most likely threat to Australia’s security. If the overwhelming public opinion against Indonesia is not enough then the assymetrical characteristics of the two nations has until recently blurred the true potential for a strong and mutually beneficial relationship between Australia and Indonesia. Yet in December of 1995 the two nations signed the Australia-Indonesia Agreement on Maintaining Security, the first of its kind for Indonesia, an agreement that established an agenda of cooperation and support in the pursuit of peace and security.

In comparing the two nations the former Foreign Minister, Gareth Evans correctly articulated the bipolar differences as he stated, “no two neighbours anywhere in the world are as comprehensively unlike as Australia and Indonesia. We differ in language, culture, religion, history, ethnicity, population size and in political, legal, and social systems.” Yet with such diverse traits and a lack of understanding by most Australians of Indonesia’s culture and traditions, not to mention Indonesia’s foreign policy, it would appear difficult to explain Australia’s recent and significant efforts of fostering closer ties with Indonesia. Initiatives have been instigated in a number of areas including cultural, economic and educational, yet the greatest source of expenditure has been in the development of closer defence ties under the auspices of the Defence Cooperation Program, (DCP), this program has grown so large that the RAN complained that it could no longer continue to conduct the extensive bilateral exercises with the Indonesian Navy unless additional and specific funds were made available to finance these activities.

While the RAN has been increasingly unable to meet its commitments to the DCP, the cost of the program has doubled from $2.2 million in the financial year of 1993-94 to $4.6 million in 1994-95. At this time, the CDF, Admiral Beaumont, stated the program had become so expansive that an institution was needed to plan and coordinate the cross military activities because the number of these activities had grown so large. Clearly Australia has committed itself to an expensive and resource intensive program which comes less then a decade after five Australian journalists were killed in Timor. This was followed by perhaps the lowest ebb in Australian relations with Indonesia as a result of a derogatory article in the Sydney Morning Herald in 1986. Thus, considering the paradigm shift in the relationship between the two nations and the extent to which Australia is now pursuing ties with Indonesia, the question remains of the relevance that a relationship of this sort holds for the future security of Australia. This article will investigate the DCP between Australia and Indonesia in order to determine its relevance for the defence of Australia as strategists attempt to plan for the threats and uncertainties of the 21st Century.

Background

The DCP had its origins in the 1960s, a time in which Australia faced the aggressive attempts of the Soviet and Chinese backed communist expansion into Southeast Asia coinciding with the British decision to withdraw its forces east of the Suez. Added to the difficult security outlook the United States was unwilling to offer any specific commitment to deal with the communist threat existing within our closest neighbour, Indonesia. The inevitable outcome was the increased attention given to pursuing a policy of defence self-reliance whilst emphasising the need to develop strong defence ties with the smaller nations of the region. By 1963 bilateral defence arrangements had been made with Malaysia and Singapore, by 1968 these arrangements had been extended to include Indonesia.
The 1970s was a period in which the rate which these bilateral arrangements were pursued was greatly reduced due to the Whitlam Labor Government’s determination to withdraw military involvement from Southeast Asia. This situation was to remain up until 1983 when the DCP was restructured to specifically include Malaysia, Indonesia and Papua New Guinea. The 1987 publication, The Defence of Australia, significantly altered Australia’s defence philosophy from one based on Forward Defence to that of self-reliance with special emphasis placed on the support and enhancement of the DCP’s member states defence capability. It was now far less likely that Australian forces would be deployed within the region to provide a forward line of defence for Australia. Rather, Australia would now seek to develop the member states ability to defend themselves.\(^8\) As recently as 1994 the Minister for Pacific Island Affairs indicated that the constructive commitment Australia had been providing had served the region well and that it remained the basis for the future of the Defence Cooperation Program.\(^9\)

The Australian Army has recently developed its concept for the direction it intends to take in providing the nation with security into the 21st Century. Significant attention has been focused on the new acquisitions that the defence force as a whole has been seeking and the emphasis to move a greater share of the defence assets and personnel to the northern reaches of the continent. Yet for an overall defence perspective the former Minister for Defence, Senator Robert Ray, succinctly stated that “regional engagements remain a central tenet of our Defence policy”.\(^10\) To be more precise, the 1993 Strategic Review states that “more than with any other regional nation, a sound strategic relationship with Indonesia does most for Australia’s security”.\(^11\) Furthermore, the 1994 Defence White Paper states that “Indonesia is particularly important to the security of Australia… our relationship with Indonesia is our most important in the region and a key element in Australia’s approach to regional defence engagement”.\(^12\) Therefore, there can be no misunderstanding concerning the emphasis that the Government places on the defence relationship between Indonesia and Australia, particularly at this time in which the region faces such a degree of uncertainty. However, the question remains of the relevance this program holds for the future defence of Australia. The first task in answering this question is to gain an insight into the strategic circumstances that our defence analysts face as they attempt to plan for the requirements of the 21st Century.

Unfortunately for these analysts they face an unprecedented degree of uncertainty within the region, and the possibility of conflict on several fronts cannot be denied. Potential hostilities exist in numerous areas throughout the region including: the sovereignty claims over the Spratly and Paracel Island chains; the current outbreak of civil hostilities throughout Cambodia and the potential for this to increase into mass civil war; the continued political instability within Thailand; the emergence of the blue water fleet of the Indian Navy and its growing force projection capability; the same could be said of the Chinese military presence in the South China Sea not to mention its aggressive and intimidating manoeuvres directed against Taiwan; the internal insurgency problems caused by Islamic fundamentalists in the Philippines and Indonesia; similarly the attempts of the Bougainville Revolutionary Army to secede from mainland Papua New Guinea; the ever-increasing role and power projection capabilities of Japan; and the continued and irresponsible antagonism between North and South Korea.

These issues are some of the more significant potential sources of conflict that the Southeast Asian region face at present, yet added to these concerns are the reduction in presence by both Soviet and American forces. These forces although previously principal enemies were also stabilising factors within the region. Their withdrawal adds a new dimension, whereby smaller nations are able to project power and influence which would never have been thought possible during the occupation of the previous superpowers. Therefore, the potential sources of conflict are numerous, an extent to which Australian defence analysts have never faced and it is within this context that the relevance of the DCP must be raised.

Relevance to Australia’s Security

It is precisely this uncertainty within the region that creates the need for strong bilateral relationships. In a time of fear and worry Australia depends upon close links with its neighbours to ensure that well informed and objective decisions are made. As alluded to earlier, the majority of Australians have regarded Indonesia as the most likely source of future conflict. In a poll taken in 1993, 57 per cent of Australians believed Indonesia would be a threat within ten years.\(^13\) However, Indonesia’s power projection capacity is even less than Australia’s, not to mention that their defence structure is decidedly inward looking, also in contrast to Australia.\(^14\) Despite Indonesia’s obvious lack of capacity to stage a mass
incursion into Australia, the public remain fearful and thus the development of a strong and mutually beneficial relationship between the two nations is a positive step. This relationship will in time defeat the lingering suspicions that so many have held and which previously had the potential to prejudice important strategic decisions.

Clearly, developing strong military bonds with a close neighbour in an uncertain region as ours has many benefits. The DCP affords the exchange of soldiers and officers to various training institutions in each country enabling the exchange of doctrine. It enables each other’s defence forces to train together and in opposition to each other, thereby improving their awareness of each other’s strengths and weaknesses. Further, it allows the two nations to gain exposure to climates and conditions that they would otherwise not have had access to. The bilateral defence exercises between Australia and Indonesia have grown so large that since 1992, Australia has become the principal provider of foreign defence training to Indonesia. Overall the program has become the principal provider of foreign defence training to Indonesia. It enables each other’s defence forces to train together and in opposition to each other, thereby improving their awareness of each other’s strengths and weaknesses. Further, it allows the two nations to gain exposure to climates and conditions that they would otherwise not have had access to. The bilateral defence exercises between Australia and Indonesia have grown so large that since 1992, Australia has become the principal provider of foreign defence training to Indonesia.13 Overall the program has the effect of improving the security between the two nations as their defence forces have been exposed to the climates, conditions and doctrines of each other’s country. This in turn results in better trained forces and the increased ability to integrate with each other if required.

It is imperative that the Australian and Indonesian defence forces are as well trained and prepared for future conflict as is possible with the available resources. An examination of the region does not only highlight the potential for conflict but also the unprecedented power and destruction that many of the region’s nations now poses. As a whole the region’s defence expenditure has doubled over the past decade with much of the expenditure devoted to the procurement of power projection capabilities such as multi-role fighter aircraft, modern surface combatants with anti-ship missiles, submarines and rapid deployment forces.16 Unfortunately for the region, the numbers of these types of weapons are growing and in many cases the acquisitions are leading to speculation concerning their realistic need. Hence the inevitable fear of some nations concerning the motive behind their neighbours, possession of superior force projection capabilities.

To add to the delicate situation within the region is the uncertainty if not blatant confusion resulting from the 1982 United Nations Convention on the Law of the Sea. The particular concern relating to this convention is the interpretation of the detail surrounding the Economic Exclusion Zone which is responsible for at least ten potential conflicts in the region.17 Furthermore, it is within the maritime sector that many nations appear to be concentrating their upgrades with nations such as Japan, South Korea, China and India developing a significant blue water capability.18 With Indonesia occupying a significant portion of the southern border of the South China Sea and many of the potential conflicts occurring in that sea, it appears that these potential conflicts have a direct security implication for Indonesia. In this case the DCP has already laid the foundations for assistance, as officer exchanges by both nations have been made on RAAF P3C and Indonesia Searchmaster flights. While under current consideration is the possibility that the Australian Government will make intelligence received from its “Jindalee” Over the Horizon Radar available to the Indonesians.19

Therefore, when the DCP is examined within the delicate and uncertain context of the region at present, there can be no doubt that a strong defence relationship with Indonesia is in Australia’s best interests. However, the benefits of the DCP are not limited to security alone but rather, the growing relationship between the two nations leads to a number of significant opportunities in other fields. From a regional perspective, the close ties that Australia is fostering with Indonesia will in time enhance Australia’s credentials within Asia, thus increasing the influence that this nation can exert. As Alan DuPont argues it will give Australia a “stronger voice in the political, economic and security forums of East Asia” thereby adding stability to an otherwise hostile environment.20

In terms of direct benefit to Australia many would not be able to avoid noticing the economic implications of close ties with Indonesia. In a speech to Company Directors in 1994, the then Prime Minister, Paul Keating, stated that no country is more important to Australia than Indonesia.21 He was referring to the need to identify Indonesia as an economic partner. As the former US Commerce Secretary, Robert Mosbacher stated, “challenge number one is the rising importance of economic power in the equation of national security and world leadership”.22 This comment displays quite a degree of insight and is as relevant for Australia today as it was for the US in 1989. That is, the military capacity of any nation is proportionate and subordinate to its economic capacity and thus any factor that influences a nation’s economic well-being therefore affects its ability to sustain a credible defence force. With Indonesia’s potential market of 180 million and Australia’s significant technological base it appears once again mutually beneficial for each nation to
draw off each other. This is made much easier given the firm foundation that the two nations already possess as a result of the DCP and provides confidence for the future economic well-being of the two nations. This is a compulsory criteria for the provision of resources required to maintain and develop capable defence forces.

**Limitations**

With such a rosy picture being made of the DCP one could almost be forgiven for thinking this program should take precedence in Australia’s defence strategy, after all, it appears more than able to deal with all present and future security issues. To the contrary, this must never be the case. Although a strong defence bond between Indonesia and Australia has many benefits it must never become the fundamental factor in the defence of Australia. There are far too many historical cases which illustrate the fatal flaw in depending upon one or even a number of allies to provide the security of a nation only to have that nation humiliated when the time comes to call upon past promises. Australia needs only to be reminded of the Singapore disaster during the Second World War to understand the potential for devastation that such a policy affords.

Secondly, the question remains as to how close Australia’s relationship should proceed with a nation that has such a wide spread reputation for human rights abuse. With the continued coverage and international outrage over Indonesia’s invasion and occupation of East Timor, the petition signed by the majority of New Zealand’s parliamentarians calling on Indonesia to withdraw its troops from East Timor, and the trade sanctions, albeit limited, imposed by the US, Australia must consider carefully the extent to which it hopes to develop ties with a potential international outcast. By focusing so intently on fostering close links with Indonesia, Australia runs the risk of isolating itself from world opinion and hence influence in international affairs.

Furthermore, Indonesia’s military role is vastly different to that of Australia. Unlike Australia, Indonesia’s military firmly controls most sectors of public life including the administrative, economic and media divisions. The State is often subordinate to the military, whereas Australia’s military is decidedly subordinate to the democratically elected government. Once again Australia’s relationship with such a regime must be challenged to the degree to which Australia chooses to ignore the ideal of freedom and democracy, of which Australia’s military is tasked to defend, in order to gain enhanced security.

**Conclusion**

Despite the before mentioned limitations there must be no doubt that the program is a positive step in enhancing the security of Australia. The program exposes Australia’s military to doctrine and conditions that it would otherwise not have access to. More importantly, however, it provides the foundation for the integration of both nation’s security forces in times of need. This cooperation is already occurring with joint exchanges of officers on surveillance aircraft which in consideration of the potential for hostilities in the South China Sea is a significant advantage for both nations.

Notwithstanding the international criticism of Indonesia’s poor human rights record the security of Australia’s sovereignty must take initial priority and thus the DCP must be allowed to develop and strengthen. Further, the barrage of criticism that Indonesia has received has not markedly changed their attitude, whereas Indonesia is more interested in listening to nations that it regards as friends, a relationship that Australia is clearly pursuing.

The DCP between Australia and Indonesia proves that strong bilateral relationships within a region regarded with such uncertainty is possible. This relationship is a stabilising factor within a sea of lingering suspicion and fear. By developing close ties with Indonesia Australia is effectively increasing its role within the region, displaying a positive determination to be a responsible and mature member of Southeast Asia. However, the DCP must never become the answer to all Australia’s defence needs. A policy of defence self-reliance must always be the first priority supported by strong defence relationships with key nations such as Indonesia.

**NOTES**

5. *ibid.*
8. ibid., paras 208-211.
9. ibid., para 217.
15. A. DuPont, p.146 op.cit. p.54.
17. ibid., p.231.
18. ibid., p.230. (South Korea will invest 60% of its military budget in maritime expenditure over the next five years whereas Japan will invest 72%)
19. ibid., p.243.

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Lieutenant Richard Niessl graduated from the Australian Defence Force Academy in 1994 with a Bachelor of Arts degree majoring in History. He spent 1995 at the Royal Military College where he graduated into the Royal Australian Infantry Corps. Prior to his appointment to the 3rd Battalion (Parachute) Lieutenant Niessl completed an Honour’s year writing a thesis on the Malayan Emergency. He is now the Mortar Line Officer at 3 RAR.
The Flight of the Pig, a full colour publication depicts the F111 fighter aircraft in all its glory. The book traces the history of the aircraft over its 25 years of faithful duty with the RAAF. Defence Photographer Mal Lancaster, who has had an affinity with the F111 since its arrival in Australia has spent the best part of his career photographing the “Pig” as the F111 is affectionately known.

The book is available through the office of the Australian Defence Force Journal at a cost of $29.95.

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The Changing Nature of NBC Defence and the Implications for the ADF

By Peter F. Calder, DSTO

The term NBCD (Nuclear, Biological and Chemical Defence) grew out of the superpower confrontation during the Cold War, and was used in connection with a nuclear European war involving a large scale use of weapons of mass destruction. The threat of World War III has receded over the last decade and it is logical to question the need to maintain an NBC defence capability.

The use of chemical weapons occurred on a large scale during WWI, but since that time nations have generally shied away from using these indiscriminate weapons. In fact, there has been a movement towards banning these weapons from the battlefield, and the Chemical Weapons and Biological Weapons Conventions have been signed by many nations. In addition, the end of the former USSR as a superpower has allowed the world to step back from the brink of a nuclear conflict.

There seems to be a prima facie case that the world has become a safer place and that the threat now presented by NBC weapons is not significant. This article aims to show that, while the possibility of a large scale NBC operations has reduced, the nature of the threat has changed and will have enduring implications for the ADF.

The Changing Nature of NBCD

The NBC environment encompasses a wide spectrum of threats, ranging from full-scale nuclear war on the one hand, through to operations on the presence of industrial contamination, on the other.

At the high end of the threat spectrum is the widespread contamination which would be produced by a global nuclear war. The end of the Cold War has reduced the possibility that the world will be embroiled in such a catastrophic conflict which is now considered very unlikely for the foreseeable future.

However there continues to be a concern about the use of nuclear, biological and chemical weapons. In the changed world of the 1990s there has been a move away from the East-West tension of the Cold War period to regional conflicts and increased deployments in support of the United Nations. Cold War divisions were clear. Aligned nations were guided by their superpower ally and followed a common doctrine. Now, however, nations are much more inclined to carve out an independent destiny, and can choose how they behave without the close guidance that previously existed. Conventional weapons loan programs have reduced and chemical and biological weapons might be seen as cheaper alternatives to indigenous high technology weapons developments. The lowering of the risk at the high end of the spectrum has exposed lesser risks which now begin to gain insignificance. This complicates the NBCD domain, which, while less threatening, now involves many more international players with their own national agendas.

For instance, some nations are pursuing, or have already reached the capability to develop nuclear weapons, despite the Nuclear Non-Proliferation Treaty which seeks to limit the spread of nuclear weapons. To some extent, a nuclear capability is seen as a deterrent, but the states which are popularly considered to possess these weapons have ongoing border disputes which have the potential to escalate into a nuclear exchange unless tightly controlled. Nuclear fallout reaches beyond national boundaries and is a vital international concern.

A strong limiting influence in the use of bacteriological and chemical agents has been the Geneva Protocol, which in 1925, prohibited such weapons. (This protocol has been revised several times since then). It is of interest to note that, although mustard and phosgene gases were used during World War I, no chemical weapons, including the more deadly nerve gas development by Germany, were ever used during World War II. Although the superpowers practised the use of chemical and biological weapons since then, they have never had occasion to use them. Local use of CB weapons during internal and border conflicts has occurred from time-to-time, although with severe international...
condemnation of the side violating the convention. The threat by Iraq to use CB weapons in the Gulf War was taken very seriously by the coalition forces and there has been unprecedented international scrutiny of Iraq’s CB capabilities.

Lower down the spectrum is the threat by pressure groups and extremist organisations to use chemical and biological weapons against the civilian population. Although the quantity of material involved in any such incident would most likely be quite small and the extent of the contamination limited, its use could be very disruptive and many casualties could be expected. Information on how to prepare these agents is readily available. Perhaps more importantly, the reported smuggling of nuclear material from the former Soviet Union is a cause for concern.

At the bottom of the spectrum is the threat imposed by industrial contamination, whether deliberate or accidental. The community makes use of a large number of toxic chemicals. In the event of an uncontrollable release, the population in the vicinity of the release may be put at great risk. These chemicals include ammonia, sulphur dioxide, hydrogen chloride, hydrogen cyanide, chlorine and phosgene. In sufficiently high concentration these substances can be lethal. Because of their wide availability within the community, their limited effectiveness as a weapon compared to purpose-designed CB materials, might not be a major issue in internal conflicts.

Industrial chemicals represent a significant threat to operations in an urban or industrialised environment since the release of chemicals as a result of shellfire would be expected.

An associated low end threat is that produced by nuclear radiation whether from medical isotopes, radioactive materials or nuclear power plants. Uncontrolled release of radiological material could cause serious contamination as happened when the Chernobyl nuclear reactor melted down. Large areas of Russia are now uninhabitable. There are hundreds of nuclear power plants in use throughout the world today and any damage caused by military activity could result in the release of radioactive materials, with severe short- and long-term effects.

While many nations have the capability to produce chemical and biological weapons, the recent extensions to the Chemical Weapons Convention and the Biological Weapons Convention have seen the general renouncing of the intention to ever use weapons of mass destruction, but not by all nations. These Conventions include provision for inspections to confirm adherence to the limitations agreed to. However, CB agents can be readily developed from within a nation’s industrial base and disguised as a legitimate enterprise. The world is still concerned that Iraq could conceal so effectively the extent of its NBC activities prior to the Gulf War. In addition, common industrial chemicals themselves represents a threat to military operations. While there are nations and organisations which continue to pursue an NBC capability, it would be negligent of defence planners to ignore these developments. It is important that the implications for ADF operations be thoroughly explored and taken to their proper conclusions.

Implications for the ADF

The NBC threat spectrum implies a number of implications for the ADF. The relative importance of the possible response option open to the ADF depends on how the threat would impact ADF operations.

With the demise of the Soviet Union, fear of a nuclear exchange have been replaced by fear of an uncontrolled proliferation of weapons of mass destruction. Given the reports about CB weapon developments in Russia, Iraq and Libya, the effectiveness of global treaties designed to eliminate these weapons from world arsenals, or limit their spread is far from certain. Although Australia has signed these international treaties, not every nation has. Australia is concerned to keep weapons of mass destruction out of its region. It would be prudent for the ADF to maintain the capability to protect itself from the effects of these weapons, particularly for operations off-shore.

Current guidance provides for the ADF to participate as a coalition partner with Australia’s major ally, the USA. Fulfilling such obligations could, and already has placed the ADF in a position of possible exposure to CB weapons. For example, the RAN operated in the Persian Gulf during the Gulf War in which the threat of CB weapons was real. In such activities, it is important that the ADF is to be considered a full partner. Operating in coalition demands compatible NBCD doctrine and preventative measure so the ADF can contribute effectively in this important role.

The ADF has a long history of serving on United Nations forces in peacekeeping and peace making roles. UN operations are often in war-torn countries in which industrial chemical contamination could be widespread. In addition, damage to a civilian pathological laboratory could disperse infectious
materials over a wide area. In such operations, OH&S expectations could be higher than in a “real” war. If the ADF were to operate in such toxic environments, suitable equipment, policy and procedures would be required to ensure ADF personnel were not put at risk.

A modern conventional military force operates with high technology weapons capable of considerable hitting power. However, less developed forces actively seek strategies to nullify their relative weakness in the face of such power. For instance, the North Vietnamese avoided presenting an identifiable target to US forces, frustrating US efforts to use their overwhelmingly superior fire power. In a similar vein, nations might use the deterrent effect of weapons of mass destruction to hold in check a more powerful neighbour who might nevertheless be equipped with the most modern weapons. Putting all one’s faith in the obvious power of conventional weapons may be misplaced in the complicated arena of modern warfare. The price of using our own conventional weapons may be too high under some circumstances and must be factored into the security equation. An NBC defence capability is necessary to preserve the ADF’s options in face of such a threat.

One of the biggest problems in NBC defence is knowing if personnel have been exposed to radiation or a chemical or a biological agent. It is essential to be able to detect and identify the presence of contamination in order to take effective steps for protection. Just the threat of CB weapons can be disruptive to operations, requiring field personnel to don CB suits which hinder their normal agility. Early detection can reduce this disruption so that countermeasures can be taken only when absolutely necessary. It is equally important to know when to remove the protective suits. Needless to say, the stress on service personnel to even the threat of attack could be considerable; even more so if protective measures were inadequate or poorly understood and practised. Much still needs to be done in developing rapid and cost effective techniques for agent detection and identification. There is therefore a continuing need for research into defence against weapons of mass destruction, a fact recognised in Australian strategic policy.

Way Ahead

With the changing nature of NBC defence becoming more apparent, it would be an opportune time for the ADF to examine its strategies for relevance, particularly when confronted with an adversary which possesses an NBC capability. Even though weapons of mass destruction are not present in our region, the ADF could be called upon to operate in countries where NBC problems could be a major hazard to operations. It is important, in light of the recent reorganisation of the Australian Defence Headquarters, that the strategic nature of NBCD policy not be lost sight of, and that a suitable tri-Service structure be developed to maintain and improve the NBCD capability of the ADF. Spreading the responsibility for NBCD policy across the Services, not only leads to inefficiencies, but also to reduced readiness through potentially incompatible doctrine and equipment between units and across the Services. Suitable strategic and operational policy frameworks are needed to enable each Service to develop compatible and complementary NBCD capabilities to suit its own environment.

The possibility of NBC activity on the Australian mainland should not be ignored, particularly in relation to the potential for terrorist activity. If any such NBC incident should occur, it would be in the ADF’s interest to have the policy, procedure and equipment already in place to be able to contain any contamination and to limit damage. This would involve close liaison with civil authorities who may need to call on the ADF’s expertise when required. It would be too late after an incident occurred to try to put in place the organisation and processes needed to manage the problem.

The ADF’s region of operations for the defence of Australia lies in the tropics, presenting environmental and operating conditions which are quite different from those experienced in a European scenario for which NBC defensive procedures and equipment were originally developed. In fact, the move of the ADF to the north has focussed our awareness of the problem. Not enough is known about how the dispersion of chemical or biological contamination might differ from that in colder climates, or how CB suits and gas masks can be designed for a tropical climate.

DSTO has gained a reputation for world class knowledge in this area. Research into such problems which are unique to the ADF also provides the quid-pro-quo Australia could use to gain access to research results from allies which would otherwise be unavailable (and unaffordable). It would seem essential for Australia to continue to develop its research program to ensure the ADF is equipped with the best possible protection against CB threats.
The perceived threat of CB warfare (in its many forms) in many parts of the world today where the ADF may be called upon to operate, indicates clearly a continuing need for adequate radiological, chemical and biological defence into the foreseeable future. It would seem imperative for the ADF to continue to ensure that it can operate safely in such hostile environments into the 21st Century.

NOTES
1. Israel, North Korea, Iraq and Pakistan are all generally assumed to have nuclear weapons, and have unresolved border disputes with their neighbours.
4. Mustard gas and nerve agents were used by Iraq against Iran, and against the Kurds. See G. S. Pearson, “Chemical and Biological Defence: An Essential National Security Requirement” RUSI Journal, August 1995, p. 20.
5. Nerve gas was released in a Tokyo subway in 1995 by the Aum Shinrikyo religious sect, resulting in 12 deaths and 5000 casualties. See New Scientist, All Fall Down, Special Report 11 May 1996, p. 32.
7. The Bhopal incident (December 1984) in India serves as an indication of the effects of collateral damage to a chemical installation. see http://www.corpwatch.org/trac/bhopal/
8. Both chlorine and phosgene were used as poisonous gases in World War I.
9. For details of the Chernobyl disaster, see http://www.uilondon.org/chemidx.html/
12. By the end of the 1980s at least half a dozen countries had decided to develop biological weapons. See Milton Leitenberg, op. cit., p. 2.
15. ibid., p. 18.
16. ibid., p. 31.

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*Mr Peter Calder holds a degree in Electrical (Electronic) Engineering as well as Graduate Diplomas in Mathematics and Strategic Studies. Since joining DSTO in Salisbury he has studied the application of computer technology to Command & Control and Intelligence Processing. He is currently posted to Canberra to the position of Scientific Adviser – Policy & Command. One of the specific responsibilities of this position is to provide scientific advice to the Services on Nuclear, Chemical and Biological Defence research. Mr Calder chairs the NBCD Research Sub-committee of the NBCD Steering Committee.*
A Nation at War
Australian Politics, Society and Diplomacy
during the Vietnam War 1965–1975

PETER EDWARDS
A NATION AT WAR, AUSTRALIAN POLITICS, SOCIETY AND DIPLOMACY DURING THE VIETNAM WAR, 1965-75, by Dr Peter Edwards, Allen and Unwin, in association with the Australian War Memorial, 460 pp, Illustrated, Black and White, $59.95.  

Reviewed by Michael Fogarty

“Citizens in a democracy have a right to know, not only the foreign policy of their country, but how that policy was formulated. Indeed, without knowing the reasons for a policy, one cannot truly know the policy. There are conventional and proper limits on the contemporary disclosure of policy documents, but there is every reason why they should be revealed in the fullness of time.” (See the Foreword by the then Prime Minister, Mr E.G. Whitlam, in Documents on Australian Foreign Policy, 1937-49, Volume 1, 1937-38, Dr R.G. Neale, Editor, AGPS, Canberra, 1975).  

This book is the sixth volume in the Official History of Australia’s Involvement in South East Asian Conflicts 1948-75. In a separate review, David Jenkins noted that “... A Nation at War is a book about Australian diplomatic and strategic decision-making during the decade from 1965-75 and, as such, a fitting successor to (the first volume in the series) Crises and Commitments.” (Sydney Morning Herald 2 August 1997). The title itself is a play on words inferring that the overseas war had polarised many Australians as they demonstrated either for or against Australia’s role in Vietnam.  

Dr Edwards had unrestricted access to government documents of all political persuasions. As he put it at the launch, the debate needs reliable information – independent and non-partisan – not accepting all dogmas. He tried to avoid polemics in this social, political and diplomatic history. This was the only way to understand an Australian experience of the war – for veterans and successive generations. The history of the events was most complex but it is a positive vision of Australia’s role in Asia. He stated that our relationship with the US was problematical. Lastly he paid tribute to his “professional family” at the Official History Unit, namely Major Ian McNeill and others who all contributed to the outcome.  

The Governor-General, in launching the book, paid an eloquent tribute to the veterans involved. In an excerpt from his speech he reasoned that “... Australia as a nation was involved in the war in Vietnam. At the same time, within the nation, Australian society was becoming increasingly divided over the wisdom and morality of that involvement. Perhaps most important, the story of the Vietnam War and its aftermath reminds us of how much our nation, through its elected governments, demanded of those, whom, by a macabre lottery, it sent to fight and sometimes die in a far off land and how slow it was to adequately acknowledge their service and their sacrifice.” (Vetaffairs, June, 1997).  

Two final volumes in the series remain – with Ground Operations in Vietnam 1966-1972 and RAN Operations in Vietnam expected to be published by 1998. It is over fifteen years since the project was first commissioned by the Fraser Government. Based on the published output, it is time to ring in a verdict. The series is a successful achievement as the editor and his team have produced a highly acclaimed set of histories to date. That initial faith in the academic leadership of the project has been amply proven as the quality shows.  

The book pays appropriate tribute to two former Australian diplomats – Ambassadors Price and Woolcott. Both had long and distinguished careers including extensive service in Asia as Heads of Mission. Richard Woolcott had considerable media skills and was instrumental in improving the capacity of the then Department of External Affairs and its overseas posts to better disseminate a truly independent Australian foreign policy. History will remember Geoffrey Price for the responsibility placed on him as the last concierge of our Saigon embassy in those fateful days of April 1975. Given a difficult assignment, to the last, he provided effective leadership in an understandably chaotic situation – where elsewhere it was largely absent.  

There is much in the book which the reviewer can not adequately cover in so short a space. If the themes can be reduced to three then they should include, not necessarily in any ordered importance, the history of
protest movement, the national service system and Australia’s relationship with the United States and the United Kingdom in and over Asia.

We have travelled far, in the last quarter-century, since the withdrawal of combat troops from Indo-China. Several years ago the reviewer attended a military history conference at ADFA – under the auspices of the AWM. During a session on the protest movement he sat next to a leading figure of the draft resistance – figured in the work. On the other side sat a decorated officer of the war. One could not escape the unconscious irony in that the anti-draft advocate was seated characteristically to his left whereas the serving senior officer, in uniform, was seated to his right. That both could finally meet together in amicable circumstances showed much of the maturity that was lacking so many years ago. Both had their private battles – one with his individual conscience and the other with a wider call to duty. As part of our grand historical tapestry they displayed a measure of respect for each other which becomes a reflection on our progress as a democratic society.

Sue Langford, in an appendix, has written a comprehensive account of the national service scheme from 1964-72. Many forty-something’s will appreciate her detailed list of the call-up dates over the period. The intake figures are also given. The book describes the death in 1966 of the first national serviceman in Vietnam, Private Errol Noack, the public reaction to his death and a likely explanation for it. One can only note the symbolism of the times - almost biblical in scale. The Fourth Book of Moses, called Numbers, describes those Israelites capable of bearing arms. So too did our government of the day require a regular census by half-yearly registration of all the men over the age of twenty – old enough for service.

The author discusses the role of ANZUS and SEATO towards the conflict and pressures placed on Australia by both the US and UK on our defence posture in both Vietnam and Malaysia respectively. Edwards notes that “... Australia was finding it difficult to co-ordinate its policies with both great powers and was extremely concerned that at least one, and possibly both, might withdraw militarily from the region. Without their military presence, Australia’s forward defence policy would be seriously threatened.”

A Nation at War is in many ways a better book than the first volume in the series covering a largely similar theme. But this may be partly due to its sociological analysis in that there was a more informed debate in the late sixties and early seventies.

For the first time, as the media ensured it, politics found live audiences in the streets – for groups with an alternative agenda. Television had a greater impact and many Australians learned the difference between public duty and private rights – if the clamour of the demonstrations was any indication. It was a critical experience for the many Australians who became changed by that war – including many young student leaders who later entered politics. In Vietnam, the Defence Force served honourably.

The editorial team shows a better grasp of the data, a more focused intellectual attack, showing good research with well-stated conclusions as they analyse and interpret the variegated themes. The author taps into the social and political mood of the Australian people as he explains why this was the way we were. Complex as the issues are, Edwards has rendered them clear and coherent showing a greater command and understanding of the influential decisions being made at the time - both domestically and internationally. Furthermore, it is a veritable snapshot of the human face of Australia in the decade under review.

In Australia and the Vietnam War 1965-1975, The Sydney Papers, Winter 1997, Edwards concludes that “... as Australia reassesses its policies towards Asia and towards the United States, to meet new strategic and economic demands, we would do well to take a fresh look at Australia’s experiences in the decade from 1965 to 1975.” With consummate ease and purpose, A Nation at War does just that. Recommended.


Reviewed by Lieutenant Colonel Ian Wing

Somebody once asked me if I believed that Australia had an “intelligentsia”. I answered that we certainly have an “elite”, made up of politicians, bureaucrats, media personalities, academics, sports stars and leaders of industry, but that their levels of intelligence are not universally very high! Thankfully, more careful consideration of the makeup of Australian society, and exposure to works such as
The Virtual Republic, confirm the fact that Australia does possess a genuine intelligentsia.

The Virtual Republic consists of nine essays each dealing with an aspect of Australian culture, society, politics, the arts and the media. The essay style tends to follow the author’s stream of consciousness and is very different from the service essay so familiar to military writers. It is intended for readers with a working knowledge of sociological terminology but it deliberately avoids a highbrow style which would make it inaccessible to ordinary casual readers. Overall, if the military reader is prepared to approach this book with an open mind and to wade through the occasionally meandering arguments, much can be gained from it. Military futurists, such as myself, must understand trends in Australian society if we are to correctly predict their influence on the ADF of the future. Reading The Virtual Republic is part of the development of that understanding.

Wark is a lecturer in media studies at Macquarie University and is a columnist for the Australian and New Statesman. His “republic” emphasises a complete fulfilment of the democratic ideal of free expression. He hopes for an Australia in which all views are given a “fair go” and everybody takes the time to think about what they believe. He is unashamed of his idealism and is generally optimistic that the strengths of the developing Australian culture will overcome the perils which currently threaten to confound it.

The book examines critical contemporary issues such as land rights, sexuality, ethics and plagiarism with frequent references to totalitarianism, the Holocaust and controversial playwrights and authors. He deals extensively with postmodernism and political correctness; providing a liberal democratic explanation for the challenges which face conservative 1990s Australia. Military subject matter receives little attention in the book, perhaps a pointer to its non-controversial status, or perhaps to its low profile in contemporary debate.

Wark asserts that our society is enriched by popular culture and the media but offers cautionary wisdom on the weaknesses of their intellectual depth and honesty.

You are unlikely to agree with all of the messages contained in The Virtual Republic but it will challenge your beliefs and stretch your mind. The book provides a useful insight into the thinking of one of Australia’s intelligentsia on the composition of our national culture.

### UNCONVENTIONAL WARFARE: Rebuilding US Special Operations Forces

**Reviewed by Major Darren Kerr**

During the period from the early 1980s to the early 1990s, a “guerilla campaign” was waged in Washington D.C. It was a campaign which received little media attention and cost no lives (perhaps only one heart attack). It was not a campaign to overthrow the US Government nor for any other of the usual reasons, rather it was to rebuild a US Special Operations capability which had been allowed to wither and nearly die since the end of the Second World War (with only a brief resurgence during Vietnam). This “guerilla campaign” is engrossingly documented in Unconventional Warfare: Rebuilding US Special Operations Forces by Susan L. Marquis.

Unconventional Warfare is a detailed but very readable history of the political struggle to establish and fund US Special Operations Forces (a term which covers all four Services). While operations such as Desert One, Urgent Fury, Desert Shield and Desert Storm are discussed, this book is not a military history. However, that should not deter any military reader as what it reveals about US political decision-making is particularly enlightening and of much relevance for the ADF.

Unconventional Warfare reveals for the first time the full extent of the campaign which went into rebuilding US Special Operations Forces, and it becomes clear from reading this book that the expression “guerilla campaign” is particularly apt. The book covers the five decades from the end of the Second World War, the first four of which saw US Special Operations Forces fighting Single Service success and fund US Special Operations Forces (a term which covers all four Services). While operations such as Desert One, Urgent Fury, Desert Shield and Desert Storm are discussed, this book is not a military history. However, that should not deter any military reader as what it reveals about US political decision-making is particularly enlightening and of much relevance for the ADF.

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making processes, allows her to lay bare subterfuge, maliciousness and occasional political bravery of those who opposed or fought for a Special Forces capability.

Marquis reveals early in the book that her heart lays with the Special Forces, referring to them as a “precarious value” [precarious values are those goals or missions within an organisation that are in conflict with, or in danger of being overwhelmed by, the primary goals or missions of the organisation]. Nevertheless, she writes very objectively and presents, at least to an outsider, what happens to be a very fair analysis of what was often a difficult fight to build a dedicated US Special Forces capability.

It would be wrong though to dismiss this book as merely an examination of US policy-making, Susan Marquis also provides a very insightful examination of the reasons for maintaining Special Forces; the capabilities they provide, the options they give government in a climate of uncertainty and, finally, the rationale for their unique independence. Unconventional Warfare is both informative and a pleasure to read, a usually rare double. It is a book which is highly recommended.


Reviewed by A. Argent

This is the story of a rifleman, a 20 year old Regular, who served in a section throughout his tour – and you can’t get it any sharper than that.

In his preface the author writes he has changed “names, units, places and chronological sequence in order to protect myself from offended individuals and bloodsucking lawyers. I’ve also tampered with the truth in order to throw people off the scent”. However, whether he served in 9 Section, 12 Platoon, D Company of 6 RAR in 1967, as he states, or in another sub-unit or battalion, I believe, with certain reservations, he has given the reader a good and honest picture of how the Australian rifleman lived (and died) in Vietnam and what he endured.

The first part of the book deals with his training in Australia and his Vietnam experiences. He joined his unit as a reinforcement and so, unfortunately, did not have those important elements of training and development in a battalion working-up in Australia and then moving, as one of a cohesive team, to Vietnam.

The second part covers his return to Australia, his subsequent post traumatic stress disorder and his dealing with it here and in the US. He makes some effort to analyse why PTSD is (apparently) so high among those who served in Vietnam and is frank about himself. However, because he makes no mention of or gives no comparative figures for the infinitely more intensive and bloody Gallipoli, Somme, Flanders, Tobruk, Kokoda Track, Bomber Command, the Atlantic and Arctic campaigns and what Australian prisoners of war endured, the observations lack depth.

He returned to Vietnam in 1995 and this makes interesting reading as are some of his other reflections and his letter to The Australian.

Some readers may find the soldiers’ dialogues somewhat unreal, perhaps doctored and other things mentioned more hearsay or related to the US Army than fact. There are also some annoying Americanisms – “boot camp” for Australian recruit training, for example and US infantrymen would be upset at reading the “Big Red One” was a US Marine division!

Comparisons are odious but readers who wish to read what it was like at the sharp end in other wars should go to Frank Richards’ Old Soldiers Never Die (Royal Welsh Fusiliers, Western Front 1914-18), Comrades of the Great Adventure and The Gallant Company by H R Williams (56 Battalion AIF, Western Front 1916-18) and Quartered Safe Out Here by George MacDonald Fraser (Border Regiment, Burma 1945). None mention PTSD.