



Australian Army Journal



- The Australian Army Reserve: Relevant and Ready
- Towards the Hardened and Networked Army ■ The Challenges Facing a Land Commander ■ Regionalism versus Globalism
- Chaos versus Predictability: A Critique of Effects-based Operations
- The Australian Defence Force and the Continuing Challenge of Amphibious Warfare ■ Biotechnology and War: The New Challenge
- Design Myopia: Some Concerns in Implementing Network-centric Warfare ■ Towards an Australian Way of War ■ Reflections on Defence Self-Reliance and the Australian–American Alliance
- Field Intelligence: The Commander’s Eyes and Ears



VOLUME II, NUMBER 1

WINTER

2004



Australian Army Journal

FOR THE PROFESSION OF ARMS

VOLUME II, NUMBER 1

WINTER

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The *Australian Army Journal* is published by authority of the Chief of Army:

LTGEN Peter Leahy, AO

The *Australian Army Journal* is sponsored by:

Head, Land Warfare Studies Centre

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ISSN 1448-2843

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Design and typesetting by Clarus Design, Canberra

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EDITORIAL

WARFIGHTING

A VITAL DEDICATION

In the award-winning 1970 film, *Patton*, there is a scene in which General George C. Patton (played by George C. Scott) watches the German *Afrika Korps* wither before his prepared defences. Viewing the battle through his binoculars, Patton shouts: ‘Rommel, you magnificent bastard, I read your book!’. While the scene may be a Hollywood rendition of Patton’s reaction, it is a tribute to his knowledge of warfighting as the foundation stone of the profession of arms. Knowledge of warfighting requires years of training and education, and in the 21st century the question of the balance between the two vital areas has increasingly become a question of debate. Arguably, most contemporary problems in warfighting preparation do not emanate from problems of training, but arise from shortcomings in professional military education. Patton was not simply a trainer of soldiers; he was also a keen student of the military art who was familiar with the latest professional military writings.

There is much truth in the adage that ‘one trains for certainty but one educates for uncertainty’. In the early 21st century, the two features that distinguish the character of the battlespace are uncertainty and complexity. Such features must be recognised and understood, particularly at the level of campaign planning. It is in campaign planning that military education comes into its own. Knowledge of military theory, and of the connections between politics and the three levels of war—tactics, operations and strategy—becomes vital. So does an understanding of the operational art. In the Anglo-Saxon military tradition, the theory of war and the operational art have been embraced only since the 1980s, and there remains much for soldiers to learn about linking the art of war to the science of military technology. Such a linkage can only be accomplished by a greater emphasis on relevant military education—particularly military history, and the history of technology and of political economy. It was deficiencies in education, not training, that led Liddell Hart to reflect that ‘a professional soldier is rarely a professional strategist’.

The Winter 2004 edition of the *Australian Army Journal* (AAJ) presents, once again, a rich miscellany of articles that focus on warfighting and related issues. These articles attempt to traverse the areas of training and military education, and the art, history and technology of war. In *Point Blank*—our section for sharp, topical material—the Chief of Army, Lieutenant General Peter Leahy, sets the tone for the Winter 2004 Edition with an important and timely article that addresses the perennial issue of how best to use the resources of the Army Reserve in future operations. Lieutenant General Leahy highlights the significant impact of the 2001 legislative amendments to the Defence Act in beginning a dynamic process by which the Army Reserve will achieve greater relevance and readiness in the future. The Chief of Army's article is followed by Michael O'Connor's contrasting essay on the importance of Australia's trade and security in the new millennium.

Moving into the main body of the AAJ, the Chief of Army and Lieutenant Colonel Roger Noble provide introductions to the new Hardening and Networking the Army (HNA) initiative. Lieutenant General Leahy outlines his vision of the HNA project and emphasises the complexity of the new strategic environment and the need for the Australian Army to possess a credible combined-arms warfighting capability to engage in close combat—the land force's core responsibility. In his article on Australian light armour, Lieutenant Colonel Noble provides a spirited defence of the virtues of cavalry in contemporary operations. In our section on command and leadership, the Land Commander, Australia, Major General Ken Gillespie, reflects on the challenges faced in force preparation for operations in an era of little warning time and one that is marked by the need for 'best effect' arrival. Major General Gillespie's article is followed Major Stephanie Hodson's essay on the division in post-11 September 2001 Australian strategy between what she describes as contending regionalist and globalist schools of thought.

In the AAJ's section on special operations, two US Army officers, Majors Michael A. McNerney and Major Marshall V. Ecklund, explore the little-known subject of nonconventional assisted recovery in urban areas of the Middle East. The journal then presents two contrasting views of effects-based operations. The first article by Brigadier Justin Kelly and Lieutenant Colonel David Kilcullen of the Directorate of Future Land Warfare provides a sceptical analysis of the claims of the effects-based school of operations. The second article in the section by Lieutenant Colonel Joshua Ho of the Singaporean Armed Forces provides an Asia-Pacific perspective on the dimensions and potential of effects-based thinking in contemporary military operations. In the area of joint warfare, two Royal Australian Navy officers, Lieutenant Commander Bob Moyse and Lieutenant Tom Lewis, reflect on amphibious operational needs and on the contentious question of carrier aviation for the Australian Defence Force respectively.

Professor Christopher Coker of the London School of Economics, and Michael Bonner and Tin Han French of the Defence Science and Technology Organisation examine the subject of military technology. Christopher Coker presents a chilling insight into the future of biotechnology and war, focusing on technicity, genetics and the possibility of ‘post-human warfare’. For their part, Bonner and French analyse various lesser known problems in Australian network-centric warfare, including human engineering, mission command and the human–machine interface. These reflections on military technology are followed by a section devoted to law and ethics. In the latter section, Malcolm Brailey examines the contentious issue of pre-emptive and preventive military action in an era when global terrorism has transformed many of the rules of engagement in warfare.

In the realm of ‘ways in war’, the *AAJ* presents three contrasting articles by Victor Davis Hanson, Roger J. Spiller and Michael Evans. Professor Hanson—an American scholar and author of the bestselling book, *Why the West Has Won: Carnage and Culture from Salamis to Vietnam*—delivers a perspective on why Western armies have been so successful on the battlefield since the time of the Renaissance. Roger Spiller, the George C. Marshall Professor of Military History at the US Command and General Staff College, examines the reasons that the United States has been so reluctant to learn the lessons from the multiple, unconventional ‘small wars’ that it has fought. The section concludes with an investigation by Michael Evans into the Australian way of war, focusing on the interaction between culture, politics and strategy over the course of a century.

An interesting contribution by former Chief of the General Staff, Lieutenant General John Coates, on British and Australian generalship in the 1942 Malayan campaign dominates the *AAJ*’s military history section. Lieutenant General Coates’s article is followed by two short pieces by Major David Caldwell and Captain Kellie Robinson on defence self-reliance and field intelligence respectively in *Insights*. In the *Retrospect* section, the *AAJ* is proud to reproduce an edited version of Lieutenant Colonel John Monash’s 1912 Gold Medal essay from the *Commonwealth Military Journal*. For a modern military reader, there is much to relish in Monash’s analysis of the 1864 Wilderness campaign during the American Civil War—not least of which are his elegant prose and his ability to penetrate swiftly to the core of an operational issue. In Monash’s essay we see the analytical skills of an engineer, lawyer and soldier combined in a single, powerful mind. It was this mind that would take Monash to battlefield success in France in 1918 and make him, in the view of many observers, the greatest Australian soldier of the 20th century.

Part of the *AAJ*’s mandate is to honour the service of Australia’s soldiers and, in the Winter 2004 edition, we salute four distinguished officers who have recently passed away. They are Lieutenant General Sir Thomas Daly, Chief of the General Staff from 1966 to 1971; Major Generals Tim Cape and Kenneth McKay;

and Brigadier Monsignor Gerald Cudmore. All four were men of great distinction and achievement. We also farewell Professor Gunther E. Rothenberg, a distinguished soldier–scholar and a foundation member of the *AAJ* Editorial Advisory Board. We pay tribute to his service to the journal by publishing Professor Peter Dennis’s graveside eulogy delivered in April of this year.

This edition of the *AAJ* also includes a review essay on 20th-century combat by Russell Parkin, the new coeditor of the *AAJ*; book reviews by Jeffrey Grey, Michael Evans, Russell Parkin and Christopher Enemark; and concludes with letters and commentary from our readers. The editors of the *AAJ* trust that the content of the first edition for 2004 will encourage widespread military debate, and lead to a constant exchange of views and ideas throughout the Army. The journal also hopes to stimulate the study of warfighting throughout the Army and the Australian Defence Force. The creation of able, uniformed strategic thinkers depends on military professionals pursuing not simply training, but also an education in war. If military professionals neglect such study, it will not occur elsewhere.

Western postmodern education prefers to study Greece without the phalanxes, Rome without the legions, Christianity without the sword and Islam without the scimitar. For this reason, warfighting should represent the main focus of the curriculum of the Australian professional military education system. As General Douglas MacArthur once remarked, warfighting is the uniformed military professional’s ‘vital dedication’. Soldiers may, on operations, be compelled to act occasionally as diplomats, peacekeepers and humanitarians, but it is war—‘Mars’s fiery steed’—that remains a military professional’s true mission. It is a mission that no civilian can fulfil.

POINT BLANK



THE AUSTRALIAN ARMY RESERVE

RELEVANT AND READY

LIEUTENANT GENERAL PETER LEAHY

Contemporary military operations and the character of the emerging security environment have shown that full-scale mobilisation for the defence of the nation is much less likely in the early 21st century than it was in the 20th century. Indeed, the trend away from state-on-state, large-scale conflict began in the last century. From the time of the Korean War of 1950–53 through the Vietnam conflict of the 1960s and early 1970s to the current plethora of small-scale conflicts experienced at the beginning of the new millennium, there has been a diminishing requirement for the mobilisation of mass armies.

In each of the conflicts in which Australia has been involved since the mid-20th century, the Army Reserve has played a vital role. The Army Reserve's contribution has primarily been in the form of small units or through individuals rather than through formed bodies of sub-units, units or formations. Between 1999 and 2003, a period of high operational tempo, Army Reserve personnel have responded magnificently, often volunteering for operational service

... Reserve contributions have helped the Army to meet its obligations to the nation during dynamic and uncertain times.

and performing critical full-time roles within Australia. These Reserve contributions have helped the Army to meet its obligations to the nation during dynamic and uncertain times.

In the future, challenges to national security are likely to arise in an increasingly complex political and operational environment. The Army is responding to these challenges through the Hardening and Networking the Army program. This initiative will substantially improve the land force's firepower, mobility, protection and communications, and is envisaged as a decade-long program that will restructure and re-equip the Army for operations in the 21st-century battlespace. In the future, Army formations and units will be more difficult to hit, yet they themselves will be able to strike an enemy harder, move more quickly, and be better protected and networked within a fluid battlespace.

The Hardening and Networking the Army initiative cannot achieve its full potential in transforming the Australian Army's combat capability without the significant involvement of the Reserve. The hardening and networking process will require the Reserve to be able to perform a broader range of new roles and tasks that are relevant to a changing security environment. Change also requires that the Army Reserve be available at much shorter readiness notice. In essence, the Army Reserve must adapt to our changing security environment by becoming more relevant to the land force's operational requirements and more ready to deploy on operations.

NEW OPPORTUNITIES FOR THE ARMY RESERVE

During 2001, significant legislative amendments were enacted in Australia that changed the nature of Reserve service within the Australian Defence Force. Reserves can now be called out, either in part or in whole, for a wide range of operations, including combat, defence emergency, peace enforcement, peacekeeping, civil and humanitarian aid, and disaster relief. These opportunities for greater employment of Reservists have been matched by a variety of measures to protect the jobs of members of the Reserve and to support their families and employers.

The package of legislative amendments to Reserve service in Australia contains some of the most historic and significant changes to the Defence Act since it was enacted at the beginning of the 20th century. The Army has not yet properly

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grasped the extent of the new opportunities presented by such legislative changes, nor has it fully comprehended the role that the Army Reserve can now play in providing forces for contemporary and future security challenges. Given the rigorous challenges that the new Hardened and Networked Army initiative poses, it is time that the land force carefully considers these opportunities, and makes adjustments to the roles and tasks that members of the Army Reserve may undertake.

THE VITAL ROLE OF THE ARMY RESERVE

The Australian Army is responsible for providing professional, well-trained and well-equipped land forces that must be available for operations at short notice. The Army is required to sustain a brigade on operations for extended periods and, at the same time, to maintain at least a battalion group for additional deployment. The possibility of operational deployments alongside a substantial period of recuperation before redeployment means that the land force cannot achieve such a requirement without a significant contribution from the Army Reserve.

Army Reserve forces that are relevant to specific operational needs and that are ready to deploy have assumed major importance in our planning to provide land force options to the Government. Because most security contingencies arise at very short notice, planning dictates that the first brigade deployment will consist of soldiers that are predominantly from the full-time force, with specialist individual and small units being allocated from the Army Reserve. Subsequent brigade rotations will, however, require progressively larger contributions from the Army Reserve, both in absolute numbers as well as in the size and structure of the forces needed. For example, a third rotation in force elements will almost certainly depend on a substantial contribution from Army Reserve elements.

Consequently, the Army Reserve must be capable of providing three levels of support to the land force. First, individuals and small units must contribute to a first deployment, or become components in any land force contribution to meet a security challenge, at relatively short notice. Second, the land force must employ individuals and larger units from the Reserve in order to enable second and subsequent deployments. Third, the Reserve must be capable of supplying sufficient expansion forces to meet any major security crisis.

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THE ISSUE OF RELEVANCE

There are two reasons for reconsidering whether the current roles and tasks allocated to the Army Reserve are relevant to the land force's likely military requirements. The first reason is the reality of a decreased emphasis on large-scale mobilisation for advanced professional armies. The second reason concerns the changing character of armed conflict facing the world's land forces.

A DECREASED EMPHASIS ON MOBILISATION

Changed political and security circumstances have meant that it is no longer a priority to maintain military forces in order to provide the basis for a rapid expansion of the Australian Army to a size required for major continental-style operations. As a result, the Hardened and Networked Army of the future will be structured to reflect this new reality. At a strategic level, there is an opportunity to adjust the Army Reserve's roles and tasks in order to meet the clear priority to supply trained personnel, small units and sub-units as part of front-line land forces deployed on operations. Army Reserve forces can now be concentrated on providing full capability as part of operational forces, and supplying the subsequent reinforcement and rotation of deployed forces. Expansion and mobilisation will remain an Army task, but the priority in the future will clearly be on meeting more immediate military needs.

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THE CHANGING CHARACTER OF ARMED CONFLICT

The second reason for reconsidering the relevance of the Army Reserve's current roles and tasks concerns the changing character of armed conflict. Professional warfighting skills remain the essential basis for all military operations, and such skills are best acquired and executed by military forces trained to conduct close combat in combined arms teams. Moreover, in addition to these essential warfighting skills, land forces require new forms of expertise in order to allow them to provide effective support in missions involving humanitarian, peacekeeping and nation-building efforts.

Today, more than ever before, military forces are likely to have to sustain and protect populations and assist in the re-creation or repair of national infrastructure. The Australian Army is likely to conduct military operations in concert with a myriad of allies and government and non-government institutions as partners in the field.

Not all of the skills required for such multidimensional missions are likely to be maintained by type or scale in the Regular Army. Much of the required expertise may involve civil skills or specialist knowledge that is held by members of the Army Reserve. This reality means that the Australian Army needs to make better use of the intellectual capital of its Reservists.

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THE ISSUE OF READINESS

The Australian Army is expected to conduct concurrent operations, moving rapidly from one operation to another while also accommodating changes brought about by the war on terror and other emergent threats. The tempo of recent operations has resulted in limited time for individual rest and recuperation or for unit reconstitution. Although the Army is coping well with operational pressures, there is a need to consider a range of supporting strategies that may improve land force readiness. Increased Army Reserve readiness is an efficient way of sharing the burden imposed by operational tempo on all soldiers and of providing sustainment, support and surge capacities for the land force as a whole.

Readiness is a function of job competency and availability, and applies in two domains: the *individual* and the *collective*. As the general trend is towards decreased warning time for operations, requirements in both domains have tightened and may continue to tighten. As individuals, all members of the Army Reserve have an obligation to be ready to deploy on operations at twenty-eight days' notice. Collective readiness, on the other hand, can vary from hours for critical tasks to several months for less critical responsibilities. Individuals are also required to conform to the collective readiness state of their units or sub-units.

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Currently the majority of Army Reserve units either have no readiness notice or are allocated a collective readiness notice beyond one year. Many Reservists have made themselves available for operational deployments well within these collective notice requirements. In some instances, such as in the deployments to East Timor, sub-units have been prepared to move at less than their nominated notice and have moved rapidly onto an operational footing.

In recent military operations, the ability of members of the Army Reserve to make themselves available for service, together with various critical job skills, have been major factors in the success of our missions. Examples of deployment success include personnel from the military trades as well as specialists in such areas as medicine, law, finance and engineering.

THE ISSUE OF JOB COMPETENCY

Before operational deployment, all soldiers must be fully qualified according to their rank and specialisation; they must also be properly trained and prepared for the task at hand. It has become clear to the Army's leadership that the vast majority of Reserve soldiers, through no fault of their own, cannot accumulate the growing number of competencies possessed by Regular Army personnel. This disparity in competencies will, in future, be partly addressed by the development of the Active Reserve Training Model, to be finalised this year.

The new training model will provide mechanisms for members of the Army Reserve to obtain specified competencies for rank and skill. Training will focus on developing competencies in relatively narrow but deep skill sets, in order to ensure that all Reserve members can be deployed for specific tasks as, and when, required. Should members of the Army Reserve be able to devote additional time to training, they will have the opportunity to acquire further competencies for rank and skill. These areas of competency will be pitched at the same levels as those demanded of the Regular Army. Acquiring such expertise will require periods of Reserve service in a collective training environment in order to cement individual skills, gain collective competencies and progress upwards through rank.

The nature of Army Reserve service means that some aspects of collective training can be best achieved in regional units that are focused on providing sub-unit capability. Although unit structures and establishments may have to change in order to reflect a 'raise, train and sustain' role accurately, it is logical that dedicated sub-units should closely mirror equivalents in the Hardened and Networked Army along with appropriate allocations of equipment, training and full-time staff. By these means, individuals and small groups can be force-allocated to operational units with high levels of confidence. The above system also offers the potential to develop relevant and ready collective reinforcements, and to prepare rotation forces for deployment.

THE ISSUE OF AVAILABILITY

Many members of the Army Reserve have demonstrated high levels of individual availability through their willing response to recent security contingencies. In some cases, the level of response has exceeded operational needs, and the Army has not always been well positioned to capitalise fully on Reserve commitment. The establishment of the High-Readiness Reserves (HRR) category has now formalised this high level of latent availability by Reserve personnel.

A formal commitment to high readiness by a member of the Reserve allows the Army to form high-readiness units such as the Ready Response Forces with increased confidence. Such voluntary and formal expressions of availability, alongside the ability of the Government to utilise its call-out powers under the Defence Act, have substantially changed the potential availability of all Army Reserve personnel to serve when needed. While all members of the Army Reserve can be subject to call-out, the formalisation of availability through the HRR category of service adds a degree of predicability to contingency planning. In the future, the HRR category of service will underpin higher-readiness units, although Reservists will also be able to move between the Active and Standby Reserves.

Army Reservists also need to be available to meet individual and collective training requirements. This particular aspect of availability requires both high levels of personal commitment and a degree of sacrifice by Reservists, who are often forced to organise their lives around the Army's needs. As the training requirements for Army Reserves increase, the issue of availability will become pivotal in developing military capability. Whenever the Army requires its personnel to acquire new skills, it must provide flexible training opportunities and deliver a timely training regime. Training opportunities within the land force require further improvement. The various incentives available for the Army to encourage Reservists to gain competencies and the organisational capacity of the Army to deliver tailored training require further study.

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PROVIDING SUPPORT MECHANISMS: FORCE ALLOCATION, REINFORCEMENT AND ROTATION

There are three main ways in which the Army Reserve can provide capability to the land force: by force allocation, by reinforcement and by rotation. Force allocation occurs when nominated and prepared individuals, small units and sub-units are allocated as part of high-readiness formations or as units in peacetime for operational deployments where acceptable risk can be carried. Force-allocated Army Reserves will develop a habitual relationship with the formation or unit to be reinforced. This relationship is likely to be founded on the ability of Reservists and the reinforced unit to prepare, train and exercise together. Force allocation will be used primarily for the first force deployment.

Reinforcement occurs when the Army allocates small units, sub-units, individuals and equipment to strengthen and support deployed forces. Reinforcement may be either planned or unplanned and it generally occurs after the force deployment has commenced—often as the result of losses or unexpected developments, such as changes in task, the intensity of combat or in the scale of operations. Rotation occurs when units, sub-units and individuals are used in follow-on deployments in order to replace personnel and equipment. Rotation will generally occur in the second and third deployments, and rotation tasks will be nominated in advance in order to ensure adequate preparation. Mobilisation and expansion functions are examples of rotation in action.

Preliminary work for force allocation as part of the Hardened and Networked Army shows a clear potential for individual Army Reservists and units to provide additional assets. These assets include squadron, battery and company groups tailored to suit a specific mission, and force protection companies for brigade groups; motorised lift sub-units; and combat support and combat service support (CSS) sub-units. They also embrace Ready Response Forces; Civil–Military Cooperation (CIMIC) units; specialist teams, such as joint offensive support teams; communications capabilities to support networking; and specialist individuals across a wide range of competencies. Such assets provide broad options for reinforcement and a focus for the development of rotation forces as part of second or third deployments.

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REGIONAL DISTRIBUTION AND THE STRUCTURE OF THE ARMY RESERVE

One of the great strengths of the Army Reserve is its ability to represent the land force and to engage with the broader Australian community through the many military depots that are located throughout the country. It is the Army's intention that the regional distribution of the Reserve be maintained. Additionally, the divisional and brigade structure of the Reserve and its geographical distribution will also be retained since it provides the best means to carry out the military functions of raising, training and sustaining military forces.

The majority of the Army Reserve effort will be assigned to the provision of force-allocated units and individuals and to the reinforcement of deployed forces. The focus of the Reserve command structure will need to shift accordingly, in order to raise, train and sustain functions. Reserve command structures will be required to take on increased responsibilities for moving units and individuals from lower to higher readiness.

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THE ISSUES OF RECRUITMENT AND RETENTION

Army Reserve recruitment is another important military function. Experience suggests that such recruitment is best carried out by Reserve units in local areas. Reserve command structures are, therefore, to assume increased responsibilities for recruiting personnel in the future. Recently there has been a substantial movement of members of the Army Reserve into the Regular Army. The latter is a welcome trend, although it is a trend that does have disadvantages, particularly for those Reserve units that lose well-trained and motivated individuals. Reserve units also play an indirect role in the Army recruitment process through their support of cadet units. Many cadets become recruits in either the Regular or Reserve force and are influenced by what they see of the land force through their Army Reserve sponsor unit. Reserve units will continue to sponsor cadet units.

Retention of trained personnel remains a major impediment to the development of the Army Reserve. The general increase in training required by a more complex warfighting environment, and the need to ensure that Reserve soldiers possess competencies for rank and specialisation before deployment pose major challenges for the land force. The Army cannot expend scarce resources on soldiers who do not stay in the land force long enough to offer meaningful service. The development

of clear, relevant and challenging roles and tasks for the Army Reserve will have a positive impact on the process of retaining personnel. The highly successful contributions that the Army Reserve has made in the recent past have proven the value of a positive retention policy. Even so, the Army will need to address the ongoing issue of retention of trained Army Reserves if our personnel are to be capable of meeting future realities.

THE ISSUE OF RESOURCES

Since resource allocation depends on nominated task and readiness notice, all Army units are to be allocated such notices. In the future the Army will allocate priority for resources according to readiness and nominated task. With likely changes to Army Reserve readiness, roles and tasks, a series of adjustments to current resource allocations can be expected. Such adjustments should not be interpreted as meaning substantial additional allocations. Rather, adjustments should be viewed as indicating the beginning of a carefully managed rebalancing of resources towards force allocation and reinforcement tasks.

CONCLUSION

The Army Reserve is a vital component of overall land force capability. The roles and tasks and the readiness requirements of Army Reserve units have changed significantly in recent years, and are likely to continue to change in the future. As a result, it is now appropriate to reconsider the relevance and readiness of the Army Reserve to ensure that it continues to make a major contribution to our national defence. While the Army has already completed a considerable amount of analysis on Reserve roles, more work will be required in the future as we strive to produce a land force that is suited to the new and complex demands of 21st-century combat.

THE AUTHOR

Lieutenant General Peter Leahy, AO, is Chief of Army. A graduate of the Royal Military College, Duntroon, he has held many appointments throughout his career, including exchange postings with the British and American armies, Commander of the 3rd Brigade and Deputy Chief of Army.

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TRADE AND NATIONAL SECURITY

MICHAEL O'CONNOR

In conventional terms, the task of Australia's defence and national security apparatus is to protect national territory against any form of direct military attack. This task is usually taken to mean repelling an armed invasion of the continent although, in recent years, the possibility of a terrorist attack on Australia has become a factor in the public mind. In reality, Australia has never had to fear seriously the prospect of invasion. Even in 1942, the Japanese hesitated to invade Australia; today, only the United States has the military ability to invade and occupy this country. In the case of terrorism, defence remains primarily a task for the intelligence, police and emergency services.

Australia has fought in defence of interests, not territory. Many have suggested that Australia's involvement in military operations over a century have been interventions in 'other people's wars'. Yet, Australia has always intervened in defence of what it perceives to be its national interests—a perfectly legitimate national enterprise. Because there is often almost no discussion of what Australia's external interests might be, confusion reigns until such interests come under pressure from events.

Apart from the security of national territory—rarely, if ever, under threat even from localised raids—Australia's history suggests the existence of two dominant and interrelated permanent interests: one political and the other economic. The permanent political interest is to support the maintenance of global or regional peace, almost always in conjunction with our allies. Indeed, a compelling case can

be made to support the view that Australia has always gone to war in order to restore peace once it has broken down. Certainly this was the case for Australia in 1914 (World War I), 1939 (World War II), 1950 (Korea), 1962 (Vietnam) and 1990 (the Persian Gulf), as well as in the many commitments made since 1945 to United Nations peacekeeping operations.

The permanent economic interest is that Australia is a country heavily dependent on overseas trade, and any disturbance of that trade may risk damaging Australian prosperity. The economic interest is, of course, virtually inseparable from the political interest of contributing to international stability, without which trade will be disturbed. Yet, despite these realities, the popular and intellectual mood of Australia has often been one of persistent isolationism—until, of course, a crisis develops. To a large extent, Australian isolationism stems from a belief that the country is small and insignificant, and is located a long way from the important centres of the world. While that perception may have once been real, it is no longer credible today.

With a population of approximately 20 million people, Australia ranks demographically 52nd of 236 countries and dependent territories. More importantly, the country ranks 16th in the world in terms of gross domestic product (GDP). If one excludes seven countries or territories that make revenue as international tax havens, Australia ranks 11th in per capita GDP in the world.¹ Moreover, Australia is a significant trading nation, ranking 26th in the world for exports and 21st for imports.² These rankings are based on monetary values, but if reckoned by tonnage, Australia, as a trading nation, ranks 17th in the world. If rated on tonnes and kilometres, Australia's status rises to seventh internationally. In Australia's case, a large proportion of exports are of minerals and agricultural products with low added value, while the distance from principal export markets accounts for the much higher ranking on the basis of tonnes per kilometre.

Australia's total exports in 2002 amounted to just over \$120 billion free on board (f.o.b.) while imports cost some \$129 billion f.o.b.,³ accounting for some 31 per cent of GDP. Trade in services added a further \$64 billion, meaning that Australia's total trade amounted to just on 40 per cent of GDP. It should be noted that the above figures do not account for the unquantified contribution to GDP made by trade-dependent industries. Clearly, Australia's prosperity—as indicated by such measures as employment rates, per capita GDP and government revenues—is heavily dependent on overseas trade, the security of which represents an overwhelming strategic interest.

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Australia's overseas trade is carried overwhelmingly by sea. Exports account for more than 500 million tonnes of cargo annually, with a further 58 million tonnes imported.⁴ Another 600 tonnes are carried by air, but air transport accounts for more than nine million tourists inward and outward bound. The average sea journey exceeds 9000 km, with the total seaborne trade task exceeding 5000 billion tonnes per kilometre. In 2001–02, there were 8816 ship voyages into and out of Australia. This figure represents a reduction on previous years, due in part to the introduction of larger ships. More than 3000 ships are engaged in trade with Australia in any given year. Coastal shipping carries a further 52 000 tonnes, mostly bulk cargoes of significant value to industrial processes, such as oil refining and distribution as well as steel making.

In strategic terms, Australian trade represents a national interest subject to a degree of vulnerability, at least in politico-economic terms. Even limited attacks on merchant ships trading with Australia could generate economic uncertainty, upward pressure on insurance rates and demands for maritime protection. During the Cold War, serious concerns were expressed by some of our trading partners, most notably Japan, at the vulnerability of their import trade in energy and minerals. Some 20 per cent of Japan's imports originated in Australia.⁵ Forgetting that Japan was defeated in 1945 mainly by the interdiction of its overseas supplies, some Australian strategic thinkers suggested that this issue was unimportant but, as with the tango dance, it takes two to trade. In short, Japan's vulnerability was Australia's too.

With the end of the Cold War, the strategic threat to maritime trade has diminished. The United States is the only military superpower in the world, and lesser powers are unable to inflict serious damage to the flow of world trade. Most threats exist on the political and financial rather than strategic levels simply because they impact on business and economic confidence. The most obvious contemporary threats to trade are sub-national rather than national, and emanate from piracy and terrorism. Unlike states, non-state pirates and terrorists have no fixed interests to protect, and their tactics can be more flexible and ruthless.

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The most obvious contemporary threats to trade are sub-national rather than national, and emanate from piracy and terrorism.

Given the current volume of global seaborne trade, the impact of piracy remains limited. Most international piracy is the work of entrepreneurs seeking little more than cash and valuables. In recent years, however, there has been the emergence of organised crime syndicates that not only seek to hijack cargoes, even bulk cargoes, but the ship itself, which is then given a new identity to seek further cargoes. Various incidents of piracy, especially in Chinese waters, have been identified as being the activities of renegade security force units.⁶

For Australia, piracy has, so far, been of limited impact. The country has one of the smallest merchant fleets in the world and Australian-flag ships are rarely at risk. Nevertheless, their cargoes represent Australian wealth, and their loss would have an adverse impact on insurance rates, coupled with a perceived need to provide additional security, either by naval units or private security forces for escort duties through high-risk sea lanes.

Unlike piracy, terrorism—especially extremist Islamist terrorism—is a far more significant problem. Over the past decade, terrorists have demonstrated a significant ability to attack ships and aircraft with no regard for the lives of either the terrorists or passengers. Indeed, the aim of many 21st-century terrorist operations is to kill as many people as possible in the most dramatic way. Aircraft have been common targets, but ships—commercial and naval—have also been attacked. Australian security authorities are understandably concerned at the potential for the use of ships to be attacked at sea or in harbour, or to be used to import weapons of mass destruction into a major port. This threat has assumed more salience since Australia was singled out as a primary target by the al-Qa'ida and Jemaah Islamiyah networks. Given that Jemaah Islamiyah is an indigenous Indonesian network and that much of Australia's seaborne trade—especially the highly vulnerable natural gas tankers—passes through poorly policed Indonesian waters, the possibility of a dramatic incident certainly exists.

Tourism and education represent the fastest-growing elements of Australia's trade in services. In 2002, Australia received almost 4.5 million tourists from overseas and welcomed 162 000 overseas students.⁷ Spending by international visitors accounted for 11.2 per cent of total exports, while student expenditure was responsible for an estimated \$4 billion of export income.⁸ The impact of terrorist attacks and outbreaks of disease such as sudden acute respiratory syndrome (SARS) demonstrates that tourism and foreign students represent a highly elastic element

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of Australia's overseas trade. Although the economic impact of disruption might be small, the political effect is much greater, albeit temporary and probably exaggerated in a truly strategic sense. In the political sense, however, perceptions are often more important than reality. While terrorism can be seen as a relatively trivial weapon to use against a sophisticated nation, its political impact is considerable. Both the United States after 11 September 2001 and Australia after the 2002 Bali bombing demonstrated a high degree of community resilience and resistance to terrorism. While there was a dreadful cost in lives in both incidents, and in the impact and cost of additional security measures, the long-term economic and social effects were negligible. The most serious risk today lies in the potential of Islamic terrorist groups gaining access to, and then using, weapons of mass destruction. No-one can be sanguine about the possibility of such a scenario but the use of such weapons is likely to be totally counterproductive to the terrorist cause, especially among moderate Muslims.

In the wider strategic sense, the activities of failed or rogue states remain the main challenge to Australian prosperity and security, and that of what might be termed the community of respectable nations. In the Asia-Pacific region, failed or potential failed states such as the Solomons and Papua New Guinea demand an engagement by Australia that may be expensive both in time and cost. Failed or rogue states threaten the peace on which economic prosperity through trade depends. This is a subject of importance that demands a sophisticated analysis and debate within Australian public-policy circles—a process that has, so far, been lacking.

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ENDNOTES

- 1 This and related data is derived from the CIA *World Factbook 2003*, viewed 25 May 2004, <<http://www.cia.gov/cia/publications/factbook>>.
- 2 *Ibid.*
- 3 See Department of Foreign Affairs and Trade, *Trade and Economic Statistics*, viewed 25 May 2004, <http://www.dfat.gov.au/publications/stats-pubs/economics_trade_card.html>.
- 4 Transport data is derived from the Bureau of Transport and Regional Economics, *Australian Transport Statistics—2002*, viewed 25 May 2004, <<http://www.btre.gov.au/docs/trnstats02/trnstats.htm#Top>>.

- 5 See Manabu Yoshida, *Resources, Maritime Transport and SLOC Security—A Japanese Perspective*, in Malcolm J. Kennedy and Michael J. O'Connor (eds), *Safely by Sea*, University Press of America, Lanham, VA, 1990.
- 6 For a somewhat chilling personal description, see Captain Ken Blyth with Peter Corris, *Petro Pirates—The hijacking of the Petro Ranger*, Allen & Unwin, Sydney, 2000.
- 7 See Bureau of Tourism Research, *Tourism Snapshot—International*, viewed 25 May 2004, <<http://www.btr.gov.au/service/datacard/international.pdf>>; and Department of Immigration, *Overseas Students in Australia*, viewed 25 May 2004, <<http://www.immi.gov.au/facts/50students.htm>>.
- 8 See Department of Foreign Affairs and Trade, *Trade and Economic Statistics*, viewed 25 May 2004, <http://www.dfat.gov.au/publications/stats-pubs/economics_trade_card.html>.

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HARDENING AND NETWORKING THE ARMY

TOWARDS THE HARDENED AND NETWORKED ARMY*

LIEUTENANT GENERAL PETER LEAHY

The role of a Chief of Army is to raise, train and sustain the land force. Inherent in these functions is a constant search for balance between current operations and force modernisation for our future capability. As we learnt in East Timor, Afghanistan and the Solomon Islands, the Government may require the Army to deliver land forces for deployment at very short notice. There is, therefore, always a dynamic tension between present operations and future modernisation.

Over the past four years, the Army has witnessed a high operational tempo, although there now seems to be some relief in sight. Our draw-down of troops in East Timor is advancing in accordance with the Government's policy. We will withdraw our last combat troops from East Timor under the current United Nations mandate by the middle of this year. The Army has also begun to reduce its forces in the Solomon Islands. Both withdrawals are appropriate measures, given the success of operations in both East Timor and the Solomons.

There are, of course, still significant numbers of Army and Australian Defence Force (ADF) personnel in Iraq that are operating in a dangerous and demanding environment. Currently, no significant change is foreseen in our personnel numbers in Iraq. An ADF training team to assist in developing the Iraqi Navy has recently

* This article is based on an address to the Defence Watch Seminar on 10 February 2004.

deployed, and consideration is being given to some tasks to train the Iraqi Army. In general terms, however, there is likely to be a gradual reduction in the numbers of Australian personnel deployed on operations.

These reductions in operational commitments are welcome since they offer some respite to Australian personnel who have been engaged in sustaining simultaneous operations in numerous theatres.

While the Army must be, and is, prepared for any emerging contingencies, my message, as Chief of Army, to our soldiers has been, 'get home, get a rest and get back to basics'. Many of our deployed forces have been able to do this, and the Commander Special Operations Command recently reported that his forces are fully rested and reconstituted, ready to deploy again if required.

PREPARING FOR THE FUTURE: IMPLICATIONS OF THE 2003 DEFENCE CAPABILITY REVIEW

How is the Army preparing for the future? Many of the projects contained in the White Paper of 2000 and the resultant Defence Capability Plan (DCP), and now the Defence Capability Review (DCR), are en route and will soon be introduced into military service. These new capabilities have begun the process of hardening and networking the Army. While the DCR of November 2003 re-balanced some aspects of capability in the earlier DCP, most of the latter's fundamentals remain intact. The Army has, however, made some adjustments as a result of changes in the strategic environment—notably the war on terror, the spread of weapons of mass destruction and the rise of instances of regional deterioration. The Army has also paid particular attention to recent operational experiences in making military recommendations and decisions. One of the major features of the DCR is the project to strengthen the effectiveness and sustainability of the Army. The ability of the land force to conduct close combat in combined arms teams has been enhanced, and the Army will now acquire the necessary combat weight to be more sustainable and lethal in operations.

Other important decisions in the DCR include the acquisition of combat identification for the land forces, improved communications and the increased provision of night vision equipment. Enhanced communications that are capable of being used at an individual level and night-fighting equipment are both force multipliers and war winners. The Army will move as quickly as possible to network the land force from formation down to individual soldier level by establishing 'sensor to shooter' links.

A major feature of the DCR, and one that many commentators appear to have overlooked, is the review's movement towards an enhanced joint force. The ADF aspires to create a seamless joint force by 2020, and the DCR has pointed the direction. A future joint force will be amphibious, with the Navy and Air Force transporting and protecting the Army on operations and also providing sea denial and counter-air

capabilities. At the heart of joint operations are interdependence and the use of the strength of one service to cover the weakness of another. The DCR of November 2003 has strengthened the framework of a future joint force by enhancing air defence protection, strategic-lift requirements and communications. Recent experiences in the Gulf have emphasised the vital importance of close air support to land force operations. Consequently, the Army and the Air Force are working closely together in order to enhance the provision of fighter air support for ground forces. Such cooperation will intensify in the future as the ADF moves closer to acquiring a replacement fighter.

Major Army projects that are proceeding include the Armed Reconnaissance Helicopters, troop helicopters, various military vehicles and the Javelin weapons system. The Armed Reconnaissance Helicopters are being assembled in Brisbane and are likely to come into service in December 2004 while the selection process for troop lift helicopters under the Air 9000 project continues. The Bushranger vehicle is under test and in low-rate initial production in Victoria. The vehicle represents an important capability and would appear to have export potential. Similarly, the M113 upgrade and planning for a tank replacement have both made useful progress. The Javelin direct-fire weapon is also now in service and was used with devastating effect during the Iraq War.

THE CONTOURS OF THE FUTURE STRATEGIC ENVIRONMENT

The future is never a single coherent entity. Indeed, it may be accurate to conceptualise in terms of two futures: the near and the distant. The relative diminution in the demands of recurrent operations now permits the Army to take stock of its recent experiences and to analyse the lessons learnt in order to lay a foundation for both our near and distant futures. The War on Terror crystallised many of the elements that were emerging in the strategic environment in the aftermath of the end of the Cold War. In the course of the 1990s, armed conflict became increasingly unpredictable, diffuse, highly lethal and diverse in character.

As the Americans discovered in Somalia and are learning painfully in Iraq today, it is impossible to quarantine warfighting from humanitarian and nation-building operations. As a result, it is now essential that land forces be carefully tailored for specific missions. Yet, such forces must also be capable of rapid transition between different phases and modes of conflict while they are in-theatre. Indeed, even the US Marine Corps' concept of the 'three-block war' may be inadequate in fully capturing the degree of simultaneity, complexity and overlapping that now characterises the 21st-century battlespace.

The most significant change in warfare lies in the more diffuse and lethal nature of the threat environment. The nation-state has lost its near monopoly on the ability to wage war. Increasingly, a wider range of transnational actors—from criminal

gangs, through issue-motivated groups to terrorists with global reach—demonstrate that non-state armed violence has become a major international security problem. While professional mastery of conventional warfighting remains the vital component of military capability, state-on-state and force-on-force battle has receded in relative terms and, in the view of many Western military thinkers, this is a trend that may continue over the next decade.

As events in Iraq in 2003–04 have demonstrated, the much-vaunted Republican Guard was not the major threat faced by Coalition forces. Instead, smaller groups of insurgents employing guerrilla tactics, equipped with hand-held anti-armoured and anti-aircraft weapons, and using roadside bombs were able to inflict serious casualties on sophisticated Coalition forces. The situation has been complicated further by the fact that Iraq has been infiltrated by thousands of foreign jihadists, whose thresholds of cost and defeat are seemingly high.

Unlike conventional military forces, the Iraqi insurgents and foreign jihadists do not present easily identifiable, high-value targets. They are irregular forces in the classic mould: difficult to segregate from the local population and even more difficult to bring to a battle of decision. Indeed, they measure success, at least in part, by denying Coalition forces the ability to secure operational decision. The insurgent forces attempt to neutralise the massive technological overmatch of the American, British and Australian militaries by ‘hugging’ population centres and sites of religious and cultural significance. In such circumstances, irregulars are difficult to locate and to strike at with precision munitions. Deficiencies or mistakes in targeting become a weapon in insurgent information operations and are used to undermine Coalition attempts to bring stability and to restore Iraqi self-government.

In Iraq, the insurgents emerged as the most significant threat only after Saddam’s conventional forces had been subjected to massive kinetic destruction. An irregular force of some type is the most likely adversary that the ADF will face over the next decade. Fortunately, we did not encounter this type of threat in either East Timor or the Solomon Islands. However, in a world of porous borders, characterised by the proliferation of black-market weaponry, we must ensure that Australian forces are adequately protected in order to survive in a dangerous security environment. In the future it will be prudent to assume that even the most low-level adversary will possess advanced portable missile weapons and rocket-propelled grenades (RPGs).

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THE BACKGROUND TO THE HARDENING AND NETWORKING THE ARMY INITIATIVE

When announcing the DCR in November 2003, the Minister for Defence, Senator Robert Hill, stated that he had accepted a series of recommendations that would contribute to making the Army more sustainable and lethal in close combat. The overall impact of the November 2003 DCR has been to facilitate progress towards the Hardened and Networked Army initiative—a scheme designed to enable the land force to meet the challenge of future combat.

The announcements made in November 2003 have resulted in considerable public discussion and some controversy. Nonetheless, the quality of the debate over the implications of a Hardened and Networked Army has been generally disappointing. Two criticisms can be levelled at opponents of the Army's new initiative. First, opponents of modernising the Army have concentrated almost exclusively on the issue of hardening through the replacement of the current tank capability. Because of this concentration, critics have almost completely ignored the networking aspect of the Army's modernisation plan. The debate about a replacement tank has been shrill, misinformed and, in some cases, erroneous.

Second, there is a suggestion that the Army is seeking tanks because it is in the grip of an expeditionary fantasy. Yet, the extant guidance contained in the 2000 Defence White Paper specifically directs the land force to develop the capability to deploy simultaneously a brigade and a battalion group within the immediate regional littoral. The Army's doctrine of MOLE (Manoeuvre Operations in the Littoral Environment) was developed to conform to a regional offshore role. The idea that the Australian Army has ever envisaged fleets of tanks engaged in sweeping conventional manoeuvres, as in World War II, is an invention. In essence, the Army views the tank as primarily a close-support weapons system to protect the combined arms teams.

Let us be clear about the issue of armour. The Australian Army possesses tanks. The strategic guidance in the 2000 White Paper, makes it clear at paragraph 8.12 that Australia would not embark on 'development of heavy armoured forces for high-inten-

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sity conflict'. As Deputy Chief of the Army, the author was directly involved in drafting the above passage of the White Paper, and it represented his best professional judgment at that time. Nothing that has occurred operationally since 2000 has changed that view. Moreover, the author helped write the very next sentence in the 2000 White Paper that added a vital caveat. This

caveat was that, although the Government of Australia was not developing heavy armoured forces, it was nonetheless determined to provide the land forces with the appropriate combat weight required in order to permit the Army to accomplish any military mission without undue risk. Armoured protection and firepower are both essential for the infantry.

What has changed since the White Paper of 2000 is not the character of strategic guidance, nor the Army's assessment of its role in the Defence of Australia. Rather, what has changed is the character of the military threat that Australia's land forces may encounter in conducting their missions. A direct consequence of this threat is that the definition of adequate combat weight has altered. It is a fact that the current Leopard tanks are extremely vulnerable to a range of modern and easily acquired weapons systems. As a result, the deployment of current tanks would not provide protection and may expose soldiers to unnecessary risk.

The most efficient and safest way to enhance the Army's combat weight and protect Australian troops is through the replacement of the ageing Leopard with a more robust main-battle tank. The modernisation of the Army's armoured capability is not a radical step. On the contrary, it represents policy continuity. The Army is simply updating its existing tank capability in order to ascertain that combat weight is adequate to meet assessed threats. All Chiefs of Army have a moral responsibility to ensure that the young men and women that are sent into a threat environment are as protected as possible from the effects of lethal fires.

At the time of the release of the 2000 White Paper, the current Leopard main-battle tank was considered capable of remaining in service until 2015 and perhaps beyond that date. This assessment has since proven to be overly optimistic. The indisputable truth is that threat to Australian troops has changed, and has changed rapidly.

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The proliferation of RPG 7, 16, 18 and 22 weapons, along with a range of other deadly anti-armour weapons, means that close combat without protection from armour is highly dangerous. It would be irresponsible, to the point of immorality, to risk the lives of Australian soldiers through exposure to lethal fires. Contemporary conflict environments require the provision of adequate armoured protection for deployed military personnel.

Close combat remains the Army's core business; it is the acme of professional skill. Moreover, close combat is what the Government directs the Army to provide to the ADF's joint capability. In short, by acquiring new tanks, the Army seeks to take prudent steps to maintain its vital close-combat capability in order to achieve tactical decision. Close combat is dependent on effective combined-arms teams comprising balanced elements of infantry, armour, artillery, engineers, aviation and signals, supported by a range of ground- and air-based indirect fires and logistics support. One key element of our combined teams, namely the tank, is now vulnerable due to an enhanced weapons threat and must, therefore, be replaced.

Those critics that portray the acquisition of a modern, better-protected tank as a radical departure from current strategic guidance are misguided and wrong. There have been a number of canards thrown up in the wake of the decision to procure new armour. One is the belief that the decision on tanks undermines the primacy of the Defence of Australia as a force-structuring principle. Yet, the combined arms team, with a tank at its core, is the best and safest way of delivering Army fighting power, regardless of weather or terrain. While a direct attack on the Australian mainland is currently regarded as a remote prospect, it is the Army that would bear the ultimate responsibility for the final defeat of an incursion.

As recent events have demonstrated, Australia's national interests are not defined by its geography. Again, this proposition is not a heresy concocted within the Army. Indeed, the 2003 Foreign Affairs and Trade White Paper, *Advancing the National Interest*, states: 'geography has never been the sole determinant of our international links'. As a responsible ally and a good world citizen, Australia has provided military forces to a range of missions right across the globe.

This approach is not purely a consequence of the War on Terror. After all, in the 1990s the ADF conducted operations in Cambodia, Somalia and Rwanda. In particular, the mission to Somalia in 1992–93 emphatically demonstrated the central importance of combat weight even in a humanitarian mission. Deployed Australian forces needed Coalition support to protect them from Somali militia mounted in

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vehicles known as ‘technical’. The tragic *Black Hawk Down* incident in Mogadishu, graphically portrayed in book and film, could have been avoided by the more timely intervention of armoured vehicles.

Although the issue of hardening the land force in the form of the tank has captured the attention of critics, there is a bigger picture to be considered—that of the creation of a mobile and well-protected Army. With the equipment enhancements that are forecast in the DCP and the DCR, the Army is undergoing a transition from a primarily light infantry force to a medium-weight, all-arms force. There will be substantial improvements to military capabilities in terms of firepower, protection, communications and mobility. By the end of the decade, the land force is likely to possess almost 900 good-quality armoured vehicles, including the M113A3, the ASLAV and the Bushmaster. The Army’s combat power will also be enhanced by a wider distribution of armoured fighting vehicles in order to provide appropriate battle grouping of forces, which will meet a range of contingencies.

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HARDENING AND NETWORKING AND THE FUTURE ARMY

The Australian Army that currently exists in barracks is not the Army that will deploy on operations. The Hardened and Networked Army of the future will be capable of tailoring packages of mission-specific combat forces that are seamlessly linked to both Australia’s joint and coalition partners. The Australian Army cannot operate without the support of the Royal Australian Navy (RAN) and the Royal Australian Air Force (RAAF). The Army needs the support of both of its sister services for deployment, redeployment and sustainment on operations. It is difficult to imagine a circumstance in which the Army would work without the Navy and Air Force as its indispensable partners. In this respect, the mission to East Timor is instructive as a joint operation. Troops were deployed into Timor by HMAS *Tobruk* and by C13 air transports. Firepower, communications, intelligence and medical support were supplied by HMAS *Adelaide* and HMAS *Jervis Bay*, and were redeployed by all elements of the Navy and Air Force. The joint capabilities in the November 2003 DCR will substantially enhance the ADF’s potential as a joint force. There will be an appropriately sized amphibious capability that can be protected by air and sea elements.

The Army’s aim, then, is to deploy flexible and versatile land-force components as part of a joint or combined force that provide the Government with military options across the spectrum of operations. To this end, the Hardening and Networking the



Army initiative is currently the subject of a high-level staff appreciation to analyse the changes that need to be made in the land force. In particular, the Army is seeking, wherever possible, to remove singular capabilities and create an ‘Army of twos’, thus better meeting the deployment and rotation requirements of government. There is also a commitment to removing hollow-ness from the force, to optimising the Army’s structure to create task-organised combat teams, and to enhancing firepower, protection and networking, along with the introduction of new roles for the Army Reserve.

Alongside the hardening of the Army is the requirement to network the land force—a requirement that is sometimes overlooked. Because the Army is reliant on the RAN and RAAF to arrive at, and survive in, the Area of Operations, the land force must be ‘networked’ with air and sea elements in order to enhance the power of cumulative operational effects. For this reason, in an ambitious project, the ADF is moving towards the ‘Seamless Force 2020’.

The mode of warfare to which the Army and the ADF aspire was indicated in the campaigns in Afghanistan and Iraq, in which effects on land were achieved through the seamless orchestration of fires from the sea and air, often using space-based assets.

Australian Special Forces have already mastered many of these skills. Ultimately, the entire ADF will be networked throughout the battlespace with sensor–shooter links achieved in real time and the most appropriate fires will be brought to bear on targets, irrespective of the service designation of the provider.

In many respects, we are entering an era of warfare in which a private soldier may be capable of identifying a target for a cruise missile. Such a capacity will, of course, place extraordinary responsibility on the men and women who serve in the land force. Although it is common to hear the term ‘strategic corporal’ employed, we may be on the cusp of an era when every soldier will become an individual node in a networked battle group—in effect, a ‘strategic private’. Indeed, over time, it is possible that many of the tasks once considered as being exclusively within the province of the Special Forces will increasingly be performed by members of conventional forces. Such a development will impose a huge burden on the Army in attracting, training and retaining the right kind of individuals. The complex, lethal and diverse battlespace of the future will test Australian soldiers severely, and units will need to learn to switch rapidly between civic aid and humanitarian tasks to warfighting without supplementation.

... the Army is undergoing a transition from a primarily light infantry force to a medium-weight, all-arms force.

In other words, alongside the technological innovations to warfighting will be the requirement for cultural and educational changes. The Army will require personnel skilled in foreign languages, cross-cultural knowledge and understanding of the Laws of Armed Conflict, and who are able to discriminate in the use of force. Australian soldiers are already regarded highly for several of these qualities, but the Army will have to improve its skill levels even further. The soldier who fights in the Seamless Force of the future may be a warrior first and foremost, but he or she must also be prepared to be an aid worker, diplomat and media relations expert if circumstances demand such expertise.

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CONCLUSION

It is important to note that Hardening and Networking the Army is not only about changes in technology and equipment, but also about force structure and doctrine. It is only through balanced and carefully considered changes to the three elements of technology, structure and doctrine that true military progress can be made. Currently the land force is changing its equipment, but the parallel tasks before it concern establishing the right force structure and military doctrine in order to make the optimum use of new equipment.

Ultimately, there is no greater symbol of a country’s national resolve than when its young men and women are deployed on the ground, in harm’s way. In the future, Australian Army personnel will be operating in highly ambiguous and lethal environments. The leadership of the Army has a responsibility to its soldiers to ensure that they have the right equipment, force structure and doctrine to succeed in combat. The Hardening and Networking the Army initiative is designed to facilitate that vital success.

THE AUTHOR

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HARDENING AND NETWORKING THE ARMY

AUSTRALIAN LIGHT- ARMoured VEHICLES (ASLAV) AS MOUNTED CAVALRY

VANGUARD FOR A HARDENED ARMY

LIEUTENANT COLONEL ROGER NOBLE

Although infantry commanders throughout the Marine Corps have now had an opportunity to see the combat effectiveness of light-armoured infantry (USMC LAV regiment now titled Light-armoured Regiment) units through the full range of conflict intensity ... many do not understand the mission, function, capabilities, limitations or proper methods of LAI employment.

Captain J.J. Maxwell, US Marine Corps, 'LAI: Impressions from SWA',
Marine Corps Gazette, August 1991.

On the subject of light armour, the author admits to experiencing the same frustration felt by Captain Maxwell. It is encouraging, however, to note in 2004 that the US Marine Corps appears to have a better understanding of the use of a light-armoured cavalry capability than it did when Maxwell wrote in 1991. A 2003 Marine Corps document on lessons learnt from Operation *Iraqi Freedom* states that the mounted light-armoured regiment (LAR) has the potential to be ‘the most lethal [and] versatile force on the battlefield’.¹

Unfortunately, the Australian Army has yet to reach a similar level of comprehension about the value of its own Australian light-armoured vehicle (ASLAV) as mounted cavalry. Despite fielding arguably the best light-armoured vehicle in the world in the form of the ASLAV-3, developing robust doctrine for its use and generally leading the way in light cavalry thought and tactics for fifteen years, the Army still underestimates the potential of its own cavalry. The reasons for this underestimation are twofold. First, the Army possesses only one modern ASLAV cavalry regiment based in faraway Darwin. Second, there is a limited focus on cavalry in Australian military education and training. As a result, the role of cavalry in Australian military culture is ambiguous and does not fit easily into any particular conceptual framework. Yet, as we enter the Hardened and Networked Army (HNA) initiative—an initiative aimed at improving our combat firepower and protection—we must develop a better understanding of our organic light-armoured capabilities.

The purpose of this article is to explain how ASLAV mounted cavalry, operating as part of a combined arms team, provide a multipurpose and combat organisation that is ideally suited for employment on the complex battlefields of the 21st century. Indeed, the ASLAV meets many of the Chief of Army’s Development Intent for HNA organisation as outlined in the ‘Complex Warfighting’ operational concept. The Chief of Army has directed that ‘all elements of the deployed force are to be provided with protected mobility, firepower, situational awareness and stealth to enable them to perform their missions without undue risk’.² The HNA of the future is to be optimised for close combat in complex terrain as part of a joint inter-agency taskforce. HNA elements must be capable of medium-intensity warfighting in a coalition setting and be adaptable to peace support operations.

The problem that the Army faces is that, when it comes to the employment of cavalry, the Australian Army clings to an edifice of mythology. This mythology has inhibited constructive thinking about the use of ASLAV across the spectrum of conflict. If the land force is to create a modular and flexible force in the future, this mythology must be overturned and replaced by reality.

The problem we face is that, when it comes to the employment of cavalry, the Australian Army clings to an edifice of mythology.

CAVALRY CAPABILITY ‘BRICKS’

The ASLAV cavalry regiment is modular and fights according to its organic combined-arms team organisation—that is, by patrol, troop, squadron and regiment. The diagram at Figure 1 below represents the cavalry action that can be generated at each level of activity.

The basic capability ‘brick’ of the regiment is the three-vehicle patrol composed of two ASLAV-25s, one ASLAV-PC, and a four-man dismounted cavalry scout patrol. To appreciate fully the inherent versatility of this organisation, it is essential to understand the capabilities of both the vehicle and the dismounted troops.

The vehicle patrol is mounted in an ASLAV-3. The latter is a highly mobile armoured vehicle that can be deployed by air, land or sea. For its part, the ASLAV-25 incorporates a fire control system, with LAZER and autolay functions that are similar to those found in modern main-battle tanks. The fire control system includes magnified thermal optics; a highly accurate, stabilised 25 mm cannon; a 7.62 mm coaxial machine gun; a flex-mounted 7.62 mm machine gun; and a 76 mm grenade launch system. The ASLAV-PC is fitted with a non-stabilised .50-calibre machine gun. All Australian light-armoured vehicles are fitted with Global Positioning Systems (GPS), an Intra-Vehicular Navigation System (IVNS) and a digital VIC3 radio harness capable of supporting secure high, very high and ultra-high frequency radios.

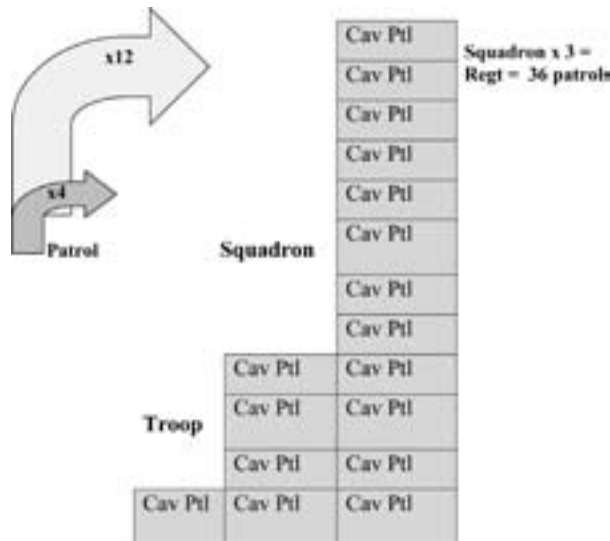


Figure 1. ASLAV Cavalry Regiment by Patrol ‘Brick’ Structure.

Note: 1 x Cav ptl (Patrol) = A 3 x ASLAV Vehicle Patrol or 1 x four-man dismounted team.

By the end of 2004, all dismounted cavalry scouts will be equipped with secure high and very high frequency radios, Javelin direct-fire support weapon, a Thermal Surveillance System (TSS), unattended ground sensors (UGS), plus NINOX, GPS, and LAZER range-finding binoculars. While the patrol is the basic cavalry ‘brick’, the troop represents the lowest-level ‘brick’ available for sustained operations or cross-attachment to another manoeuvre unit. The present cavalry regiment consists of three squadrons of twelve patrols that generate a total of thirty-six-patrol ‘bricks’ (or nine troops) for creating task-organised combined-arms organisations.

HOW CAVALRY FIGHT

Modern Australian cavalry fight the same way and conduct the same range of tasks as traditional cavalry or light horse. The difficulty faced by cavalry advocates inside the Army is that few outside the realm of mounted operations understand the character and scope of the modern cavalry’s role as a highly mobile, multi-role combat organisation across the spectrum of conflict. Modern Australian cavalry fight either mounted or dismounted in a broad range of reconnaissance, offensive, defensive and security missions.³

Even at the lowest level—that of the patrol—cavalry operate as a networked, mobile and protected unit equipped with excellent day-and-night optics and with a capacity to fight either dismounted or mounted, as circumstances dictate. This combination of patrol capability means cavalry units are ideally structured for uncertainty, with the cavalry team representing a *hard* target—*hard* to find and fix, *hard* to hit, *hard* to penetrate. The cavalry team is also capable of immediate retaliation at ranges of 3200 m, employing considerable firepower and precision accuracy. Cavalry elements can execute multiple tasks by day and night—ranging from searching buildings, communicating with local populaces, distributing food and aid to engaging enemy conventional forces. Such tasks can be completed without a need to regroup or be reinforced by other manoeuvre units.

Because of its inherent flexibility cavalry is often the ideal economy-of-force option in operations. Emitting a low signature and with limited manpower, a cavalry force can, if used with skill, have a disproportionate influence throughout an area of operations. Cavalry have protection, and can quickly disperse or concentrate, can apply precision direct-fire, and maximise the effects of offensive support and

Modern Australian cavalry fight either mounted or dismounted in a broad range of reconnaissance, offensive, defensive and security missions.

joint assets without large numbers of personnel. Such operational features are invaluable in conditions where resource limitations and tight mission constraints are often found.

Cavalry should be augmented, or cross-attached, to other units in exactly the same manner as any other manoeuvre arm. Like other manoeuvre elements, cavalry units should also be fully integrated into the combined arms team in order to execute close combat effectively. For example, in Exercise *Crocodile 2003*, the cavalry battle group, Battle Group *Eagle*, consisted of two ASLAV cavalry squadrons operating with a tank squadron, an aviation reconnaissance squadron, an M113 armoured personnel carrier squadron, air defence and combat engineer elements and a US Marine Corps light infantry company. An indicative ASLAV cavalry combat team is outlined in Figure 2.

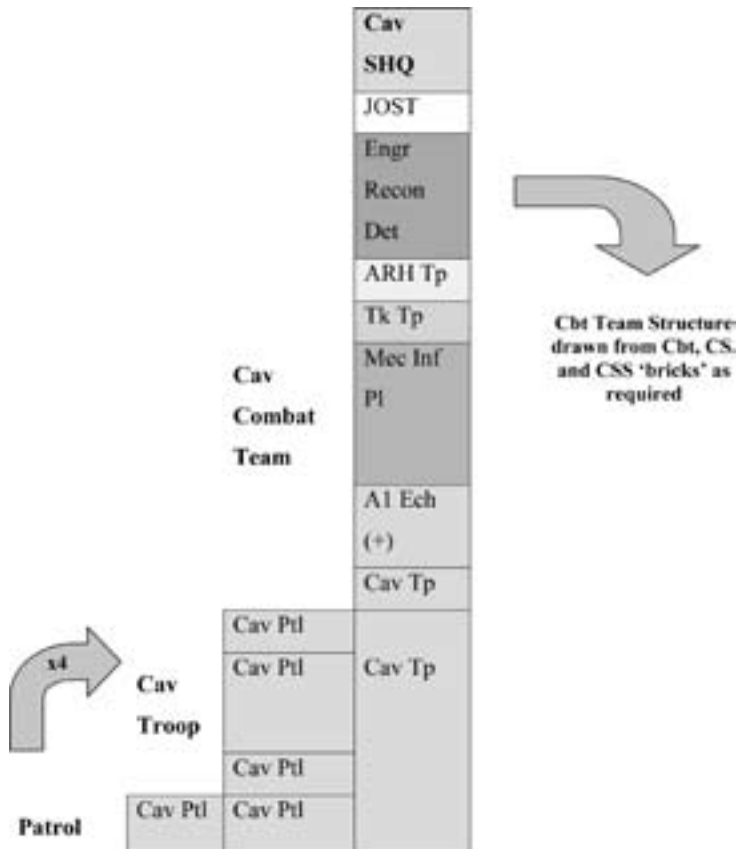


Figure 2. Illustrative ASLAV Cavalry Combat Team by Combined Arms 'Brick' Structure
 Note: The Cavalry troop is the basic 'brick' for cross-attachment to other manoeuvre battle group or combat teams.

CAVALRY, SPECIAL FORCES AND LIGHT FORCES

Cavalry units are easily integrated with light infantry. Although such integration does not regularly occur on exercises, it has been standard procedure during the operational employment of Australian light armour. In recent times, standard operational employment has seen cavalry groupings assigned to the command responsibility of either special forces or light infantry. While this integration of armour and infantry has generally proven successful, it is necessary to consider assigning light infantry to the command of armoured cavalry both on exercise and during operations. In terms of tactical lift and mobility, a cavalry squadron can almost carry an infantry company. Such a mixture of light armour and ground troops highlights the advantage of exploiting the versatility of cavalry organisation.

Furthermore, ASLAV cavalry are ideal in bridging the gap between conventional and unconventional operations. Cavalry can lift, insert and support troops as well as conduct a wide variety of operations in concert with special force elements. For example, between 1999 and 2001, Australian Special Air Service patrols operated with ASLAVs in East Timor and from 2001–02 deployed with US Marine Corps light-armoured vehicles in southern Afghanistan. In certain circumstances, ASLAVs could be used for domestic counter-terrorism operations. A cavalry battle group could, for instance, employ special forces to assist in the conduct of security or offensive missions across an extended area of operations.

Between 1986 and 1993, a battle grouping methodology that was developed at the US Army National Training Center resulted in at least twenty light- and heavy-force rotations through the Center, all of which proved flexible and adaptable. It is worth noting that not a single cavalry combat team is scheduled to move through the Australian Combat Training Centre. The latter conducts eight annual live combat team rotations. However, only one of these rotations involves heavy forces and none, in fact, are composed of cavalry or are integrated between cavalry and infantry.

CAVALRY'S TACTICAL ETHOS

Understanding the mentality of the cavalry is the key to grasping how mounted formations seek to fight. From Hannibal through Prince Rupert of the Rhine and Murat to the Cossacks under Budjenny, cavalry commanders have always possessed dash and flamboyance in their approach to warfighting. Such an ethos remains relevant in 21st-century military operations and was summed up in September 1933 by George S. Patton Jr when he wrote: 'wars may be fought with weapons, but they are won by men.' The cavalry style was famously commented on by General Allenby in 1919 when he explained that the Australian Light Horse had 'the gift of adaptability' based on 'a restless spirit of mind' and the capacity to fight 'mounted or on

foot ... on every variety of ground'.⁴ Cavalry have always embodied the doctrine of mission command since in the cavalryman's philosophy there has never been any other effective method by which mobile, fast-moving mounted troops can operate successfully.

In the Australian cavalry tradition, current doctrine and training emphasises mission focus, adaptability and what might be called a bias for action. When this ethos is combined with the modern networked nature of the ASLAV-3 vehicle, the cavalry organisation generated represents arguably the best opportunity for achieving the Australian Army's self-synchronising aspirations. Networked cavalry will be of great value in both the Army's manoeuvre operations in a littoral environment (MOLE) concept⁵ and in the devolved situational awareness that is outlined in the Army's Future Land Operational Concept (FLOC) entitled 'Complex Warfighting'.⁶ Mounted forces are predisposed towards the use of technology in military action, and the interface between human and machine is a key ingredient in achieving effective self-synchronisation.

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CAVALRY IN MILITARY HISTORY: MYTH AND REALITY

Despite the advantages outlined above, in the Australian military profession, cavalry often remains a mystery—indeed almost a 'black art' to those outside mounted soldiering. Failure to understand the use of cavalry is often due to a number of misconceptions and myths that inhibit a wider professional understanding of mounted forces. It is essential to debunk two key myths about cavalry if the Army is to make any real progress in developing its light-armoured capabilities.

THE MYTH OF RECONNAISSANCE

The first misconception about the role of modern cavalry is what might be called the myth of reconnaissance. Most Australian Army studies, from Army 21 in the first half of the 1990s through the Restructure the Army Trial in the late 1990s, have identified a role for cavalry in reconnaissance. As a result, there is a strong tendency among many Army officers to view the cavalry as little more than a specialised reconnaissance force.

During the 1990s, this perception was so powerful that it led to the word 'reconnaissance' being briefly added to the 2nd Cavalry Regiment's name. Indeed, current references to ASLAV cavalry in various Army capability documents still tend to refer

to mounted forces as ‘armoured reconnaissance’ or ‘reconnaissance’ rather than as cavalry. Such an approach is the result of a military educational system that has given little appreciation to cavalry as a genuine general-purpose force. The belief that cavalry should be confined to reconnaissance represents a mentality that views mounted armour merely as a screen that operates ahead of the real combat arms. Cavalry is perceived to be an older, one-dimensional force—useful only for scouting forward but too light and vulnerable for 21st-century conflict, where heavier forces are required. Yet reconnaissance is simply a task and cannot justify a proper unit role. Moreover, even a brief reference to the historical record illustrates that adherence to a philosophy of ‘cavalry equals reconnaissance’ is untenable.

In the 1930s, when the US Army mechanised its cavalry, it did not immediately transfer the traditional all-purpose combat role of horse cavalry across to the new motorised organisations. Instead, the US Army decided that its new mechanised cavalry would focus on reconnaissance tasks. In 1934 US Army cavalry doctrine noted, ‘[cavalry] is the agent par excellence for ground reconnaissance.’⁷ This decision did not survive the test of combat in World War II. The latter conflict revealed that reconnaissance tasks accounted for only 3 per cent of cavalry activity. General defence and security missions accounted for 58 per cent of cavalry operations, with offensive tasks and special operations taking up a further 10 per cent and 29 per cent respectively. These realities led the US Army to the conclusion that cavalry must be ‘specifically designed as a robust organisation capable of independent combat.’⁸ As a result, the mechanised US Army cavalry returned to the multipurpose combat role of its horse-borne forebears.

The US Army subsequently employed armoured cavalry extensively and effectively in Vietnam.⁹ For example, during the Tet Offensive in January 1968, the United States employed five armoured cavalry battalions against the Viet Cong. One officer wrote that their use was ‘an exercise in mobility that is the heart of cavalry operations’. As five cavalry squadrons (battalions) converged on the fighting in the Saigon area, ‘the outcome [of the fighting] was never in doubt. We knew that our enemy could never match our mobility, flexibility, and firepower.’¹⁰

Since Vietnam, US cavalry have been viewed as a versatile ground–air combat organisation. The US Marine Corps Light-armoured Regiment using the LAV-25 formed the tip of the spear for operations in Panama, Somalia and Haiti, as well as in both the 1991 and 2003 Gulf Wars. During Operation *Iraqi Freedom* in 2003, Task Force Tripoli, consisting of three LAR battalions with additional light infantry, executed a 150-mile attack beyond Baghdad to Tikrit and Baiji. Throughout the campaign, Marine light armour conducted a full range of traditional cavalry tasks, including close combat when operating as part of a combined arms team.¹¹

The Americans have not been alone in discovering the multipurpose value of modern cavalry. Both the British and the Russians have used cavalry beyond the reconnaissance role. In 1982, the British Army deployed light-armoured cavalry to the Falkland Islands, where it was used with decisive effect. For example, at Wireless Ridge, parachute troops conducted an assault supported by direct fire from Scimitar and Scorpion armoured vehicles. Unlike the infantry-only assault at Goose Green that proved costly in lives, the combined arms attack at Wireless Ridge was carried out with minimal casualties. One analyst of the Falklands War concluded, 'even against a relatively untrained force, light infantry need the direct support of armoured forces as part of the combined arms team to effectively accomplish their missions with minimal casualties'.¹² For their part, the Soviets in Afghanistan discovered in the 1980s the value of light armour in prosecuting operations against the *mujahideen*. Soviet ground forces applied the *bronegruppya* concept involving the all-arms employment of BMP, BMD and BTR light-armoured vehicles with infantry, special forces, helicopters, tanks and artillery.¹³

Moving from the general to the particular, Australia's historical experience of cavalry operations is also instructive in debunking the reconnaissance myth. At the beginning of World War II each division of the 2nd AIF included a divisional reconnaissance regiment. Yet in 1939 the Army changed the name from 'reconnaissance' to 'cavalry' regiments and cavalry unit was equipped with forty-four light tanks, forty-four machine gun carriers and 450 men.

The divisional cavalry regiments of the 6th, 7th and 9th Divisions were deployed and saw service in a broad range of tasks, ranging from attack and raiding to screening, security and defensive missions. Australian cavalry fought in both mounted and dismounted operations in North Africa and the Middle East. On their return to the South-West Pacific theatre, cavalry units also fought throughout the islands as dismounted commandos. Only the 8th Division decided not to deploy its cavalry regiment since it was deemed 'not to be required' in the jungles of Malaya.¹⁴

Like the Americans, the Australians discovered the value of light armour and of tanks in Vietnam. In 1970, towards the end of the Vietnam War, an Australian Army Battle Analysis Team concluded that the 'collective armour experience (US and Australian) in RVN [Republic of Vietnam] has proven the armoured cavalry organisation to be the most suitable, versatile and successful form of armour for counter-revolutionary warfare'.¹⁵ The report went on to note that Australian M113 squadrons had conducted a 'preponderance of cavalry tasks in RVN'.¹⁶ It recommended a number of organisational changes, including wheeled vehicles and long-range, direct-fire weapons, many of which are reflected in the current structure and doctrine of today's cavalry.

Cavalry continue to have a relevant combat role. In 1999, Australian ASLAV cavalry supported the Australian Special Air Service Regiment in operations along the border between East and West Timor during Operation *Stabilise*. In southern Afghanistan in December 2001, Australian Special Air Service elements conducted initial operations in concert with US Marine Corps light-armoured, mounted forces.

The above American, British, Russian and Australian examples from the historical record suggest that it is incorrect to view cavalry as merely a specialised reconnaissance force. Yet old myths die hard, and developing doctrine in the Australian Army continues to insist that ‘cavalry conducts reconnaissance ... Cavalry enables supported commanders to manoeuvre their force with enhanced security and to preserve combat power until it can be employed decisively.’¹⁷ The very reason that cavalry has traditionally assumed the reconnaissance task is not because of its specialisation, but rather because of its versatile and multipurpose combat role. Cavalry forces can be stealthy or not; they can fight for information and intelligence; they can operate in mounted or dismounted roles, or in both simultaneously.

Cavalry units are inherently adaptable, and it is this capacity that makes them ideal for undertaking uncertain and unpredictable reconnaissance missions. In short, cavalry elements effectively conduct reconnaissance tasks because of their versatility, agility and adaptability. Cavalry, however, have never conducted reconnaissance tasks as a *raison d'être*. Historically, it has been because cavalry units are general-purpose rather than specialised units that they have been able to assume responsibility for a range of difficult reconnaissance tasks.

THE MYTH OF VULNERABILITY

The second myth about light-armoured cavalry concerns their vulnerability to hostile fires. In the case of the ASLAV, this argument is predicated on a belief that the vehicle’s light armour is too thin to provide protection against missiles and rocket-propelled grenades. Those critics that view the ASLAV as too vulnerable often incorrectly view protection as merely a function of the thickness of armour plating. Current ASLAV armour is, in fact, thicker than the DPCU shirt, as well as that of the entire ‘B’ vehicle fleet and every special forces’ wheeled vehicle. Indeed, the ASLAV’s skin is comparable in pure thickness to the skins of the M113 and Bushmaster vehicles. In other words, it is not only the ASLAV that is vulnerable, but also the M113 and the Bushmaster vehicles.

The Army needs to realise that the protection of the ASLAV is not simply a question of the thickness of armour. Protection must be viewed in holistic terms.

The Army needs to realise that the protection of the ASLAV is not simply a question of the thickness of armour. Protection must be viewed in holistic terms. It embraces questions of firepower, mobility, optics, situational awareness, connectivity and suitable tactics, all of which come into play during operations. From the perspective of capabilities and versatility, ASLAV cavalry units are arguably the most protected manoeuvre element in the current Australian Army.

Furthermore, it is important to understand that a narrow definition of protection by armour thickness is inadequate from the combined arms perspective. The combination of armour, infantry, artillery and engineers is designed to ensure that in combat the whole of the military machine is greater than the sum of its parts. The essence of a combined arms philosophy is one of coordination in order to minimise each combat arm's vulnerabilities while maximising their respective strengths. Under a combined arms combat system, the ASLAV-3 cavalry regiment can be regarded as a well-protected and highly lethal force.

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It is worth noting that, while the US Marines in their march north towards Baghdad during the Second Gulf War in early 2003 suffered multiple hits from enemy weapons systems on their light-armoured vehicles, no single vehicle was comprehensively destroyed by enemy action. Cavalry, then, represents a multi-role combat organisation and, when integrated into the combined arms team, offers reduced risk in action. The difficulty in the Australian Army has been that mounted armour has often been poorly understood and the Army has made various attempts to limit the capability to 'specialist roles' such as reconnaissance.

In fact, as indicated earlier, light-armoured forces have been used extensively by the Australian Army in recent operations. ASLAV cavalry were employed from 1999 to 2002 in East Timor and supported Australian infantry operating along the East Timor border in search and reconnaissance missions, ready reaction, offensive patrolling, tactical lift, and security tasks. ASLAV cavalry have also been on short-notice standby to support a number of security and peace support operations in the South-West Pacific and have been deployed as part of the Australian security effort in Iraq.

In what can be regarded as a general trend, most leading Western armies from New Zealand to the United States are today investing time and resources into developing light-armoured cavalry as part of a response to the challenges posed by modern operations. The New Zealand Army has introduced the LAV-3 vehicle

into its force structure in order to realise its motorised infantry concepts. In addition, over the past few years, the US Marine Corps has focused on expanding its light-armoured capabilities. In 1997 the Marine Corps' light-armoured regiments were combined into a Special Purpose Marine Ground Task Force to conduct deep operations as a 'light armour operational manoeuvre element'.¹⁸ Meanwhile, the US Army's Stryker Brigade Combat Teams employ light-armoured vehicles, and the first Stryker team is currently deployed on operations in Iraq.

CONCLUSION

In the Australian Army, the value of light-armoured cavalry is underestimated by a poor professional understanding of the use of cavalry in general and the use of light-armoured cavalry in particular. The reality is that light-armoured cavalry fit uneasily into an Army tactical culture that is overwhelmingly infantry in orientation and character. Yet the use of cavalry must be better understood lest we risk failing to exploit our light-armoured capability to its full potential.

Used in a combined arms framework, ASLAV cavalry provide an adaptable and multipurpose combat element. The intelligent use of ASLAV forces is entirely consistent with the parameters of the HNA initiative, which seeks to produce a versatile combat organisation capable of executing a variety of tasks across the spectrum of conflict. ASLAV cavalry should not be confined to a narrow conventional reconnaissance role. Nor should such force elements be regarded as a mere contribution to more traditional manoeuvre units such as enhancing an armoured personnel carrier capacity or providing a mobile fire-support package for dismounted units. The Army needs to grasp that cavalry can readily form the basis of combined arms combat teams and battle groups for a wide variety of missions.

Future progress towards a more comprehensive understanding and employment of cavalry in the Australian Army will depend on education, training and professional mastery. Combined arms warfare must be developed in a way that dispels myth and preconception about the value of light-armoured vehicles. Failure to view mounted armour as a combined arms resource may be reassuring to those that cling to the status quo, but such an outlook is likely to be retrograde in the long term and will lead to missed opportunities in modernising the land force. Lack of critical analysis of the Army's future combat needs will lead to an inability to adapt to changing circumstances, and soldiers should remember that battle is unforgiving of error.

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The truth is clear: in light-armoured cavalry, the land force already has part of the answer to the challenges of the 21st century outlined in the Chief of Army's HNA initiative. Soldiers need to understand, accept and exploit cavalry capability for the good of the future Army.

ENDNOTES

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- 5 Australian Army, *Army Development Concept for Decisive Actions*, Future Land Warfare Branch, Army Headquarters, 10 April 2003, p. 4, defines self-synchronisation as 'the effective, self-initiated interaction between two or more military elements to achieve the superior commander's intent' without reference to a traditional command-and-control hierarchy or additional direction.
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- 17 'Cavalry Operations' (Developing Doctrine), p. 1-1.
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COMMAND AND LEADERSHIP

THE CHALLENGES FACING A LAND COMMANDER*

MAJOR GENERAL KEN GILLESPIE

The appointment of Land Commander, Australia, carries with it responsibility for the command of over 25 000 troops and a requirement to deliver ground forces in sufficient time and in proper order for both national and international operations as directed by the Australian Government. Furthermore, the Australian Land Commander may be directed to take responsibility for managing military forces on behalf of the country's senior operational-level commander, Commander, Australian Theatre. On many occasions over the past three decades, the Australian Army has been required to provide land forces for overseas deployment or deployment within Australian territory at very short notice.

For example, in 1987, following the military coup in Fiji, a company of troops, along with their equipment, was required to be on board a Royal Australian Navy ship and ready for deployment to the South Pacific in less than forty-eight hours. Again, in 1993, the Australian Army received barely four weeks' notice to prepare and deploy a 1000-strong infantry force for a mission to Somalia. More recently, in January 2004, the Army received less than forty-eight hours to deploy a small medical team to the South Pacific island of Nuie following a damaging tropical storm. In these seventeen years between providing a warfighting force for potential use in

* This article is based on an address to the Defence Watch Seminar on 10 February 2004.

Fiji in 1987 and the provision of medical support to Nuie in 2004, the Army has undertaken multiple missions. These missions include peace support operations in Namibia, Somalia, Cambodia, Bougainville, Papua New Guinea, Rwanda, East Timor and the Solomon Islands, and warfighting operations in Afghanistan and Iraq.

This article deals with four challenges of being Land Commander. First, it examines the character of current military operations. Second, the importance of the joint environment in command and control is analysed. Third, the need to provide land force capabilities for rapid effect and overmatch is emphasised. Finally, the article highlights the vital need for well-trained junior leaders who can operate in the complex conditions of today's military operations.

THE CHARACTER OF CURRENT MILITARY OPERATIONS

In February 2004, the Australian Army had approximately 1500 soldiers deployed on military operations both at home and overseas. While this number is less than that in the years between the deployments to East Timor in 1999 and Iraq in 2003, it remains a sizeable force to maintain and sustain in the field. Currently, the Army has a 'three for one' sustainment model—that is, one contingent preparing to deploy, one contingent deployed and another contingent reconstituting from deployment. Viewed from the perspective of the sustainment model, the number of soldiers involved in the three stages of deployment is not 1500 but closer to 5000.

THE GEOGRAPHICAL SPREAD OF ARMY DEPLOYMENTS

Current land force deployments involve diverse locations and types of operations, ranging from the Middle East through Africa to East Timor and Afghanistan. In Iraq the bulk of the Australian land force commitment is associated with the provision of security for Australian Government's diplomatic, trade and aid representatives who are involved in the Coalition effort to rehabilitate the country in the wake of the Hussein dictatorship's demise. The Army also provides significant staff officer support to our own National Headquarters, the coalition Military Headquarters and the Coalition Provisional Authority. In addition, there are officers deployed in the Middle East with Headquarters Central Command and in Kuwait. Elsewhere in the Middle East, the Army has observers deployed on several highly sensitive UN missions in Israel and Lebanon, and a group of multinational forces deployed in the Sinai supervising the truce between Israel and surrounding countries.

In Africa and Afghanistan, the Army has very small military contingents providing expert advice to United Nations (UN) and US coalition forces on the search for, and the destruction of, millions of land mines. In the Balkans, the Army contributes a small group of officers to the British peacekeeping force deployed in that region. Closer to home, in the Solomon Islands, there are several hundred soldiers

deployed to provide security to the mission led by the Australian Federal Police. That mission aims to re-establish the rule of law and order in the Solomons. In East Timor, Australian forces continue to provide security in the Western region of the country as part of the UN mandate. Indeed Australia provides some 25 per cent of the peacekeeping force's strength and will continue to do so until the end of the UN mandate later in 2004. In addition, under bilateral arrangements, the Army provides teams to assist in the training of the fledgling East Timorese Defence Force.

In the United States, the Australian Army has a small team of soldiers deployed at the request of the US Marines to assist them in training Marine battalions about to deploy for service in Iraq. The land force also maintains a rifle company at Butterworth in Malaysia as part of our ongoing commitment to the longstanding Five-Power Defence Agreement. The Army continues to make a contribution to the security of major events such as Commonwealth Games, Commonwealth Heads of Government Meetings, the Olympics and the Rugby World Cup. Finally, the land force is involved in border protection and maintains counter-terrorism forces on both the east and west coasts of Australia.

The spread of these operations demonstrates that ground forces continue to be an essential component both of the military art and of policy. The rise of a spectrum of threats over the past decade—particularly the emergence of an increasing number of 'non-state actors', including terrorist networks and transnational criminal organisations—has reinforced the importance of armies internationally. In international security, soldiers are not a diminishing but an increasing asset. In the 1990s, it was fashionable in some strategic circles to suggest that ground forces could be replaced by technology, and that low demography and fear of casualties would constrain the use of armies by advanced nations. If anything, the reverse has occurred. There is now a realisation that platforms such as ships, submarines and military aircraft cannot create a deterrent presence on the ground. Air and naval platforms cannot find and fight hostile forces in complex terrain, nor can they confront emergent land-based asymmetric threats.

There is now a realisation that platforms such as ships, submarines and military aircraft cannot create a deterrent presence on the ground.

LAND FORCES AND THE JOINT ENVIRONMENT

It is important to note that the Land Commander may also operate as the Land Component Commander, Joint Operations, and may act as the lead joint commander if required. This situation reflects the reality of the joint operational environment

and the need to harness the capabilities of land, naval and air force elements. For example, in operations in East Timor in September 1999, maritime and air force elements were crucial to creating what might be called ‘best effect’ arrival in order to deter hostile action against Australian land forces. Maritime and air force elements were the mainstays of force sustainment after land forces arrived and helped to create a secure environment in East Timor.

The defence of the inner arc around Australia, and the deployment and sustainment of Australian troops away from this country cannot be achieved by land forces alone. Operational success can only emerge from a refined and joint maritime strategy that carefully balances land, sea and air capabilities. Australia must always remember its military history and recall the high price it paid for sending unprotected and largely immobile forces into the northern archipelago during World War II. In Rabaul, Ambon and Timor in 1942, Australian garrisons were lost because they lacked proper equipment and did not have adequate sea and air support. The Australian Defence Force (ADF) must have the ability to operate in coalition with its allies on land, at sea and in the air across the northern approaches to Australia. The ability to project joint military force into those approaches, and beyond them if necessary, should be the key determinant of ADF force structure and of what may be described as generic force preparation.

Apart from joint command, the Land Commander may also have to act as a combined commander (commanding multinational troops) in a coalition involving other nations, possibly alongside non-government organisations. In this respect, it is useful to remember that General Peter Cosgrove was a joint and a combined commander in East Timor in 1999–2000. He commanded contingents from other nations as well as Australian force elements from all three services. In the past, Land Commanders have commanded combined forces, notably military contingents from New Zealand and South Pacific nations for peace operations in Bougainville in 1994, and again between 1998 until 2003. The current Solomon Islands operation is a combined operation supported, but not commanded, by the ADF.

Success in contemporary operations may not always involve traditional tests of military strength, but rather the use of force in ambiguous and complex conditions.

PREPARING CAPABILITIES FOR ‘BEST EFFECT’ AND ‘OVERMATCH’

A major demand for any Land Commander is that of developing effective military capabilities in terms of force preparation for deployment, command, protection, sustainment, redeployment and reconstitution. In preparing military capabilities,

the Land Commander faces a trio of challenges. The first challenge is to ensure that generic force preparation is sufficient. The second challenge is to use what specific force preparation time is made available efficiently and effectively because warning time rarely equals preparation time. The third challenge is to ensure that there are sufficient force elements to meet the demands of rotation for longer-term force projections. Unlike the World Wars and the limited conflicts of the Cold War in Korea and Vietnam, there is no time in contemporary missions for Australian forces to train and to familiarise themselves with operational conditions while in theatre. Success in contemporary operations may not always involve traditional tests of military strength, but rather the use of force in ambiguous and complex conditions. Land forces have to achieve ‘best effect’ on arrival and then continue to be successful by possessing ‘overmatch’ capabilities until the mission is accomplished, in case they are challenged.

GENERIC AND SPECIFIC FORCE PREPARATION AND FORCE ROTATION

The Australian land force must have a capacity for generic and specific force preparation as well as furnish a capability for force rotation. Generic force preparation helps to maintain a range of land force elements that can be deployed in the timeframes required by the Government. Unless land forces possess resources maintained at appropriate levels of generic preparedness, the ADF runs the risk of deploying under-trained and under-equipped force elements. Nonetheless, specific force preparation before deployment is also of vital importance. Since the Somali mission in 1993, the trend in force preparation has been for governments to give the defence force about four weeks before a military deployment. Accordingly, the Army has an array of land forces prepared and ready to move according to that span of notice. However, there are often specialised force elements that need more time for readiness, while some missions require specific force preparation due to perceived political or cultural sensitivities.

Troops may have to adapt to a wide range of roles and Rules of Engagement at short notice. They must also rehearse skills such as weapons handling, and application of firepower and manoeuvre, as well as the full range of tactical techniques and scenarios, particularly if hostilities are expected. In addition, it is wise to ‘wargame’ the headquarters staff in likely tactical, political and emergency scenarios before deployment occurs.

The challenge for a Land Commander is to find sufficient time for specific force preparation. Such preparation can become complicated because often the warning time issued by the Government may not necessarily allow sufficient preparation time required for training tactical-level commanders. Understandably, a Government may not wish its intentions to use military force to be disclosed before all options have been explored and the processes of political and diplomatic

negotiation have run their course. For instance, it might have been embarrassing if specific force preparation for deployment to Somalia in 1993 and East Timor in 1999 had been disclosed before interventions were legally sanctioned by UN mandate. Land Commanders have to balance political realities against operational requirements for specific force preparation.

The point that must be grasped is that there are significant risks if land forces are not allowed time to prepare for individual missions. High-readiness units may not take much time to refresh themselves in military tactics, but it is critical that they understand specific Rules of Engagement, and the political and cultural sensitivities of the particular mission that they are about to undertake. Because of the diversity of both locations and missions, no modern Army can be prepared for every military contingency. Therefore, a realistic amount of time is required to gain an understanding of the political and cultural complexities of the intended operational environment. Some of the risks in not taking specific force preparation seriously enough can be demonstrated by the case of Somalia in 1992–93.

In Somalia, UN forces failed to appreciate both the political determination and the military power of Somali warlords to oppose international intervention. In particular, the Americans were humiliated and forced into withdrawal after sustaining eighteen fatalities in an urban ambush in Mogadishu. This incident has since been popularised in the book and film, *Black Hawk Down*. In addition, the Canadian, Italian and Belgian armed forces faced breakdowns in discipline and were later racked by investigations into the conduct of their troops. Yet none of these armed forces lost a significant test of military strength in Somalia. What these forces appeared to lack was an understanding of the imperatives of the Somali cultural, ethical and social milieu. These imperatives should have been examined thoroughly during specific force preparation before deployment.

Another problem in preparing capabilities is that of force rotation. Although land forces may achieve quick results after initial deployment and employment, there is a growing trend in many missions to leave some forces in place. The latter helps to consolidate and maintain an operational environment and provides the stability necessary if reconstruction and restoration of governance are required by a society. This sequence of deployment, employment and consolidation occurred in Bougainville in 1997, in East Timor in 1999 and in the Solomons in 2003. In 2004, the Australian Army still has a protection force in place in Baghdad. Force rotation can, however, stretch specialist requirements in logistics and communications.

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Here, the reserves have an important role to play in reinforcing regular force elements—as was the case for the 6th Battalion, the Royal Australian Regiment, before it rotated with INTERFET forces in East Timor in 2000. Australian Army reservists have been in full-time service in almost all military operations since 1999 and the land force is currently developing a substantial role for the reserves in national security operations.

THE NEED FOR COMPREHENSIVE CONVENTIONAL CAPABILITIES

Despite the war on terror and what General Cosgrove has called ‘good neighbour’ operations by Australia in Bougainville, East Timor and the Solomons, it is important that the Army maintain a focus on its conventional military capabilities. Counter-terrorism and peace support operations are not the *raison d'être* of a nation’s defence forces. From a professional point of view, with experience drawn from multinational operations, there is little evidence that would suggest that our defence force should have anything less than a comprehensive range of conventional capabilities. Only conventional capabilities create the range of military options and deterrent ability to secure the national interest from a spectrum of threats, ranging from conventional attack to terrorism. The military adage that it is ‘easier to *adapt down* to peace support operations, rather than struggle with little warning to *adapt up* to conventional operations’ is an irrefutable reality.

Conventional land-force muscle still remains a useful tool in diplomacy. It is far better to deter hostile intent with a decisive application of force, or defeat a threat with an ‘overmatch’ of force. The ability to lash an adversary with fire-power from artillery, armoured vehicles and helicopter gun ships is useful for any commander. Through the proposed Hardening and Networking the Army initiative, Australian ground forces will be able to create decisive deterrence through ‘overmatch’ and, as a result, save the lives of young Australians. The multinational force deployed to the Solomons in July 2003 is a good example of the power of ‘overmatch.’ This force was made up of Australians and various regional allies. The mission to the Solomons acted as a deterrent to violence. The presence of Australian troops persuaded potentially hostile groups not to attempt to oppose the Regional Assistance Mission by armed force.

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THE IMPORTANCE OF JUNIOR LEADERSHIP

At the beginning of the 21st century, soldiers are required to operate in an ambiguous and complex security environment in which operational, ethical, legal and cultural issues may merge and interact. Australian Army operations in Somalia in 1993 demonstrated that Australian land forces had to be doves of peace as well as hawks of war. On the one hand, Australian soldiers had to establish a strong ground presence, using force if necessary, in order to deter hostile forces. On the other hand, Australian land forces had to deliver humanitarian aid to the dispossessed and reassure a traumatised populace with a firm and friendly presence.

In Somalia, it was not unusual for several soldiers in a patrol to be alert to possible threats while others played soccer with members of the local populace. In Somalia, and more recently in East Timor and the Solomons, striking a balance between coercion and compassion has been a hallmark of Australian military practice. Indeed, even in the more demanding warfighting environments in Afghanistan and Iraq, there were a number of occasions when Australian soldiers of junior rank were able to ease tensions and deflect potentially lethal encounters by balancing their military professionalism with a degree of cultural awareness and humanitarian compassion.

One of the key elements in Australian soldierly skills is that recourse to lethal action is rarely chosen as a first course of action. Even in hostile environments, Australian soldiers and their commanders know that they are ambassadors for the values of the nation. In this respect, many of the Army's personnel serve in what might be termed the 'shop front of Australia's international engagement'. While the responsibility to produce well-equipped, well-trained professional soldiers has not diminished, traditional tactical skills must now increasingly be supplemented by cultural and legal knowledge in order to equip personnel to participate in contemporary military missions.

During modern military operations, the decisions of junior leaders can have immediate effects because of electronic technology and the global media. The video camera is a powerful instrument. Because of its pervasiveness, the decisions of junior leaders in an operational area can now make or break an operation by influencing political opinion. The author recalls that, during his service in East Timor in late 2000, his efforts as a commander to develop a sound security strategy and to communicate a winning campaign plan ultimately depended on the calibre of junior leaders. All the planning that the author did would have amounted to little

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had his headquarters not been able to rely on junior leaders to perform well in isolated villages and mountains far away from direct supervision.

The Australian Army possesses excellent junior leaders because it has invested in one of the best individual and collective training regimes in the world. The land force prizes initiative, flexibility of mind and forthrightness in its young service personnel. Indeed, as General Cosgrove said in a 2003 speech to the Sydney Institute, ‘the need for well-trained infantry and Special Forces has not diminished as the modern battlespace becomes more crowded with sophisticated technology and the means to deliver accurate and massive firepower. Precision-guided munitions alone will not annihilate well-concealed and determined opponents dispersed in complex terrain.’ Despite advanced technology, it is still men and women, junior leaders and small teams that remain the critical factors in most Australian military operations.

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CONCLUSION

Australian soldiers must be prepared to serve from the suburbs of Sydney through protection of the Olympics to the backstreets of Baidoa in Somalia and the deserts of Iraq. However, it is impossible to tailor military forces to every contingency. Rather, Land Commanders must be prepared to devote as much time as possible to the problem of specific force preparation before deployment. In contemporary international conditions, the need for ‘best effect’ arrival and ‘overmatch’ for quick results has become more important in ensuring operational success. The more time that is available for force preparation, the better the Army’s junior leaders can be equipped with training in order to achieve that critical balance required in operational technique between military coercion and humanitarian compassion.

While much of Australia’s attention in the near future will, in all likelihood, focus on the global war against terror and on ‘good neighbour’ operations—often involving nation-building and peace support—we must not neglect conventional warfare.

Despite advanced technology, it is still men and women, junior leaders and small teams that remain the critical factors in most Australian military operations.

Australia's conventional military capabilities remain a priority. Such capabilities provide force protection and can be used to create deterrent 'overmatch' for peace support operations. In the future, capabilities from the Hardening and Networking the Army initiative can be expected to improve Australia's land force combat effectiveness and to increase the protective effect on military personnel serving in the field.

Finally, it is important to reinforce the point that the trend in early 21st-century military missions is one in which land forces receive short notice to deploy. Yet the Army must strive to achieve 'best effect' arrival and quick operational success through 'overmatch' capability. This sequence of events may occur in conditions in which Australian forces are not always required to defeat hostile forces in symmetrical tests of military strength. Instead, forces may be expected to operate in an atmosphere of violence in complex political situations against ambiguous adversaries and among noncombatants. As a result, the Army must improve its cultural, legal and ethical understanding of the complexity of modern military operations and be constantly prepared for the diverse contingencies that are likely to be required of ground forces by the Australian Government.

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STRATEGY

REGIONALISM VERSUS GLOBALISM*

AUSTRALIA'S DEFENCE STRATEGY AFTER 11 SEPTEMBER 2001

MAJOR STEPHANIE HODSON

On 11 September 2001, the world's perception of warfare changed. The al-Qa'ida terrorist attacks on the United States were not launched against an individual country as much as a particular system of values and beliefs. Recognising this reality, countries around the world, including Australia, joined a coalition in order to fight a 'War against Terror'. The attacks of 11 September were an example of an asymmetric warfare strategy that integrated three types of political violence: terror, suicide and mass destruction.¹ Typically, asymmetric tactics are unconventional tactics employed by non-state groups (based on ideological, religious, ethic or illegal activities) to counter states with conventional military strengths. An asymmetric threat may manifest itself as international civil disobedience, criminality, terrorism, cyber warfare, low-level military action and in the future may include the use of weapons of mass destruction. Asymmetric warfare is not a new phenomenon, but its use by al-Qa'ida on 11 September clearly demonstrated the increasing global reach of non-state groups.²

* This article is based on an essay that won second prize in the Chief of Army's Essay Competition for 2003.

This article reviews the tension that has developed between regionalist and globalist schools of thought in Australian defence strategy since 2000. Regionalists, such as Paul Dibb, believe that the fundamentals of Australian defence policy are sound and require only marginal changes.³ Globalists, such as Alan Dupont, tend to believe that Australia's defence strategy, as articulated in *Defence 2000*, has major failings due to a significant mismatch between strategy, force structure and the ability of the Australian Defence Force (ADF) to meet emerging asymmetrical threats.⁴ The globalist critique is that Australia's forces are currently too focused on an unlikely conventional threat to mainland Australia from the region and are not properly structured to deal with a new era of multiple threats that reflect global uncertainty. The main focus of the article is a comparative analysis between the contending regional and global approaches to the defence of Australia. From such a comparative analysis, it is possible to draw conclusions about the usefulness of Australia's current defence posture in the new century.

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THE EVOLUTION OF 'DEFENCE OF AUSTRALIA' STRATEGY

Following the publication of the 1976 Defence White Paper, Australia developed a continental defence strategy based on 'defence of Australia'. This strategy of defending the Australian mainland reversed a 'forward defence' policy from the 1950s and 1960s. 'Defence of Australia' doctrine originally focused on continental geography, although more recently supporters of the policy have referred to themselves as 'regionalists'. A common feature of the doctrine, however, is its heavy reliance on conventional military forces.⁵

Critics of the regionalist approach, such as Alan Dupont, argue that current defence strategy ignores the increasing diversity and globalisation of threats, the declining relevance of geography in strategy, and the increasing importance of non-military and non-state actors in global security.⁶ For Dupont, the ADF is not properly structured for the type of deployments to which it has been committed since 1999. Too much of the defence budget is committed to technologically advanced but expensive ships and aircraft that the ADF rarely uses. Dupont believes that the ADF needs more 'niche capabilities' alongside additional land forces that are equipped for a wide range of contingencies across the threat spectrum. Such forces must be capable of being deployed rapidly with adequate protection, sustainment, and command and control.⁷ The ADF must also be able to meet transnational threats

such as people smuggling, money laundering and drug trafficking. In addition, not only must the ADF be capable of winning wars, but it must have the capacity to secure peace.⁸

Defence commentators such as Paul Dibb, who are associated with the status quo, have responded by labelling Dupont's approach as 'expeditionary'.⁹ The use of this term is unfortunate because it suggests the deployment of large, self-reliant forces more in line with the post-Cold War British approach to defence than that of Australia.¹⁰ The approach that Dupont outlined is one in which Australia requires important niche capabilities to defend its interests when participating in international coalitions. It is an approach that is more 'global' than 'expeditionary' in character.¹¹

Dibb believes that the fundamental question for Australia is how to prepare for immediate asymmetric and low-level contingences without risking conventional defence preparation. He argues that the regional security threats that underlie traditional defence of Australia strategic thinking have not changed and that preparing for potentially short-term transitory threats may risk long-term national security.¹² For Dibb, the primacy of a geographical defence of Australia is based on such factors as popular support for the policy, the instability of the Asia-Pacific region, the deterrent effect of the ADF and the clarity that the policy provides for force structure priorities within a limited budget. Supporters of the regionalist approach argue that the most effective way to contribute to global security is to be able to deal with security in Australia's own region.¹³

Since 1999, the ADF has experienced the highest level of operational tempo since the Vietnam War. Since 2001, operations have included the commitment to the international coalition against terrorism, an ongoing deployment to East Timor, border protection duties in Australian waters, and a nation-building mission in the Solomon Islands.¹⁴ Defence personnel are deployed both regionally and globally, with Australia employing both niche capabilities, notably Special Forces, and technologically advanced assets such as ships and aircraft.

The crux of the regionalist versus globalist debate is whether a force structure narrowly designed to meet conventional threats can continue to give an Australian government the options that it requires in order to meet the rise of transnational threats in the post-11 September environment. Australian military personnel have performed admirably in all the situations required of them to date, but the Minister for Defence, Senator Robert Hill, has posed the question: 'Are we offering the full support that they [ADF personnel] really need and deserve?'¹⁵

Supporters of the regionalist approach argue that the most effective way to contribute to global security is to be able to deal with security in Australia's own region.

**DEFENCE 2000 AND THE 2003 DEFENCE UPDATE:
IMPLICATIONS FOR CHANGE**

Defence 2000 provides a blueprint for the ADF's future force structure and options, with the main priority being 'to maintain the capacity to defend Australian territory from any credible attack without relying on help from the combat forces of any other country'.¹⁶ Other responsibilities of the ADF include fostering the security of the immediate neighbourhood, promoting stability and cooperation in South-East Asia, supporting the maintenance of strategic stability in the wider Asia-Pacific region and providing support to global security. *Defence 2000* was clearly based on the proposition that a balanced conventional force was the most appropriate approach to meet this range of contingencies and diverse threats.¹⁷

Defence 2000 was, however, overtaken by events. Following 11 September 2001, the 'War on Terror', the terrorist attack on Australians in Bali in 2002 and increased concerns about the proliferation of weapons of mass destruction, the Government released *Australia's National Security: A Defence Update 2003*.¹⁸ In this document, issued in February 2003, the Government acknowledged that, while the strategic circumstances facing Australia have rapidly changed, the principles set out in *Defence 2000* remain sound. As a result, *Australia's National Security* does not suggest any fundamental change to the priorities of defence policy nor does it propose significant changes to the size and role of the ADF. Instead, it recommends some reassessment of areas of the defence capability program and of expenditure. The document states that the Government will fast-track the timetable for various capabilities already identified in *Defence 2000*, such as intelligence and troop lift helicopters alongside improvements in special forces and interoperability for coalition operations.

In many respects, the 2003 Defence Update adopted a middle road. The document acknowledges the importance of the defence of continental Australia to long-term national security, but also attempts to deal with the reality of a changing threat environment. It is significant that the document appears to suggest that global security issues will play a more important role in shaping ADF force structure. Nonetheless, *Australia's National Security* does not deal with the most difficult issue facing Australian defence planners: what long-term capabilities may need to be stalled or even abandoned if there is to be a greater emphasis on global rather than

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national or regional threats. In an interview at the launch of the Defence Update, Senator Robert Hill indicated the need for considerable additional debate on the future direction of defence policy.¹⁹

In his book on the management of Australian defence preparedness, Alan Hinge argues that a consistent feature of Australian defence policy since the 1970s has been the tendency to favour technological modernisation of force structure over operational readiness.²⁰ It is possible that *Australia's National Security* signals a change in this practice. Over the past two years, in a series of interviews and talks, Senator Hill has suggested an increasing commitment to improving operational readiness for more ADF deployments that may be global in character.²¹ The wars in Afghanistan and Iraq, and the ADF's mission to stabilise the Solomon Islands demonstrate the importance for the Government to have recourse to a range of realistic military options.

At present there are probably two major strategic dilemmas that the Australian Government is facing. The first dilemma is finding the correct level of versatility required within the ADF's force structure in order to ensure operational preparedness and still be able to plan to meet long-term defence requirements.²² Hinge describes this dilemma as being a 'hot' or 'cold' problem. Strategists have to decide between a 'hot' optimisation of forces for short-warning conflict and nonconventional conflict, or a 'cold' concentration on equipping Australian forces in order to meet medium- or high-level conventional threats that may arise in the future. It is a dilemma that lies at the core of the regionalism versus globalism debate in defence policy. A major criticism that Woodman has made of *Defence 2000* is that it contented itself with identifying a range of emergent transnational threats but failed to provide sufficient options on how to counter these threats other than through the development of a balanced conventional force.²³

While the 2003 Defence Update has provided some of the detail that was missing in *Defence 2000*, a mismatch still exists between assessed risks and stated priorities. For example, both documents state that a geographical defence of the continent remains the primary force-structure determinant for the ADF despite the low risk of a conventional military attack being launched against Australia. Moreover, the types of tasks required to deal with asymmetric threats are described as occasional tasks that might intrude on the core need to prepare a conventional defence of Australian territory.²⁴

At the same time, however, *Australia's National Security* recognises that the threat from terrorism is not transitory but is probably permanent.²⁵ As a result, the ADF is developing significant capabilities to deal with a range of nonconventional threats even though in theory these are not described as the core task facing the ADF. In the light of these inherent contradictions in Australian strategic doctrine, and the fact that global security issues appear to be influencing force structure decisions, there is a need for a significant review of strategic direction in the near future.

Hinge's study of preparedness goes on to describe a second dilemma facing Australian strategic practice: that of the 'consume' or 'invest' resource allocation problem. Consumption of resources in meeting present operations reduces the amount of finance and skills that can be invested in long-term capability development.²⁶ One of *Defence 2000's* strengths was the document's clear commitment to significant long-term funding and to systematic review of capability development.²⁷ The unexpected tempo of operations and their increased expenditure requirements mean that the Department of Defence is facing serious budgetary challenges. Indeed, Senator Hill has indicated that some long-term capabilities might need to be either delayed or even abandoned in the future.²⁸

It is likely ... that in the long term the strategic dilemmas that have emerged to face Australian planners since 2000 will only be comprehensively resolved by the development of a new Defence White Paper.

CONCLUSION

Australia faces a changing global threat environment. This reality is reflected in the tension that has arisen between a traditional geographical and regionalist approach to defence policy and that of a wider transformational and global approach to strategy. At the core of the debate is the issue of whether a force structure designed to meet traditional conventional threats in our regional environment can continue to give the Australian Government the flexible options that the latter requires in order to meet the growing transnational threats of the post-11 September environment.

Defence 2000 was intended to provide a blueprint for force structure into the 21st century in a way that attempted to address both conventional and asymmetric threats. However, the aim of the document is to develop capabilities over a decade. Unfortunately, operational requirements have necessitated a re-evaluation of Australia's defence capabilities, and this reality is reflected in the 2003 Defence Update. The latter publication suggests that, in the future, the Government may fast-track the timetable for a variety of military capabilities in order to try to strike a balanced position between contending regional and global defence demands. It is likely, however, that in the long term the strategic dilemmas that have emerged to face Australian planners since 2000 will only be comprehensively resolved by the development of a new Defence White Paper.

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SPECIAL OPERATIONS

TRUST, INFLUENCE AND NETWORKS

CREATING CONDITIONS FOR NONCONVENTIONAL ASSISTED RECOVERY IN URBAN AREAS OF THE MIDDLE EAST

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The recovery of isolated American and coalition personnel has been one of the highest priorities of successive US military and political leaders throughout the 20th century. Since the advent of the helicopter, combat search and rescue techniques, and personnel recovery doctrine have been based on conventional military principles. American dominance in conventional warfare, however, encourages potential adversaries to pursue asymmetric approaches to combat. Until recently, there was a perception that the United States had an aversion to sustaining casualties in combat, and this perception encouraged its enemies to exploit effectively urban environments against this weakness. As one writer has noted, ‘cities offer physical cover—three-dimensional urban terrain—and political cover ... [and] more stringent rules of engagement associated with the presence of noncombatants’.¹

In taking advantage of the urban environment, an enemy is able to conceal his forces behind a shield of noncombatants and use urban structures for camouflage, thereby nullifying US advantages in both heavy and precision weapons. Through employing such methods, an adversary stands to gain significant combat advantages. Moreover, the increase in low-intensity conflicts and urban operations has resulted in

a higher risk for US and coalition personnel in becoming isolated in areas that may be too perilous for the United States to undertake conventional recovery missions. In the future, therefore, establishing a comprehensive nonconventional assisted recovery (NAR) strategy will be critical if the United States is to carry out a full range of military operations successfully. Understanding the formation, organisation and operations of informal networks represents one of the most important factors that contribute to the success of NAR operations. Such informal networks, both within the adversary populations and within US agencies, can be exploited in order to maximise the chances of successful personnel-recovery operations.

This article argues that the types of informal networks that are found in the urban environments of the Middle East are capable of facilitating successful NAR operations. The article evaluates conditions in urban areas of the Middle East and examines informal networks in terms of use in mounting successful NAR operations. The article also briefly analyses the techniques of personnel recovery in World War II France and in Iraq in 2003. The overall aim is to try to define those principles and requirements that are necessary for military exploitation of informal networks in NAR operations. Future NAR doctrine development should involve a meticulous examination of the informal networks that are found in both Middle Eastern cities and in the urban areas of the world.

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CURRENT US DOCTRINE FOR PERSONNEL RECOVERY

The draft version of military doctrine for personnel recovery entitled 'Joint Doctrine for Personnel Recovery' (JP 3-50) is projected for publication at the end of 2004.² This document is overwhelmingly conventional in tone and addresses the issue of NAR in only one paragraph. Moreover, this particular program for personnel recovery is compartmentalised with regard to specific tactics, techniques and procedures. Yet, the doctrinal principles for successful NAR should be available to, and understood by, all members of the military community since any service may be called on to play a role in such operations.

Apart from JP 3-50, other documents that contain doctrinal guidance for military commanders with regard to NAR operations include *Special Forces Personnel Recovery* (FM 3-05.231), 'Nonconventional Assisted Recovery in the Department of Defense' (Department of Defense Instruction 2310.6), and 'Personnel Recovery' (United States Special Operations Command Directive 525-21).³ The second

and third of these documents relate primarily to national and strategic objectives involved in NAR operations. Since FM 3-05.231, *Special Forces Personnel Recovery*, is current and approved doctrine, and focuses exclusively on the actual implementation of NAR by Special Forces, it will be the primary document to which the authors will refer in this article. In FM 3-05.231, NAR is defined as:

Evader recovery conducted by SOF [special operations forces] UW [unconventional warfare] ground and maritime forces and OGAs [other government agencies] who are specially trained to develop NAR infrastructure, and interface with, or employ, indigenous or surrogate personnel. These forces operate in uncertain or hostile areas where CSAR [conventional search and rescue] capability is either infeasible, inaccessible, or does not exist to contact, authenticate, support, move, and exfiltrate isolated personnel back to friendly control. NAR forces generally deploy into their assigned areas before strike operations and provide the JFC [joint force commander] with a coordinated PR [personnel recovery] capability for as long as the force remains viable.⁴

US doctrinal sources tend to define unconventional assisted recovery separately. In this sense, unconventional assisted recovery may be regarded as simply NAR conducted exclusively by Special Operations Forces. For the purposes of this article, the authors will discuss the general concept of NAR and will address any exceptions that may apply to Special Operations.

In *Special Forces Personnel Recovery*, doctrine lists five specific tasks for NAR embracing contact, authentication, support, movement and exfiltration of personnel to friendly control.⁵ In order to fulfill these tasks, military forces establish recovery teams and recovery mechanisms. A recovery team involves individuals or groups, while a recovery mechanism normally refers to the type of infrastructure required to support the five tasks of NAR. This mechanism may include indigenous forces or civilians from inside a given operational area and, 'depending on its size and range, an RM [recovery mechanism] can vary the nature of its actions from overt to covert to clandestine'.⁶

NAR doctrine also recognises the difference between conventional and nonconventional personnel recovery operations. These differences include the degree of political risk, the nature of the operational techniques employed, the relative independence of recovery forces from friendly support, a requirement for detailed operational intelligence and the possible use of indigenous or surrogate forces. A novel feature of NAR is the possibility of using informal networks to meet objectives.

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NONCONVENTIONAL ASSISTED RECOVERY AND THE USE OF INFORMAL NETWORKS

Middle Eastern specialist, Guilain Denoeux, has noted that, in the absence of popular political institutions, informal networks thrive in underdeveloped regions of the world. He states that, in the Third World in general:

... the lack of political organizations enjoying wide popular support has led informal groups and associations to assume functions—including mediating disputes, allocating resources, conveying information and providing for order and social integration—that, in more institutionalized political settings, have become the responsibility of formal organizations.⁷

Such networks offer meeting places, contacts and channels for the circulation and communication of information, and ‘because of their informal nature, they are hard for governments to control and locate.’⁸ Urban areas in the Middle East are no exception to the rule of informal networks. Most states in the region do not have the resources or capacity to meet the formal socioeconomic needs of their populations. As several writers have observed, many urban areas in the Middle East often represent an institutionalised agglomeration of associations whose activities are very different from those of the incorporated cities of the Western world.⁹ As a result, people in many Middle Eastern urban areas use informal networks to fulfil a variety of social needs.

In terms of NAR activities, these informal networks can either threaten or facilitate recovery operations. The key to success would appear to lie in identifying a typology of networks that can be exploited. Denoeux lists four specific types of network that are most important in the Middle East: the *clientelist*, the *occupational*, the *religious* and the *residential*. In order to facilitate NAR operations, US forces must develop a degree of trustworthiness within these networks. Trust is based on three factors: reputation, performance and appearance.¹⁰ Developing a genuine reputation for goodwill in the minds of potential collaborators is therefore vitally important. Promise and performance must be matched, and US forces must be sincere in their concern for the safety and livelihood of those surrogates that assist the United States in the conduct of NAR operations. Balancing the three factors of reputation, performance and appearance will help develop a solid foundation of relational trust that will help in ensuring the committed support of NAR surrogates. In assessing the impact of different types of informal networks in the Middle East in the conduct of successful NAR

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operations, it is important to discuss their special characteristics and to evaluate ways of exploiting networks by establishing effective incentive programs in order to ensure indigenous support for NAR operations.

THE CLIENTELIST NETWORK

The patron–client relationship, or the clientelist, is a network typified by the symbiotic interaction of individuals of differing social status. A typical example in the contemporary Middle East is the relationship between local notables and the ruling elite. The local notable usually represents a respected member of the community and acts as a mediator in airing popular concerns to the ruling government. In return, the notable can provide community cooperation for the elites in the central government. As Denoeux puts it, ‘they [the notables] and their respective families [have] often entered into alliances and coalitions among themselves, creating in the process an informal urban leadership structure.’¹¹

While a clientelist network can be exploited to facilitate NAR operations, it requires careful analysis of local conditions. For example, in Middle Eastern states with relatively centralised regimes, government officials, patrons and brokers may often belong to the same structure.

In fact, patrons and government officials may often be the same individuals.¹² This type of strong client–patron relationship suggests that attempting to recruit and utilise local notables for NAR operations might be a counterproductive exercise. Regimes with weaker central authority are probably more promising in the conduct of NAR in that the relationship between ruling elites and local notables may be tenuous. Under these circumstances, careful recruiting and vetting of local notables may facilitate the creation of recovery mechanisms in designated areas for recovery. A careful social–political and intelligence study of local relationships will be vital if US forces intend to utilise a clientelist network to facilitate NAR operations.

In clientelist networks, building trust will be vital and should be based on an American reputation for delivering consistent rewards to those local notables who collaborate in the establishment of recovery networks. America’s performance will most likely be judged against the US forces’ ability to protect not only the physical safety, but also the community power-base, of local notables who collaborate as surrogates. Moreover, US forces must appear to have assertive control

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over events, and this control should be clearly observable to the surrogates. If US forces falter in presenting an image of control, then it is likely that there will be a diminution of trust. As a result, the ability of US forces to influence the required network will decline.

THE OCCUPATIONAL NETWORK

In Middle Eastern conditions, the occupational network brings craftsmen and tradesmen together in a beneficial and cooperative relationship. Although formal organisations such as craft guilds exist in the Middle East, the informal networks that sustain them are often more significant in influence. A unique aspect of Middle Eastern occupational networks is the *bazaari*. The term *bazaari* has been described as ‘a generic term that encompasses craftsmen, merchants, shopkeepers, and many moneylenders.’¹³ Despite developments in manufacturing and business, leading to trade unions, occupational networks remain important throughout the Arab world.

The possibility of exploiting occupational networks for NAR operations is probably greater than within clientelist networks. However, like the latter’s, the characteristics of occupational networks would require careful and judicious study by US intelligence. The character of Middle Eastern small business centred on the *bazaari* creates an environment that is potentially favourable to US forces and opens up avenues to provide incentives for cooperation. Conversely, it must be noted that, in some authoritarian regimes such as Syria, the central government maintains tight control over the business sector through selected agents in both the *bazaari* and the trade unions. Another potential problem with exploiting an occupational network is that the *bazaari* may be closely linked to Islam and associated with the mosque, as in contemporary Iran. Weak or adversarial relations between a Middle Eastern regime, its national religious leaders and the *bazaari* provide perhaps the best opportunities for exploiting occupational networks in NAR operations.

Building trust between US interests and Middle Eastern occupational networks will most likely rest on the former’s reputation for honouring payments. Such payments should follow the local capitalist norms that attracted the network to collaborate initially. The United States should avoid large-scale lump-sum payments to occupational surrogates, but instead follow a bargaining strategy based on a system of consistent payments to those that cooperate within the network. Such payments have the effect of signalling a long-term commitment by the US Government.

THE RELIGIOUS NETWORK

Middle Eastern religious networks are not well understood in Western culture. Since militant Islamist groups cannot be regarded as networks that facilitate American objectives, the United States must concentrate on collaboration with what Asef Bayat has called 'social Islamist' networks.¹⁴ Such networks are primarily instruments of the middle and lower middle class and help to provide many basic social services to communities, sometimes through local independent mosques. Religious networks are often cellular in organisation and have proven to be effective at disseminating political information throughout the Islamic world.

The exploitation of Islamic religious networks for the purpose of NAR operations would obviously be extremely difficult. Within Western government and educational institutions, there is insufficient information available about the organisation and motivations of such networks. Another reason that NAR operations would be difficult to organise in conjunction with Islamic religious networks is the inability of the United States to provide tangible incentives for those that collaborate. Beyond finance, US agencies lack the capability to compete with the cultural and moral incentives that indigenous Islamic communities provide.

Because Western culture is often encumbered by widespread ignorance of Middle Eastern religious values, the United States might attempt to build a reliable reputation based on respect for, and support of, the various social services that religious networks provide to Arab communities. Such an approach should be reinforced by actively fostering social services both domestically and internationally. Finally, and arguably most importantly, the United States should try to ensure social commitment while maintaining a religious neutrality. Any attempt to manipulate the theological aspects of religious networks is likely to result in undermining the usefulness of such networks, which become less trustworthy.

THE RESIDENTIAL NETWORK

Residential networks are perhaps the most cohesive of the Middle East's informal networks. These networks usually reflect neighbourhoods with similar ethnic and religious, and often occupational, backgrounds. Residential communities face common daily problems such as poor living conditions, limited access to schools, a paucity of medical facilities and a lack of participation in various cultural organisations. Government control of residential areas may also often be conducted through informally recognised community leaders who communicate residential concerns to ruling elites and mediate between the latter and the residents in return for a form of socio-political control over some elements in the neighbourhood.

Exploiting the Middle Eastern residential network offers both advantages and disadvantages for NAR operations. If a sympathetic residential network can be identified for exploitation, it is likely to prove very reliable. Since residential networks cut across the full spectrum of informal networks, the United States can offer incentives that might meet majority needs within a given community. The main disadvantage with residential networks is that they are often too limited in area control to provide support beyond immediate community boundaries. As Denoeux observes, the group emotions that unite the members of a given quarter often translate themselves into ‘feelings of animosity toward the inhabitants of other quarters, especially neighboring ones, who [can be] easily identified as collective enemies.’¹⁵

Within residential networks, cultivating respect for the community’s autonomy can facilitate the development of trust. Building a tradition, both domestically and internationally, of supporting community initiatives is one way of attempting to cultivate this type of reputation. US forces can win community support by fostering the civic health of those informal residential networks that offer their support to NAR. Finally, to reinforce their trustworthiness, US representatives should communicate with the network as a collection of citizens, not as a form of politico-military officialdom. In other words, recruiting efforts should be undertaken by local figures that are recognised advocates of the community.

EXPLOITING AND INFLUENCING INFORMAL NETWORKS IN THE MIDDLE EAST

Having identified the four types of informal networks that dominate the social landscape of the Middle East, it is now possible to discuss techniques of psychological persuasion in developing support from American NAR operations. As Robert Cialdini has pointed out, techniques of psychological persuasion include reciprocity, authority, social proof, consistency, commitment and liking.¹⁶ These techniques are most effective when used in concert with one another and are applicable across cultures. However, the use of specific techniques, or combinations thereof, may vary from society to society.

The technique of reciprocity is useful in that offering a particular incentive yields a return and builds influence. The technique of using local authority figures may increase influence because people in informal networks often associate the credibility of a situation with support from figures of authority. Similarly, authority is linked to the phenomenon of social proof in that local acceptance reinforces

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the power of influence. Taskings and incentives that are consistent with the self-image and desires of the target community may bolster the trust and commitment of network members. Finally, the simple reality of liking between individuals or between groups may facilitate persuasion and agreement.

It is important to note, however, that attempting to exploit informal networks with strong loyalties to a centralised regime is likely to be counterproductive. The informal network that exhibits dissatisfaction with its ruling political regime is the proper target. Such networks contain the marginalised within their ranks. Marginalised figures may often avoid outward defiance, but they may also possess a useful potential to oppose ruling elites, particularly when the correct circumstances present themselves—possibly in NAR operations.

INFLUENCING THE CLIENTELIST NETWORK

Within the clientelist informal network, NAR planners must seek to identify vulnerable areas such as the presence of political instability. For instance, urban areas are often inherently unstable with regard to the structure of patron–client relationships because of the pluralism and competitiveness of the human environment. Local notables who are dissatisfied with the central regime may have the patronage to persuade their clients to move into collaboration with US forces. By applying Cialdini’s techniques of persuasion, NAR planners may be able to avoid offering inappropriate incentives. For example, a typical Western approach might involve offering money as a standard incentive. While monetary means may be effective under certain circumstances, they may prove highly counterproductive in others. US forces may be able to employ the techniques of authority and social proof if network members respected by the targeted local notable are already supporting American operations.

Reciprocity and consistency offer perhaps the best opportunity to exploit a clientelist informal network. Using a combination of money, post-conflict political support, offers of asylum and other incentives may garner patron support within the network. The method of liking, in and of itself, is probably the least effective unless one encounters clients that exhibit strong liberal democratic or capitalist tendencies. Identifying the system of patronage based on wealth and prestige within a clientelist network is the key factor in winning local support for NAR objectives.

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INFLUENCING THE OCCUPATIONAL NETWORK

In informal occupational networks, such factors as high taxation, restrictive trade, constraints on domestic manufacturing, and limitations on the autonomy of unions or *bazaari* may yield collaborators for NAR operations. Individuals or modern business concerns with international economic links with Western nations or market expansion motives may be open to persuasion since they tend to exhibit 'a relatively cosmopolitan... and liberal outlook'.¹⁷

Most Middle Eastern businesses and bazaars tend to be established in urban areas with manufacturing, transportation and human resources. The occupational networks that result from the interaction of these factors may provide a key node for NAR operations. As with clientelist networks, persons of authority and symbols of social proof may be enlisted to win over supporters within occupational networks. Moreover, garnering the support of large international companies for US recovery operations may provide some influence in this area.

Reciprocity and consistency still appear to be the strongest methods of persuasion in winning the support of occupational networks. The latter are designed for profit and the use of money. Occupational networks provide post-conflict trade support, access to emerging technologies, offers of asylum and the opportunity to conduct business in the United States, and represent a melange of methods for co-opting support. The factor of liking may also reinforce the support of those members of occupational networks who possess ideals of free-market capitalism.

Occupational networks appear not to be as hierarchical as clientelist networks, making patronage perhaps less of a factor. Nonetheless, it may still be possible to use managers in the occupational network as a node of the network for information, resources and support.

INFLUENCING THE RELIGIOUS NETWORK

Islamic religious networks arguably present the greatest challenge to exploitation by US forces in support of NAR operations. Nevertheless, there are some possibilities for cooperation that those concerned with NAR operations should not overlook. For instance, religious establishments that are strongly repressed by centralised regimes might provide useful allies. Some secular authoritarian regimes such as Algeria and Egypt often demonstrate a disregard for Islamic values, thus breeding a resentment that is sometimes translated into surrogacy. Friendly forces might be able to persuade various individuals or groups within social Islamist groups to assist in recovery operations.

Since many urban areas in the Middle East are overpopulated, with high levels of unemployment, support from social Islamic networks is a significant feature. The possibility of approaching some religious networks in areas that central

governments have neglected and that are short on resources may result in avenues of support for NAR operations.

Similarly, factors of authority may be influential. For instance, the support of a Muslim Brotherhood or similar social Islamic groups might help persuade the target network to assist NAR operations. Given contemporary Middle Eastern conditions, however, one should not be overly optimistic in enlisting the support of Islamic religious networks. Techniques of reciprocity and consistency may provide a means of influence possibly through financial aid and post-conflict community initiatives. It is doubtful that the technique of liking will assist NAR efforts, largely due to differences in political values and social beliefs between Americans and the Islamist religious networks of the Middle East.

In sum, the exploitation of religious networks appears to be the least likely means of facilitating successful NAR operations. Nonetheless, a socio-political analysis of Islamic religion and its dynamics in the Middle East remains important in a region in which the United States is engaged both politically and militarily for the foreseeable future.

INFLUENCING THE RESIDENTIAL NETWORK

Informal residential networks represent a mosaic of the three networks discussed above. As a result, identifying critical vulnerabilities for exploiting support in residential networks encompasses all of the criteria that the authors have already outlined. Individuals and groups targeted for collaboration and support in clientelist, occupational and religious networks will also have influence in their residential communities. Bringing the additional resources of a residential network to bear may provide expanded NAR capabilities.

US forces can also exploit residential areas by using individuals who possess strong community ties. For instance, in many urban areas, civil servants with control of urban information, utilities and infrastructure might be of great value in assisting NAR operations. Authority and social proof can again be employed as effective methods of persuasion. On the other hand, since neighbouring communities are often social rivals, cultivating authority may be of more value.

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Such an approach does, however, imply that NAR operatives have already infiltrated and exploited a clientelist network. Reciprocity and consistency are also vital features in winning the support of residential networks. The incentives discussed earlier—money, post-conflict support, asylum, and community-specific enticements—may all be effective in garnering support for recovery operations. The United States must ensure that such incentives are consistent with the character and needs of those in the network. Liking can reinforce these techniques within communities that reflect a desire to live by Western standards, but this technique is, by itself, unlikely to be sufficient in winning collaboration.

The exploitation of informal residential networks can serve as a force multiplier for NAR operations, especially when combined with the resources of one or more of the other networks. The residential informal network is reliable in that it cuts across social, religious and cultural boundaries, and has great potential in providing supporters. However, those concerned with NAR operations need to realise that the residential network is limited in terms of the autonomous support that it can provide. Finally, residential areas have geographical limitations, while their frequent social rivalries with other communities act to restrict the amount of resources they can provide to NAR operations.

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INFORMAL NETWORKS IN PERSONNEL RECOVERY OPERATIONS

Since World War II, the United States has become reliant primarily on conventional means for personnel recovery. In South Vietnam during the 1960s and early 1970s and in Iraq during Operation *Desert Storm* in the early 1990s, US forces primarily used conventional search-and-rescue methods to recover personnel. There was no existing infrastructure for nonconventional recovery of service personnel. This situation evolved over a period of three decades and was based on the prevalence of a short-term mentality for the conduct of combat operations. The emphasis on conventional search-and-rescue techniques have been further reinforced by an inherent mistrust on the part of American authorities of surrogate personnel in areas of operation. It appears that the current operational tempo has at last forced military planners to give serious reconsideration to the existing conventional paradigm. Observations of informal network support for NAR operations in World War II and Operation *Iraqi Freedom* are also useful in illustrating the unconventional character of recovery operations.

WORLD WAR II AND INFORMAL NETWORK EXPLOITATION

The case of the evasion networks used in Occupied France during World War II provides a good example of the unconventional exploitation of informal networks. While the French case is not transferable to conditions in the Middle East, it does provide insights into the use of informal networks. Establishing and financing escape lines in Occupied France was a daunting task for Allied sympathisers and members of the French Resistance. Nonetheless, informal occupational networks did assist in the escape of large numbers of Allied military personnel.

One member of a French occupational network was the entrepreneur, Louis Nouveau, who was recruited by Ian Garrow, a member of the British 51st Highland Division, who developed one of the earliest escape lines in France after 1940. Significantly, Nouveau was a commodity trader with a large number of social contacts, and he took advantage of them to help Garrow in his escape work.¹⁸ Nouveau did not support Allied escape operations for monetary reasons, but because of his sentiments as a French patriot. Patriotism may not represent a tangible incentive; nonetheless, from the Allied perspective, it was an exploitable incentive.

French informal residential networks proved critical for successful recovery of Allied personnel. In most cases, Allied personnel seeking to evade German capture were protected by local families in their homes or farms. The local people took enormous risks in providing shelter for Allied pilots and agents since German soldiers routinely searched residences and provided rewards for the capture of Allied military personnel. Security concerns forced the French resistance to move airmen from house to house in villages and towns. Moreover, in their search for Allied military personnel, the Germans sometimes resorted to taking French hostages. As one downed pilot, Paul O'Connell, recalled, 'I feared that the spouses and the relatives of the hostages might turn us in, if they knew anything, to obtain the release of their loved ones'.¹⁹ Yet, in this case and in many others, local French communities refused to betray the whereabouts of Allied personnel to the German authorities.

Observations of informal network support for NAR operations in World War II and Operation *Iraqi Freedom* are also useful in illustrating the unconventional character of recovery operations.

OPERATION IRAQI FREEDOM AND INFORMAL NETWORK EXPLOITATION:
THE CASE OF PRIVATE JESSICA LYNCH

While NAR operations in Operation *Iraqi Freedom* remain extremely sensitive and have not yet been published, the rescue of US Army Private, Jessica Lynch, illustrates the potential benefits of employing an informal occupational network to support personnel recovery operations. Although open-source information on the Lynch case remains controversial and divergent, what is available suggests that support from an informal Iraqi occupational network was instrumental in Lynch's successful recovery.

Private Lynch was attached to the 507th Maintenance Company, under the operational control of V Corps. Tactical control was invested in the 3rd Fire Support Battalion operating with the 5th Battalion, 52nd Air Defense Artillery (Patriot). On 23 March 2003, during the rapid advance on Baghdad, Lynch's group became isolated from its convoy. After coming under heavy attack in the city of An-Nasiriyah, seven members of the company were captured, including the seriously injured Lynch. The other six prisoners were moved from the hospital where they were treated, but Lynch remained in place because of the seriousness of her wounds.²⁰

While only one Iraqi individual was regarded as actively collaborating with US forces, other Iraqi professionals were also involved. The main US source concerning Lynch's whereabouts was an Iraqi lawyer named Mohammed al-Rehaief. The latter informed elements of the US Marine Corps of Lynch's location and status; he then returned to the hospital where she was being held in order to obtain more actionable intelligence. Al-Rehaief knew the hospital staff well since his wife worked there as a nurse. Indeed, members of the hospital staff are reported to have attempted to drive Lynch to the safety of friendly forces themselves before being forced to return due to the hostility that they encountered at Iraqi and US checkpoints.²¹ Later, in a Congressional resolution, al-Rehaief was lauded for his 'compassion, bravery and humanity' in assisting in Lynch's rescue. Despite the obvious bravery of this individual, it is significant that he specifically requested asylum for himself and his family.²²

While the Lynch case may not be a true representation of NAR, it does serve to highlight the presence of informal occupational networks among Middle Eastern professionals. Moreover, the Lynch case suggests the value of attempting to establish long-term ties with individuals in such networks throughout the Middle East.

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Because of their amenability to tangible incentives, the informal occupational networks appear to offer opportunities for the United States to develop useful links in NAR operations.

CONCLUSION

The increase in low-intensity conflicts and military operations other than war in urban areas throughout the Middle East and American military involvement in the region has created a need to re-evaluate the principles and techniques of NAR operations. The authors of this article have argued that the utilisation of informal networks is an important factor in the successful conduct of personnel recovery operations. Understanding the structures, motivations and communications of various informal networks is crucial to proper utilisation of such networks. For NAR planners and operators, such an understanding must encompass the informal networks of both potential adversaries and their own organisations.

Because Third World adversaries are most likely to apply asymmetric approaches to warfare, the exploitation of informal networks is likely to offer US forces the best opportunities for NAR. The Middle East is now an area in which the United States has a high level of military involvement. Consequently, understanding the clientelist, occupational, religious and residential relationships in urban Arab populations and knowledge about the character of the regimes in the region may prove to be critical in future military operations. In current Middle Eastern conditions, clientelist and occupational networks offer the greatest opportunity for establishing extensive recovery mechanisms. However, residential networks are capable of offering more reliability and security, albeit in a limited geographic area. Due to their lack of theological understanding and the inadequacy of incentive provisions currently available, US forces should, in general, avoid the exploitation of religious networks.

Fostering efficient and positive informal networks within organisations and between agencies responsible for NAR is also important in achieving success. The sharing of interpersonal skills and knowledge is essential in order to cut across organisational boundaries in hierarchical bureaucracies. Without this ability, time-sensitive actionable intelligence may be lost. By maintaining strong and positive connectivity among domestic networks, military planners will be able to consolidate multiple resources effectively towards one overarching mission—recovering isolated personnel.

Increasingly, an unconventional paradigm for personnel recovery operations is required—one that is transformational, rather than transitional, in character.

It is important for senior leaders to recognise and support the existence of informal networks both outside and inside their organisations. If the United States wishes to improve the chances of recovering isolated personnel lost during operations, developing trust in surrogate forces will be essential. Increasingly, an unconventional paradigm for personnel recovery operations is required—one that is transformational, rather than transitional, in character. Planning, coordinating and employing operations around informal networks will require judicious study and intellectual effort on the part of NAR implementers. Without such a concerted effort, US forces risk failing in one of their most important military priorities.

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EFFECTS–BASED OPERATIONS

CHAOS VERSUS PREDICTABILITY

A CRITIQUE OF EFFECTS–BASED OPERATIONS

BRIGADIER JUSTIN KELLY AND LIEUTENANT COLONEL DAVID KILCULLEN

‘The manoeuvrist approach ... concentrates on the judicious massing of effects rather than massing of physical force.’

Australian Army, *Future Land Warfare 2032* (1999)

Carl von Clausewitz’s insight that war is a free and creative act resting on a clash of wills reflects an enduring reality of war, namely that antagonists always seek to exploit their perceived strengths and weaknesses in order to try to impose control. Modern defence forces in general, and armies in particular, usually apply force as a means to an end. They employ violence as a tool in order to generate physical, cognitive and emotional responses in an adversary. In short, the application of military force in contemporary operations is normally ‘effects seeking’. This article argues that, while the aspirations advanced by supporters of effects-based operations (EBO) are laudable, they may not be achievable, particularly in the land warfare environment. The main reasons that EBO may not be practical lie in the process of politics and its relationship with strategy. There are also problems pertaining to the character of democracy, the dynamics of physical force and the nature of war.

THE BACKGROUND TO CONTEMPORARY EBO THEORY

Emerging Australian Defence Force (ADF) doctrine regards effects as ‘physical, functional or psychological outcomes, events or consequences that result from specific military or non-military actions.’¹ Unfortunately, such a definition does not distinguish an effects-seeking application of military force from the new and transformational notion of EBO. Military planning has always been about applying force, or the threat of force, to achieve predetermined effects. How, then, does EBO differ from the normal process of applying lethal force?

An EBO approach to military art first emerged in the early 1990s and was essentially a restatement of classical Soviet deep-operations theory. Under the form of deep operations advanced in the 1920s and 1930s by the Soviet theorists Georgi

Isserson and Mikhail Tukhachevskii, an enemy military force was seen in terms of systems theory. If attacking forces neutralised selected nodes or linking mechanisms within an operating system, then the feedback and control messages essential for the systemic functioning of a modern military force could be disrupted. As a result, the various components of the enemy’s force structure would collapse.

The American air strategist, John Warden, developed a ‘concentric rings’ model of strategy, which was applied by the United States Air Force (USAF) during Operation *Desert Storm* in 1990–91. The ‘rings strategy’ was essentially a restatement of earlier Soviet ideas. Warden’s approach was aimed at paralysing the Iraqi leadership from the ‘inside out’ rather than from the ‘outside in’ by directly attacking its command-and-control structures. Warden’s approach relied heavily on the application of new precision technologies to succeed and, in essence, the ‘concentric rings’ theory became a method of applying physical and electromagnetic force to impose paralysis on an enemy. In many respects, Warden developed an information-age variation of the *Blitzkrieg* technique. In the early 1990s, EBO theory was clearly a case of old wine in new bottles.

Over the past decade, however, EBO enthusiasts have become more ambitious and their approach to the use of force has become more sophisticated. Growing interest in, and capability for, information warfare seemingly offers unprecedented opportunities to integrate military force with a range of ‘whole of government’ (or, better still, ‘whole of nation’) actions. Such comprehensive operations will, in theory, mesh both physical and informational ‘forces’ together in order to generate tailored effects and thus modify the behaviour of an enemy.

An EBO approach to military art first emerged in the early 1990s and was essentially a restatement of classical Soviet deep-operations theory.

THE RATIONALE BEHIND MODERN EBO

The British military theorist, Basil Liddell Hart, once pointed out that the object of war should not be victory so much as a better peace. In such an approach, the use of force as a psychological as well as a physical instrument. Since wars are clashes of opposing wills, a fundamental element in prosecuting them is to seek to change the mind, or behaviour, of one's enemy. The philosophy of contending wills underlies the theory and practice of much of contemporary armed conflict, including aspects of manoeuvre warfare, information operations and certain types of strategic air bombardment.

The rationale behind EBO is that generating change in an enemy's behaviour is best accomplished by applying levers or actions. If the change that we wish to make is in the enemy's mind or will, then the levers applied, for the most part, are moral ones relating to the enemy's willpower or psychological state. The application of moral levers against an adversary employs both *kinetic* (bomb, shell and bullet) and *non-kinetic* (psychological operations, deception, and electronic warfare) means. The rise of non-kinetic means reflects a shift in the international political mood towards greater restraint in warfare, at least in the West. Restraint in the use of physical force has been facilitated by the parallel rise of techniques of discrimination and precision targeting, which minimise collateral damage.

The emergence of EBO clearly reflects these growing trends and seeks to analyse situations in sufficient depth in order to enable a combination of kinetic and non-kinetic means to be applied. The aim is to manage the perceptions and reactions of a designated target group. The EBO construct relies on the ability to send clear, unambiguous signals to an enemy. An effects-based approach also relies on the enemy's ability to understand and respond to these signals in a predictable, or at least rational, way. An effects-based approach assumes, in essence, that an enemy will apply conventional damage assessment and determine logically that objectives are unachievable or that the costs involved in gaining success outweigh the gains. Fundamentally, EBO advocates believe that an enemy is a cognitive being that can be dislocated, shocked or disrupted into submission or negotiation by a series of offensive actions whose effects and outcomes can be calculated by an attacking force.

The rationale behind EBO is that generating change in an enemy's behaviour is best accomplished by applying levers or actions.

EBO, POLITICS AND STRATEGY

Clausewitz deduced from history—and wars since Clausewitz’s time have confirmed his view—that war assumes radically different forms over time. Clausewitz argued that war manifests itself through the interaction of primordial violence, hatred and enmity. Expressed in 21st-century terms, Clausewitz saw war as being shaped by a complex interplay of imponderables that could be given rationality only by policy.²

In Clausewitz’s analysis, war is highly complex, verging on chaos, and is a phenomenon that is probably not amenable to reductive scientific deduction. In short, war requires constant adaptation in order to balance ends with means and possible costs with potential benefits. Given war’s underlying atmosphere of chaos, it is reasonable to approach the conduct of armed conflict as ‘a system of expedients’, a series of opportunistic responses by politico-military leaders to the objective situations that they encounter. Moreover, chaos makes war a complex adaptive system, rather than a closed or equilibrium-based system.

By its very nature, war involves an interaction between protagonists. Hatred, fear, contempt, cold calculation of costs and risks, the desire for personal prestige, raw chance, ignorance, misunderstanding and misconception of motivations interact, and do so under the scrutiny of media, non-government organisations, allies, friends, enemies and the neutral or undecided. As Clausewitz warned, war will constantly tend to escape human control, unleashing forces that rapidly take any conflict out of the realm of conscious rational policy and into the irrational, edge-of-chaos realm of hatred and violence. As a result, any decision to apply force in order to resolve a dispute is akin to ‘a roll of the dice’.

Moreover, interaction with an enemy always occurs at three levels of war: strategic, operational and tactical. In modern war, events at the tactical level can have immediate impact at the strategic level, while even the most straightforward form of conflict—between two similar, state-based adversaries employing regular armed forces—can become immensely complex. Each side’s rational, irrational and non-rational elements interact at all three levels of war simultaneously. The task of comprehending the whole complex, abstract reality of war is, therefore, enormously difficult.

Success in contemporary operations may not always involve traditional tests of military strength, but rather the use of force in ambiguous and complex conditions.

Clausewitz also repeatedly discussed the interaction of war and *Politik*. This German word has two related but different meanings in English: policy and politics. Policy is usually defined as the rational alignment of means and ends. Politics, on the other hand, are unpredictable. As two writers have noted,

Clausewitz tells us that the conscious conduct of war (strategy, etc.) *should* be a continuation of rational calculation and policy, but also that war *inevitably* originates and exists within the chaotic, unpredictable realm of politics.³

If we are to accept the views of Clausewitz—and both proponents and critics of EBO generally accept his views—then two objections to the EBO construct emerge. The first objection concerns the idea that we can apply stimuli to any polity and then be able to predict the responses reliably. The second objection is that generating an analysis sophisticated enough to derive coherent and rational whole-of-government inputs that are required by EBO is probably unattainable. In essence, whatever we may do, the target polity will tend to react unpredictably; and in any case, we will have great problems deciding what to do in the first place.

SENDING MESSAGES TO AN ENEMY: LESSONS FROM MILITARY HISTORY

In support of the two objections outlined above, it is worth examining some practical examples of attempted EBO from the historical record.

ROBERT S. MCNAMARA AND VIETNAM, 1965–68

The most advanced historical example of an EBO can be found in the Vietnam War. During the years between 1965 and 1968, the Office of the Secretary of Defense under Robert S. McNamara used a sophisticated statistical model to track whether or not the United States was winning the war against the Viet Cong and North Vietnamese forces in South-East Asia. Using a wide range of metrics and a computer algorithm that calculated a series of measures of effectiveness, McNamara's office collated data on the effects being generated against key performance indicators.

Using this data, US analysts sought to gauge the overall progress of the war and then issue directions to the US military with the intention of generating specific effects. The effects aimed at were highly sophisticated—intended not only to achieve a particular battlefield result but also to 'send messages' (as McNamara expressed it) to North Vietnam, other communist countries and to America's allies. McNamara's systems-analysis approach was based on the most sophisticated computer modelling of its day and on ideas developed by deterrence theorists such as Thomas C. Schelling. The Pentagon attempted to apply military actions in a sophisticated manner in order to generate effects beyond the immediate battlefield.

Ultimately, however, US strategy failed to deliver its promised benefits, primarily because the North Vietnamese behaved according to a different rationale from the Americans. Hanoi sought total victory while the United States was seeking success through graduated military means. The messages that MacNamara was attempting to send were not sufficiently clear or persuasive for the intended audience while reactions from both the international community and US domestic politics undermined the key message of American resolve and placed tangible limits around what military power could achieve. One deduction from the Vietnam experience is that effective EBO—at least in democracies—relies on a constrained political debate and broad domestic consensus that is untrammelled by widespread media intrusion or dissent.

... generating an analysis sophisticated enough to derive coherent and rational whole-of-government inputs that are required by EBO is probably unattainable.

THE 1915 DARDANELLES CAMPAIGN

Another example of the strengths and weaknesses of EBO is the campaign in the Dardanelles in 1915 during World War I. By the end of 1914, the emerging stalemate in France led Winston Churchill, then First Lord of the Admiralty, to propose a ‘peripheral strategy’ against the Central Powers of Germany, Austria–Hungary and Turkey. Churchill’s assessment—although he would not have used such terminology—was that the Turkish cabinet represented a weak node, and was a vulnerable and accessible target in the overall systems architecture of the Central Powers. In modern terms, the Dardanelles campaign was a supporting move in an overall EBO concept. The aim was to apply tailored effects to generate psychological pressure on the Turkish cabinet, with the intent to knock Turkey out of the war and ultimately break the deadlock in France.

The collapse of Turkey would, in turn, open up a supply route to Britain’s ally Russia, and unbalance the Balkans, possibly causing Austria–Hungary to focus exclusively on a new theatre, thereby isolating Germany in Central Europe. To achieve the desired strategic effect, the elimination of Turkey from the Central Powers required an operational naval bombardment of Constantinople. Operational requirements in turn meant passing battleships through the Bosphorus and the tactical neutralisation of the Turkish forts covering the Dardanelles. Naval bombardment proved unsuccessful, however, and ground forces had to be landed in order to seize them in an attempt to open the Dardanelles to Britain and France.

If Churchill's scheme had succeeded, it is possible that the war could have ended as early as 1916 and that the Russian Revolution might have been avoided. However, the Dardanelles plan required a chain of favourable outcomes: the silencing of the forts, the passage through the Bosphorus, the successful bombardment of Constantinople, the collapse of Turkish resolve, the subsequent realignment of Balkan allegiances and Austria–Hungary's reassertion of its historical role in the Balkans. At least three links in this chain required countries to behave in a particular way in accordance with a specific stimulus—that which is known in EBO terms as 'response pairing'. Due to tactical and operational problems, largely unconnected with this embryonic EBO approach, the Dardanelles campaign failed, and led to over 20 000 Allied deaths and substantially higher Turkish casualties.

Yet, in the face of Allied landings on their own soil, the Turks, far from weakening in resolve to the war, became increasingly staunch allies to Germany. It is therefore important to note that, in order to achieve high-level effects in EBO, a sequence of subordinate effects is generated. Each of these subordinate effects is a necessary precursor to achieving an overall strategic outcome, but they may have unintended or unpredictable consequences.

THE STRATEGIC AIR OFFENSIVE AGAINST GERMANY, 1943–45

A final example of historical EBO can be found in the Allied strategic bombing campaign against Germany in World War II. The bomber offensive was intended to shatter the will of the German population and undermine their resolve to continue the war. By late 1943, aerial bombing was consuming over 50 per cent of Allied industrial and financial resources. The strategic war aims of the members of the Grand Alliance against the Axis powers required the unconditional surrender of Germany. The strategic air offensive was a symbol of that demand for capitulation.

The average German's atavistic fear of the Russians and the grim realities of the Nazi police state made unconditional surrender unlikely. Germany fought on until the final defeat. In these circumstances, the devastation wreaked by the bomber offensive may have had the opposite effect: strengthening, rather than weakening, German will to resist. By the time the failure of the bomber offensive had become apparent, the investment in lives and effort that it had consumed precluded any retreat from the avowed strategy—not from a military point of view but because of a political commitment to Nazi Germany's destruction by the Allied powers.

DEVELOPING A VIABLE APPROACH TO EFFECTS-BASED OPERATIONS

In order to construct a practical effects-based approach to strategy, military practitioners must ensure that their military actions send the right messages. Wrong messages, or unwanted effects, must be minimised. It is also necessary to address the same question that afflicted the Vietnam-era military theorists: how to assess what effects friendly actions are generating, both in terms of immediate, direct or first-order effects, and in terms of second- and third-order effects.

What then of the idea of ‘tailored effects’? The ADF’s emerging doctrine defines ‘tailored effects’ as the right effects delivered at the right place and the right time to produce ‘decisive effect’ (that which used to be called victory). These effects are delivered through a whole-of-nation and whole-of-government effort. It is worth noting here that there are enormous problems assembling a whole-of-nation response to non-military issues such as dry land salting or environmental flows in major rivers. What realistic chance, then, is there of developing such responses or, even more difficult, ‘whole of coalition responses’ to issues such as the Taliban’s harbouring of al-Qa’ida terrorists or to the presence of an Iraqi weapons of mass destruction program?

Sending messages is a valid objective, but dissonant messages are difficult to eliminate, and they can give hope and encouragement to an enemy. Moreover, liberal democracies will inevitably generate many dissonant messages as they search for a political consensus on the use of force. It may not be possible to generate a sufficiently clear and unambiguous set of messages in order to win. Despite the neatness of a theoretical model of the enemy as a system, systems are never static. Rather they are *adaptive*, and any action we may seek to take may change the response of an adversary in ways that are unpredictable and incalculable in their effects. In addition, the enemy is not a system in isolation. Instead, the protagonists, the environment and the third parties involved are all part of a larger international system. As US Secretary of Defense, Donald Rumsfeld, recently put it, ‘the enemy has a vote’.

EBO also requires a comprehensive understanding of the cultural lenses through which messages will be perceived. Compassion may be misconstrued as weakness, and resolve as inflexibility. In this respect, an understanding of organisational culture is important. For example, an enemy’s command-and-control culture may be so inured to chaos that no action that is taken to disrupt the adversary’s

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communications systems will yield effect. The enemy may be a clan, or a tribe, or—as in the case of some groups linked to the terrorist group Jemaah Islamiyah—quite literally a family.

The cost–benefit calculus that might cause a rational nation-state to cease military hostilities on the basis that ‘I have suffered too much damage, I must cease fighting’ may be irrelevant to a non-state movement whose weapon of choice is the suicide bomber. In EBO, understanding the cultural dimension of any given conflict is a critical force multiplier. Yet, even thorough cultural knowledge confers no guarantee of how key players will react when under attack.

A further complication is that the meaning of a message for one actor in a complex adaptive system may differ from its meaning for another. This paradox applies not only to neutral onlookers or members of the world community, but also to potential future enemies within ambiguous environments. A good example is the experience of US forces in Somalia in 1993. With the benefit of hindsight, we now know that the character of the US deployment convinced the *habr gidr* clan, led by Mohammed Farah Aideed, that American generals were overly cautious in risking their troops’ lives in urban areas. In other words, American policy in Somalia was hostage to the casualty factor. US military activity early in the mission was intended to demonstrate restraint but it was an approach that was interpreted by the Aideed camp as being a form of Western weakness. Aideed’s later use of the ‘urban thicket’ to defy the United States in the city of Mogadishu was based on his perceptions of American military behaviour.

In reality, the use of any physical force may unleash unintended consequences. For the United States, the dropping of twenty-three guided bombs on to a Bahgdad café in order to try to kill a lunching Saddam Hussein in March 2003 may well have been a legitimate act of war. However, the families of the Iraqi civilians who were maimed or killed are unlikely to see the event through the same cost–benefit calculus as the USAF. The possible second- and third-order effects of such military actions are impossible to foresee. Such foresight would require knowledge of all possible effects, including ‘effects of effects.’ This knowledge would have to encompass details of the enemy, the environment, and the civilian and noncombatant elements, including family connections. Developing such a sequence of knowledge in military operations is almost impossible.

The guerrilla hiding in a cave remains the husband, brother, son or cousin of someone in the indigenous population. Determining the implications of killing the guerrilla requires a comprehensive knowledge of everyone in the cave and all of the

In EBO, understanding the cultural dimension of any given conflict is a critical force multiplier.

possible responses of the web of loyalties and kinship that extend from that cave. As T. E. Lawrence once remarked, in any insurgency, casualties are like pebbles dropped in a pond. A widening ripple of sadness and anger radiates from each person killed and wounded, creating a series of unpredictable effects.

The questions for EBO advocates are manifest. In facing an uprising in a city in Iraq, for example, to what extent will a measured response be perceived as weakness, and by whom, and how strong a response will be perceived as heavy-handed, and by whom? Against what criteria do we assess the perceptions of each of these groups? Which of these groups is most important today, and which will be so tomorrow? If people sheltering in a mosque are killing a country's soldiers, how does one balance the perceptions of a domestic political audience with those of an international audience? Another dilemma involves regarding mosques as sanctuaries when, in fact, they might be bases from which an enemy may launch operations that cost the lives of soldiers. There is also the problem of adhering to Rules of Engagement that may constrain military initiative. The latter may create a situation in which a popular perception grows that it is the insurgents, not the incumbents, who are in charge of events on the ground.

Arriving at a bureaucratic or political consensus on what effects should be generated is extremely difficult in liberal Western democracies. In most Western nations, sophisticated inter-agency assessments and management mechanisms do not currently exist for such detailed planning. Even if a consensus about action could be achieved, there is no guarantee that it would succeed in answering the key question of how the enemy might interpret military actions and what reactions they might cause.

... the principal military contribution to an EBO approach is in building the capacity for discrimination in attack.

THE FUTURE OF EFFECTS-BASED OPERATIONS: SOME IMPLICATIONS FOR THE AUSTRALIAN ARMY

Despite the reservations expressed throughout this article, the ideal that underlies EBO—of a more productive, less bloody and more efficient way to resolve conflict in order to arrive at a better peace—remains highly attractive. The difficulties that we face in execution should not deter us from working towards that ideal.

Only the most frivolous military operations will not be effects-seeking. To the extent that it is possible, the principal military contribution to an EBO approach is in building the capacity for discrimination in attack. Precision permits advanced forces to minimise the unintended consequences of an attack. Yet precision capa-

bilities may also result in the positioning of soldiers in close proximity to hostile or potentially hostile populations. Such a development threatens to create close-combat situations with little or no warning. To cope with this type of contingency, the Australian Army will need to enhance the agility and versatility of its soldiers by altering the balance between narrow, vocationally based ‘just-in-time’ training and broader, developmental ‘just-in-case’ education. In particular, Australian soldiers will require cultural and language capabilities that they can use at the tactical level of war.

The Army will also need to address solutions to several other issues. First, the land force will require enhanced capabilities for Joint Interagency Combined Task Force operations, especially in urban operations, including a need for combat groupings to provide the capability for control of, and a measure of support for, civil populations. Second, there will be a need for ground forces to focus on discrimination rather than merely precision, with an attendant requirement for tailored lethality, especially from bursting munitions. Third, in the realm of minor tactics, the Army may need to pursue a wider dissemination of non-lethal, or less lethal weapons along a greater readiness to apply incapacitating and crowd control agents. Fourth, in the future, the Army will require a greater readiness to apply a mission-oriented approach to force protection alongside a comprehensive approach to individual body armour. Finally, the Army needs to reduce reliance on contractors in areas of operations.

CONCLUSION

On present trends, it seems probable that EBO will remain at best a worthy aspiration. The pluralistic nature of Western democracies, including that of Australia, limits the coherence and unity of an effects-based approach to strategy. Moreover, Clausewitz’s trinity of chance, uncertainty and friction continues to characterise war and will make anticipation of even the first-order consequences of military action highly conjectural. Interaction between personalities and events means that any given military action may have totally unpredictable effects on different actors. In addition, a systems approach to warfare does not guarantee that second- and third-order consequences of actions can be predicted, let alone managed.

Clausewitz was right when he argued that the best outcome that a military force could achieve was to disarm an enemy. The use of force will continue to be an imperfect instrument of persuasion, while coercion is likely to be unpredictable in its moral impact on an enemy. Uniformed professionals should strive for the achievement of positive effects from their military actions while working hard to minimise negative outcomes. Developing a capacity to be more discriminating in the use of armed force is perhaps the closest that Australian military practitioners can hope to come to the ideal of executing effects-based operations.

ENDNOTES

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- 3 Edward Villacres and Christopher Bassford, 'Reclaiming the Clausewitzian Trinity', *Parameters: US Army War College Quarterly*, Autumn 1995, p. 3.

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EFFECTS-BASED OPERATIONS

THE DIMENSIONS OF EFFECTS-BASED OPERATIONS

A VIEW FROM SINGAPORE

LIEUTENANT COLONEL JOSHUA HO

The swift and overwhelming nature of the initial warfighting phase of Operation *Iraqi Freedom* has prompted some defence experts to proclaim the arrival of a new way of war designed around Effects-based Operations (EBO). In essence, such operations seek to move away from an attrition and linear approach to warfare. In an effects-based philosophy, campaign planning seeks to identify the outcomes that are required from fighting and then to derive the means required to achieve such outcomes. This article examines the dimensions of EBO by analysing the origin and evolution of an effects-based approach to warfare and some of the challenges involved in implementing them.

THE ORIGINS AND DEVELOPMENT OF EFFECTS-BASED OPERATIONS

Implicit in EBO theory is the focus on shaping the behaviour of an adversary to such an extent that an enemy will eventually prefer surrender over fighting. Such an approach is, of course, not new. An effects-based approach to warfare resonates with the ideas of the classical military theorists Sun Tzu and Carl von Clausewitz, both of whom discussed the importance of psychological aspects in war in their respective works.¹ Several 20th-century thinkers, notably B. H. Liddell Hart and

Giulio Douhet, also emphasised the need to influence the behaviour of an adversary by using either an indirect strategy or by striking deep with air power in order to paralyse an opponent.²

EBO can be used at each level of war: tactical, operational and strategic. At the tactical level of war, EBO can act as a planning methodology for the conduct of operations. A tactical planning methodology emphasises the use of both military and nonmilitary means to attack an adversary. EBO can also be considered as a means to conduct efficient tactical targeting by seeking to exploit the weak points of a particular enemy and viewing the adversary's capabilities in terms of a 'complex adaptive system'. Such a view of EBO focuses on the destruction of critical nodes in the enemy's infrastructure and command-and-control system in order to achieve a desired effect. Tactical-level EBO also envisage the conduct of parallel operations by employing simultaneous rather than sequential attack.³ Effects-based targeting was used extensively by Coalition forces in Operation *Iraqi Freedom* in 2003 to try to avoid collateral damage, limit civilian casualties and achieve operational objectives with the use of discriminate force.

At the operational level of war, EBO has come to be synonymous with rapid dominance, or the 'shock and awe' school of warfare. The characteristics of rapid dominance have been described as knowledge of oneself, of one's adversary and of the environment, combined with brilliance in execution, rapidity of action and control of the operating environment.⁴ Achieving rapid dominance often relies on the employment of a series of unrelenting strikes from sea, air, land and space forces in order to persuade an enemy to end military resistance.

For example, early in Operation *Iraqi Freedom*, cruise missile strikes and air bombardment of hundreds of targets proceeded in conjunction with the use of ground-based manoeuvre forces. The result was a rapid drive by Coalition forces towards Baghdad and the collapse of the Iraqi regime in three weeks. At the operational level of war, EBO also requires collaboration between a theatre commander and other key actors in a campaign in order to deal with an adversary that might be complex and adaptive. Interaction and networking between the operational commander and his tactical commanders in the field are required at both the planning and the execution phases

An effects-based approach to warfare resonates with the ideas of the classical military theorists Sun Tzu and Carl von Clausewitz ...

EBO can be used at each level of war: tactical, operational and strategic.

of a campaign.⁵ At the strategic level of war, EBO can be viewed as the application of all the resources of national power: political, economic, diplomatic and military. From a strategic perspective, EBO advocates believe that integration of all resources improves the effectiveness of a campaign.⁶

THE PRACTICE OF EFFECTS-BASED OPERATIONS

Successful EBO require the application of advanced information technologies that can create precise effects in warfare. Detection technologies such as unmanned aerial vehicles (UAVs) and space-based platforms with attendant sensors have evolved to such an extent that achieving positive identification for fixed installations and static weapons emplacements has become a reality. A combination of sensing capabilities across the electromagnetic spectrum on platforms that operate at different altitudes permits the military to perform continuous surveillance and targeting.

In Operation *Iraqi Freedom*, the US National Reconnaissance Office (NRO) employed three advanced KH-11 type visible and infrared imaging spacecraft and several Lacrosse all-weather imaging radar spacecraft. These assets provided 24-hour coverage in order to identify fixed installations, detect Iraqi armour, and locate fixed emplacements and missiles launches. At least one of the satellites was in a position to survey portions of the battlefield every few hours with about twelve passes over Iraq occurring per day. In total, during the Iraq War, space-based assets detected twenty-six missile launches, and 1493 static infrared and 186 high-explosive events.⁷

A high-altitude UAV, the Global Hawk, was used as a strike coordination and reconnaissance asset, and was particularly effective in locating air defence and surface-to-surface missiles. Global Hawk's synthetic aperture radar had the advantage of being able to operate in inclement weather, including sandstorms. In twenty-four hours, a single Global Hawk was able to locate up to fifty surface-to-air missile (SAM) launchers, more than ten SAM batteries and approximately seventy missile transport vehicles. A medium-altitude UAV, such as Predator, was used both as a surveillance vehicle and as an autonomous strike asset. During the warfighting phase of Operation *Iraqi Freedom*, the United States also extensively employed manned surveillance assets such as the U-2 high-altitude surveillance aircraft and the Joint Surveillance and Target Attack Radar System (JSTARS) in order to improve surveillance and targeting.⁸

At the operational level of war, EBO has come to be synonymous with rapid dominance, or the 'shock and awe' school of warfare.

Another valuable resource in sensing technology was derived from signal intelligence using electronic eavesdropping with the RC 135 Rivet Joint aircraft. Electronic eavesdropping was used to sift airwaves for mobile-phone transmissions in order to locate a user's position. Such electronic capabilities proved particularly useful in plotting the whereabouts of SAMs and SAM launchers once their operators betrayed their positions through too much chatter.⁹ Elements of the Iraqi leadership were often located once they were forced to use high-frequency radio, which was easily intercepted because fibre-optic landline and public switching networks were interdicted by Coalition forces.¹⁰

Despite advances in sensing technologies during the 2003 Iraq war, current information capabilities are still unable to perform some critical functions. For example, they are unable to detect and identify high-value, well-protected mobile missile launchers or discriminate between military trucks and civilian vehicles. Nor can information technology easily detect and identify enemy forces hiding in complex terrain or in urban buildings.¹¹

At the operational level of war, EBO also requires collaboration between a theatre commander and other key actors in a campaign ...

EFFECTS-BASED OPERATIONS AND MANAGING KNOWLEDGE

Sensing must be accompanied by the use of physical force in order to create precise effects. Force might include precision missile strikes, ground manoeuvre, and special force and information operations. All of these forces were used in Operation *Iraqi Freedom*. While sensors collect information on an adversary, translating information into usable knowledge for EBO remains a significant challenge. Advanced militaries have developed various software and hardware models for facilitating targeting and behavioural management, and for dealing with complex adaptive systems.¹² Targeting models include Colonel John Warden's 'Five Rings' theory of aerospace warfare, designed to paralyse an enemy from the inside out rather than from the outside in by striking at command-and-control nodes. Variations of the Warden model include Jason Barlow's National Elements of Value (NEV) model and Maris McCrabb's Meta agent adaptation model, both of which are aimed at paralysis.¹³

The weakness of these various targeting models is the assumption that physical effects can be translated into behavioural outcomes. Current behavioural models try to incorporate both targeting calculation and a situationally aware, recognition-primed (SARP) decision-making approach in order to try to determine the required actions needed to shape an adversary's perceptions decisively.

The recognition-primed model of behaviour postulates that all decisions flow from precedents and analogies drawn from both current and previous situations that have been experienced by humans in real life.¹⁴

Behavioural models such as SARP do, however, often fail to recognise the adversary as a complex adaptive system. Such a system is one in which the interacting autonomous and semi-autonomous entities that comprise a system can successfully adjust their behaviour to resist pressures from external military forces. As a result, complex adaptive system modelling has included statistical and probabilistic methods that attempt to come to grips with nonlinear military behaviour of potential adversaries.¹⁵ Complex adaptive system modelling requires an approach to war that incorporates self-learning not simply in terms of technology but also in terms of understanding the enemy culturally. Unfortunately, the development of a cultural–military–economic model for EBO lags behind contemporary developments in information technology.¹⁶

The weakness of these various targeting models is the assumption that physical effects can be translated into behavioural outcomes.

CHALLENGES OF EFFECTS-BASED OPERATIONS

While EBO hold promise for the future of warfare through the application of economy of force, limited casualties and by minimising infrastructural damage, they are complex undertakings. Achieving economy of effort across a battlespace requires an array of information technology resources that deliver situational awareness. Such awareness, combined with knowledge of the enemy, confers the potential ability to anticipate enemy courses of action and the likelihood of bringing force to bear in order to direct effects at the right time and place. Such an approach demands a common network architecture that gives dispersed forces the power to concentrate a precise application of effects.

The range and depth of assets employed by the United States during Operation *Iraqi Freedom* suggest that the acquisition of military resources to conduct EBO is costly. The US military budget accounts for 42 per cent of global military expenditure and, in fact, is greater than the combined total of the next fourteen leading defence spending countries in the world.¹⁷ The United States has reached a high level of attainment

... the development of a cultural–military–economic model for EBO lags behind contemporary developments in information technology.

in areas of effects-based planning and targeting, and possibly in the conduct of rapid decisive operations. However, it has not yet mastered employing all resources of national power for conflict resolution—as evidenced by the postwar difficulties experienced in the occupation of Iraq.

CONCLUSION

To date, US attempts to implement EBO have been focused mainly on the technological dimension of war. Successful conduct of EBO requires more than the acquisition of sophisticated software and hardware systems. Despite all human efforts to instrumentalise war, a Clausewitzian fog remains inevitable in human conflict. As a result, it will continue to be necessary to focus strongly on the human dimension of war. Soldiers have to operate in complex environments and to confront uncertainty. In this respect, professional military education and the fundamentals of war remain important in producing ground forces capable of judgment.

EBO require educated humans ‘in the loop’ of decision-making in order to control the dynamics of combat effectively. Former US Marine Corps commandant, General Charles C. Krulak’s notion of a ‘strategic corporal’ having to exercise an exceptional degree of independence, maturity, restraint and judgment in the conduct of operations in the 21st century is likely to become an increasing reality in the future. In essence, success in EBO requires not only an array of technological devices, but a grasp of multidimensional skills by well-trained and knowledgeable military professionals who are capable of mastering chaos in the battlespace. With the human dimension at the forefront, it may not be an exaggeration that one commentator has gone so far as to describe EBO as being the equivalent of ‘PhD-level warfare.’¹⁸

Despite all human efforts
to instrumentalise war, a
Clausewitzian fog remains
inevitable in human conflict.

ENDNOTES

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JOINT OPERATIONS

THE AUSTRALIAN DEFENCE FORCE AND THE CONTINUING CHALLENGE OF AMPHIBIOUS WARFARE

LIEUTENANT COMMANDER BOB MOYSE, RAN

A remarkable change in the general thrust of Australian defence policy has occurred in the past eight years. In 1996, Australia's defence policy revolved around the Navy and Air Force defending the northern sea-air gap as if it were a moat. The Army's role was peripheral to the latter task and was confined to dealing with those enemy combatants that succeeded in penetrating the continental landmass. For a trade-dependent nation such as Australia, the concept of a continental-style defence policy ignored the fact that the national interest depended on a stable international environment that would require mobile forces to operate offshore in order to maintain international stability. In 2004, national defence policy has changed significantly and is focused on the ability to project military power beyond Australia's shores. While the term 'expeditionary warfare' may not appear in policy documents or departmental statements, the 'e' word has become the unspoken basis for operational and strategic thinking in the contemporary Australian Defence Force (ADF). This article examines the concepts that govern the ADF's approach to manoeuvre warfare and analyses how, in the future, Australia might best develop and employ amphibious forces in the littoral environment that dominates much of our area of strategic interest.

TOWARDS A MARITIME STRATEGY: THE ARMY AND MANOEUVRE OPERATIONS IN THE LITTORAL ENVIRONMENT

In the late 1990s, the Australian Army, seeking a more positive role for itself in national defence strategy, developed the Manoeuvre Operations in the Littoral Environment (MOLE) concept. This concept put the Army in the fortunate position of being an intellectual step ahead of the direction that national defence policy has taken in the wake of Australian intervention in East Timor. MOLE provided a vision of how the Army would contribute to a maritime strategy and preceded the 2000 Defence White Paper by almost three years. Indeed, in subtle ways, the MOLE concept has been extremely influential in the ADF's joint strategic planning processes. In ADF warfighting circles, littoral warfare is now grouped with 'land and littoral' rather than 'sea control and littoral'—a major philosophical change. The Army's current experimental process, known as *Headline*, is far more developed than either the Navy's *Headmark* or the Air Force's *Headway* programs. The *Headline* experimental framework has allowed the Army to take the conceptual lead in developing offshore littoral operations. As a result, rather than develop their own ideas on offshore missions, both the Navy and the Air Force have been dominated by the MOLE construct and its related concept of Entry by Air and Sea (EAS). Yet an important question remains unanswered: can MOLE, as conceived by the Army, ever be anything other than an aspiration?

It is important to note that the Army has only six infantry battalions at any significant degree of readiness. Furthermore, it is questionable whether there is a sufficient population base in Australia or the national political will to support the expansion of the land force. In order to understand what six battalions represent in regional military terms, it is useful to recall that the Malaysian and Indonesian armies field thirty-five and ninety-two regular infantry battalions respectively. Although numerical comparisons should never be equated with combat effectiveness, they do illustrate the point that Australia would be unable to support sustained land operations in the northern archipelagos. The Army's

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infantry battalions are, arguably, the nation's highest-value military assets. Indeed, they are scarcer than fighter aircraft and warships, on a par with submarines, and are more versatile than most air and sea platforms.

While most modern land-based manoeuvre warfare doctrines have been heavily influenced by World War II German *Blitzkrieg* techniques and Soviet deep-operations theory, these approaches often minimise the effects of complex terrain. Complex environments such as archipelagos do not lend themselves to decisive sweeping manoeuvres. It is also useful to remember that, after the stunning early successes of *Blitzkrieg* in 1940–41, the Germans were soundly defeated in attrition battles at Stalingrad and Kursk in 1942 and 1943 respectively. In the Asia-Pacific, much of the land environment is complex, being either delta or urban jungle. Nonetheless, the region is well suited to manoeuvre warfare, provided strategists understand that the medium for operations is the sea rather than the land. In Asia-Pacific conditions, an enemy is pinned not by Sun Tzu's 'ordinary force' on land, but by forces employing manoeuvre by water. In Australia's maritime archipelagic environment, the bulk of the region's strategic infrastructure is within 15 miles of the sea. By ensuring control of the sea, the ADF can take as much, or as little, of war on land as it chooses. Moreover, by adopting a maritime basis for manoeuvre warfare, the ADF would be able to gain far greater military value from its limited number of infantry battalions. A battalion group inserted ashore may amount to little more than a minor tactical force. In contrast, if a battalion group manoeuvres at sea, it represents an operational-level threat. Such a force, by being sea-mobile, can strike anywhere over a wide radius and can tie down opposing land-based forces that possess combat power many times larger than its own. A seaborne force represents an effective presence while avoiding an enemy's strength by the simple expedient of staying beyond reach.

In short, the way to control an archipelago is to control the sea. Such an approach represents not a narrow naval strategy but a broad maritime strategy in which joint forces are employed. While a maritime strategy includes an indispensable role for land forces, that role is not to take and hold territory as in classical land warfare. Rather, in joint maritime operations, the purpose of a land force is to capture points of tactical relevance and

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hold these only as long as necessary in order for the joint campaign plan to achieve its objectives. For example, in late World War II, when Allied forces faced the Japanese 17th Army in well-prepared defensive positions on Rabaul, they did not take the island by assault. Instead, the Allies took control of a number of nearby land areas using the sea, often against little or no opposition, and then established air bases. Aircraft were subsequently employed to establish local air superiority, thus permitting further Allied amphibious landings in the Admiralties and completely isolating Rabaul. Cut off from their supplies, the Japanese forces on Rabaul quickly ran out of fuel and ammunition, and became as irrelevant to Tokyo's war effort as if their island base had been physically overrun.

... if a battalion group manoeuvres at sea, it represents an operational-level threat.

MOLE AND MARITIME STRATEGY: THE PROBLEM OF WEIGHT VERSUS AGILITY

In its present form, MOLE is focused on gaining entry to the land environment as a prelude to allowing the Army to fight a decisive action. Even if the ADF possessed the necessary resources to achieve such an action, it is questionable whether throwing the entire deployable strength of the Army into a single land operation is the best way to conduct manoeuvre warfare within an archipelagic environment. The ADF's limited land forces are better employed by exploiting the natural isolation of archipelagic landmasses in order to avoid contact with strong enemy forces, and to take control of key transport and communication nodes in the medium of manoeuvre from the sea.

In order to achieve this operational effect, it is necessary to think differently about the use of combat power in littoral operations. The present focus of MOLE is concentrated on creating the conditions for the defeat of the enemy ashore. In terms of force development, this approach inevitably attempts to maximise the combat weight of the landing force. On present trends, the ADF can afford amphibious shipping that provides either mass or agility, but not both. In terms of mass, a fleet of converted commercial roll-on-roll-off ships could be acquired in order to permit the landing of an entire brigade with sufficient logistics for weeks of sustained fighting ashore. However, given the limited port infrastructure

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in the region, the cross-environmental agility of these ships would be extremely poor and their landing options would soon become highly predictable to any adversary. As a result, a land force might risk becoming caught in a slugging match on the beachhead.

In contrast, in terms of agility, the ADF could seek to create a land force in which combat weight would be traded in return for the flexibility to strike freely at enemy territory. In practical terms, an agile land force would be built around an ability to achieve surprise and then to maintain sufficient operational tempo to stay inside the enemy's decision cycle. Such a rate of operational tempo is probably unachievable within the confines of the current ADF force structure. For instance, in its naval platforms, the present ADF lacks the necessary cross-environmental agility for archipelagic operations. This weakness is partly due to institutional inexperience, but is also caused by the reality that any offshore mission in the region confronts the problem of using legacy equipment that was intended for continental defence rather than amphibious operations.

By opting for a future force of two landing platform helicopter dock (LHD) ships—vessels that are due for delivery in 2010 and 2013 respectively—the ADF has demonstrated a preference for agility over weight.¹ LHD is the US Navy's designation for a versatile assault ship with the capability to launch helicopters from a flight deck and landing craft from a rear dock. Despite the fact that the decision to acquire two LHDs does not accord with recommendations from any ADF wargaming experiments or from the work of the Defence Science and Technology Organisation, the decision is potentially the best solution to Australia's problem of executing archipelagic manoeuvre. In the future, two LHDs are likely to give the ADF the agility and tempo necessary to conduct genuine archipelagic manoeuvre warfare provided, of course, that the ships form part of a properly integrated joint capability and are not viewed simply as a collection of expensive and ill-matched platforms.

ORGANISATIONAL PROBLEMS IN THE DEVELOPMENT OF ADF AMPHIBIOUS CAPABILITY

Unfortunately, the ADF's current mechanisms for integrating the various elements that make up amphibious capability remain fragile. The LHD ship is characterised by a full-length flight deck and a floodable stern dock that contains landing craft or hovercraft. Two LHDs would allow an embarked force of about 1800 troops—similar in size to a US Marine Corps Marine Expeditionary Unit (MEU). With suitable aircraft and good flight-deck management, the LHD would allow an aviation combat team with heavy weapons to strike deep inland from over the horizon. Such missions would be facilitated and supported by both the Tiger armed reconnaissance helicopters and by the use of unmanned aerial vehicles (UAV).

Compared to the more usual LHD–LPD (Landing Platform Dock) mix of ships, the all-LHD solution has strength in the realm of aviation, but remains weak in terms of surface delivery for the simple reason that the LHD lacks organic landing craft. As a consequence, operations in inaccessible areas of the Asia-Pacific region will, in the future, require the use of helicopter types selected under the AIR 9000 acquisition project. Such rotary-wing aviation will need to be optimised during operations in order to generate a sufficient rate of effort on a congested flight deck. If aircraft take too long a time to deploy and only ‘fit on the lifts’ when folded, it would be the equivalent of buying a V8 engine and running it without four spark plugs—an expensive solution that could not possibly generate the output that it was designed to produce.

Unless there are overriding single-service reasons why Phase 2 of the AIR 9000 project should select a helicopter that is poorly suited to amphibious aviation, then spending scarce funds on two ships with large flat decks makes little operational sense. The money would probably be better used in maximising the surface delivery capability of landing craft from perhaps three or four LPDs. In short, the ADF needs to decide whether the type of amphibious ship is determining the type of helicopter acquisition or vice versa. The problem posed by AIR 9000 raises the broader question of where responsibility should lie in synchronising the various elements that make up the ADF’s joint amphibious capability.

In the ADF, while the Chief of Navy has the lead authority for amphibious development, the term ‘lead authority’ is not present in current ADF command-and-control doctrine. The Chief of Navy’s authority to direct the Army in amphibious warfare matters remains problematical. Recognising that the naval staff may lack the breadth to provide him with adequate advice, the Chief of Navy ordered the formation of the one-star level Joint Amphibious Steering Group (JASG). Although the latter was a sensible initiative, the JASG lacks executive authority over any of the elements that make up Australia’s amphibious capability and can be overridden by single-service interests.

Given this reality, it is at least arguable that the best method of synchronising the effective development of the ADF’s joint amphibious capability might be to place it under the authority of the Chief of the Capability Development Group (CCDG). Such a step might solve the problem of tri-service direction, but it also raises the question of the proper location of expert advice on amphibious matters. The difficulty here is that, while each of the single services can give useful advice on their particular piece of the amphibious jigsaw, they often only possess limited

... the ADF needs to decide whether the type of amphibious ship is determining the type of helicopter acquisition or vice versa.

comprehension of how the pieces fit together into a holistic picture. Since meaningful amphibious operations are all about detail, the melding of tri-service thinking is crucial to overall success. Vesting authority for amphibious development in the CCDG would be easier if the ADF possessed a joint tactical-level concept for amphibious operations. Yet, just as there is no joint authority to provide the ADF with detailed advice on amphibious matters, so there is no tri-service organisation charged with developing a joint amphibious tactical concept.

One solution might be for the Capability Development Group to align itself with the Australian Amphibious Task Group. Yet, if the CCDG were to approach the Commander Australian Amphibious Task Group (COMAUSATG) for professional advice, it would almost certainly place an added burden on an operational commander who is supported by a small staff and is preoccupied by a busy exercise schedule. Even if COMAUSATG possessed responsibility for contributing to ADF capability development, the reality is that the staff lack expertise in critical Army and Navy warfare disciplines. Another possible solution would be to entrust Commander Australian Navy Amphibious and Afloat Support Group (CANAASG) with amphibious warfare development. Yet there are again institutional difficulties with such an approach. The CANAASG's charter makes it clear that the group is concerned with equipment rather than with joint capability management. Moreover, the CANAASG staff is the smallest of the Navy's seven force element groups and looks after the widest range of ships, but it clearly lacks breadth of knowledge in important Army and Navy specialisations. In short, within the ADF, no single organisation or force element is directly responsible for Australia's joint amphibious capability development. No single entity 'owns' amphibious capability in the way that the Navy owns joint anti-submarine warfare or the Army owns joint offensive support.

... the British organisational system of amphibious command and control might serve as a model for Australia.

THE FUTURE ORGANISATION OF AMPHIBIOUS CAPABILITY IN THE ADF: TOWARDS THE BRITISH MODEL?

Any nation with a serious commitment to amphibious capability must have a clear point of responsibility. In this respect, the British organisational system of amphibious command and control might serve as a model for Australia. At present, the Royal Navy has two operational taskforce commanders working for the Commander-in-Chief of the Fleet. These component commanders, both two-star admirals, are designated as the Commander United Kingdom Marine Force and

the Commander United Kingdom Amphibious Force respectively. The former commands blue-water operations while the latter commands brown-water, or littoral, operations. The Commander of the United Kingdom Amphibious Force is, effectively, the owner of Britain's entire amphibious capability, including the ships, the landing force and two subordinate commands: the Commander Amphibious Task Force (CATF) and the Commander Landing Force (CLF).

The Commander of the British Amphibious Force is also the official Amphibious Warfare Authority and is recognised as such by the single-service chiefs and by the Ministry of Defence. In an Australian equivalent of the British system, the amphibious commander might be a one-star officer with a direct operational line to the Maritime Commander, Australia, and a line of responsibility to the CCDG. The present Commander of UK Amphibious Forces is a Royal Marine, the nearest equivalent to a purple uniform in the UK armed forces. In the absence of an ADF marine force, it is feasible that the Commander Australian Amphibious Force could become an alternating Army and Navy appointment.

CONCLUSION

If the ADF is seriously committed to 21st-century archipelagic manoeuvre warfare in the Asia-Pacific region, then it needs to recognise three factors. First, the Australian Army does not possess adequate numbers of troops to sustain an embroilment in hostile territory and must, as a result, thoroughly imbue itself with a manoeuvrist approach to all operational activities. Second, given the littoral nature of the Asia-Pacific region, all within the ADF must recognise that land force manoeuvre is predominantly a maritime activity. Finally, any operational concept developed must be tri-service both in tone and character. An intellectual and philosophical recognition of interdependence is vital because neither the Navy nor the Air Force can control the maritime environment without the Army. Australia must develop an acceptable joint operational concept for archipelagic manoeuvre warfare but, while doing so, it must recognise that the devil is always in the detail of bringing the various service components together.

The distinguished British inter-war military strategist, Major General J.F.C. Fuller, once said that the effectiveness of a nation's forces always starts with organisational structure. The ADF's structures are not designed to generate joint manoeuvre in the

An intellectual and philosophical recognition of interdependence is vital because neither the Navy nor the Air Force can control the maritime environment without the Army.

archipelagic environment to Australia's north. In terms of the region, the northern archipelagos from Java to Fiji are the most likely areas of operations for the ADF in the future. The first and most important step that the ADF needs to take in order to develop an effective amphibious capability is to rectify its organisational shortcomings. An advocate—an owner of the ADF's amphibious assets—needs to be created. Without this vital first step, single-service philosophies will always reign. The Navy will continue to think in terms of delivering a 'cargo' and the Army will continue to think that ships merely provide the land force with 'sea lift'. If amphibious warfare is left in the grip of single-service operational concepts, any attempt that the ADF might make to conduct effective archipelagic manoeuvre risks the pedestrian and attritional stalemate of another Anzio, Salerno or Gallipoli.

ENDNOTES

- 1 The 'sea-lift capability' in 2016 may provide bulk transport for follow-on forces.

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JOINT OPERATIONS

AN ARGUMENT FOR AUSTRALIAN AIR POWER AT SEA

LIEUTENANT TOM LEWIS, RAN

Australia's December 2000 Defence White Paper outlined a strategic posture dictated by two major imperatives. The first imperative was defence of the Australian continent and the second imperative was the need to participate in efforts to uphold global security. Since the al-Qa'ida terrorist attacks of 11 September 2001 on the United States and the Bali bombings of October 2002, the two imperatives have become intertwined. Participation in maintaining global security is now closely enmeshed with upholding the defence of the Australian continent.

In the current international security environment, the reality is that the Australian Defence Force (ADF) must go farther afield in order to safeguard the nation and its interests. As the Minister for Defence, Senator Robert Hill, put it in 2003, 'Australia's immediate region continues to face major challenges, making it more vulnerable to transnational security threats'.¹ The Minister went on to note that the changed global security environment meant that Australia's national interests could be directly

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Australian continent.

affected by events outside its immediate neighbourhood. Under these conditions, ADF involvement in coalition operations farther afield is more likely than at any time in the recent past. Involvement in coalition operations would probably entail the provision of important niche capabilities such as those deployed in the war against terror and those forward-deployed to the Middle East in 2002–03 for Operation *Bastille*. The Minister concluded by observing that, ‘if adverse trends in our region continue, there may also be increased calls on the ADF for tasks in Australia’s immediate neighbourhood’. He pointed to Operation *Bali Assist* as a recent example.²

The best way for the ADF to achieve force projection is for the Royal Australian Air Force (RAAF) to ‘take to the sea’ and for the Royal Australian Navy (RAN) to ensure that deployed forces possess effective organic air power. This article makes the case for the ADF to acquire two or more aircraft carriers that are equipped with F-35 Joint Strike Fighters flown by a mixture of RAAF and RAN pilots.

THE CASE FOR SEA-MOBILE AIR POWER: LESSONS FROM BRITAIN

Since the end of the Cold War, there has been a move towards expeditionary operations in Western armed forces. For example, the British have prepared for offshore operations in defence of their political interests. Elements of the Royal Air Force (RAF), equipped with the GR7 Harrier, are now configured as Joint Force Harrier—an element that ‘remains ready to deploy anywhere in the world with the Royal Navy’s (RN) Sea Harriers as part of a naval task force.’³ Recently the United Kingdom’s Ministry of Defence announced the building of two 60 000-tonne carriers by BAE Systems—the biggest in the RN’s history. Under the British plan, elements of the RAF, joined by the Fleet Air Arm equipped with the new Joint Strike Fighter, will have the capabilities of a carrier battle group, including land target attack, and will be deployable to wherever the British Government decides they are required.

Why is the capacity to deploy away from one’s own country important in military strategy? First, such a capacity follows one of the key Principles of War, namely offensive action. Put simply, it is preferable to take war to the enemy rather than to wait until the enemy brings war to you. Passivity in military strategy gives an adversary the initiative to prepare and to choose the battlefield. The principles of good strategic planning dictate that one should choose the time and place of an engagement, preferably upsetting the enemy’s preparations at the same time.

... it is preferable to take war to the enemy rather than to wait until the enemy brings war to you.

Second, in contemporary security conditions, the asymmetric threat posed by global terrorism means that a country such as Australia might have to attack an enemy's centre of gravity at a distance, as did the United States by striking against al-Qa'ida in Afghanistan and Saddam Hussein in Iraq. In turbulent times, rogue nations and organisations of militant Islam espousing totalitarian political creeds may seek to attack those countries that embrace democratic political alternatives. Australian defence analyst, Professor Paul Dibb, summed up Australia's strategic situation shortly after the 11 September 2001 attacks by stating:

... the asymmetric threat posed by global terrorism may mean that a country such as Australia might have to attack an enemy's centre of gravity at a distance ...

We face an arc of instability to our north, a weakened South-East Asia and an uncertain balance of power with the rise of China. Indonesia—the fourth largest country—has an unpredictable future. Prudent Australian defence planners must consider that Indonesia has the attributes of a friend and a potential adversary.⁴

Australia is part of a region that seems to be steadily becoming more politically unstable, thus jeopardising a national economic prosperity that is largely dependent on seaborne trade. As Lieutenant Commander Bob Moyse of the RAN has pointed out,

Some of Australia's most vital areas of interest lie ... in the Sea–Air–Land gap of the Indonesian Archipelago. About 95% of Australia's trade is carried by sea and most of this goes far to the north before turning east and west onto the world's shipping lanes. Any significant interference with this trade would have a devastating effect on the Australian economy.⁵

How far can imagination take us in envisaging a possible crisis in the future? Several scenarios present themselves: a nuclear device exploding in a Western capital city; germ warfare sweeping through subways infecting thousands; a rogue state launching an attack with nuclear weapons on a neighbour; ongoing terrorist incidents; and problems emanating from failed states. Faced with such situations, the ADF may find itself increasingly deployed overseas in order to assist in ensuring global security.

Fighting overseas is, of course, not a new task for the RAN. Indeed, the Australian Navy's fleet air arm, born after World War II, was designed to ensure that the country could defend its interests far from its shores. As the Chief of the Navy from 1962 to 1964, Admiral Burrell, stated: 'We will need a Navy as long as Australia remains an island—and the best place to fight, if unhappily that should be required, is as far

from Australia as possible.’⁶ Admiral John Collins, a veteran of World War II, was a strong advocate of naval air power. He was of the opinion that ‘a fleet that goes to sea without its aircraft today is just as obsolete as a fleet under sail ... Carriers give a fleet tremendously increased striking power and widely increased mobility.’⁷

The reason that air power is necessary in accompanying any army or joint maritime force deployed overseas is neatly summed up by the British carrier concept:

Aircraft have mobility, flexibility and versatility, which are the keywords of a modern defence strategy ... [A] Carrier Air Group (CAG) can move to almost anywhere in the world in international waters ... giving both politicians and military commanders options, including early reconnaissance, the landing of special forces and land attack from the air ... Events throughout the 1980s and 90s have demonstrated the high value of the CV [aircraft carrier].⁸

Of course, it might be argued that Australia’s needs are not the same as those of Britain. Yet, a carrier-based force would give the ADF a flexibility that cannot be matched by any number of land-based aircraft operating from Australia. While it is true that in 2002 and 2003, on operations *Slipper* and *Bastille*, the RAAF deployed successfully to runways in the Middle East, it cannot always be assumed that friendly nations will provide basing and other necessary facilities to ensure the success of overseas military missions. Moreover, even if facilities are forthcoming, there is no guarantee that the bases themselves will enjoy the same level of protection and security as those used by the RAAF in the Second Gulf War. In contrast, aircraft carriers provide deployed forces with great flexibility as well as platforms that cannot be easily attacked by guerrillas or by enemy Special Forces.

In the past, Australia has always been able to rely on American air support. However, although the United States and Australia are close allies, it is prudent, in an era of multiple operations and military overstretch by US forces, to consider the possession of adequate national air cover in a crisis. Britain appears to understand this need. As the British historian and defence writer, John Keegan, has pointed out, ‘Britain’s forces cannot ... count on operating under the umbrella of American air cover in all future circumstances. A crisis may supervene when national air power is needed.’⁹

Like Australia, the United Kingdom plans to acquire the American F-35 Joint Strike Fighter in order to meet its future air-power requirements. All four arms of the American military—army, air force, navy and marines—are purchasing the Joint Strike Fighter. Lockheed Martin, which has designed the F-35 Fighter, will manufacture it in three variants. There will be Conventional Take-off and Landing (CTOL), Short Take-off Vertical Landing (STOVL) and Carrier Variant (CV) versions of the aircraft.¹⁰ The British F-35 project—the Future Joint Combat Aircraft (FJCA)—has been aiming to produce ‘a joint RN–RAF offensive aircraft able to deploy from bases at sea and ashore.’¹¹ BAE Systems will take the leading position as preferred prime

contractor for the CV development, with Thales UK, a defence company, providing a design and performing a major role as key supplier.¹² In British defence planning, the aircraft carrier will become the principal platform for the RN–RAF FJCA, with the latter eventually replacing the RN’s and RAF’s Harrier jets.¹³

THE ADF, THE JOINT STRIKE FIGHTER AND THE CARRIER OPTION

Australia has also committed itself to the F-35 Joint Strike Fighter development project. On present trends, the RAAF should go ahead with the acquisition of the new aircraft, but it should ensure that it buys the carrier, or maritime, version of the plane. It is likely that the F-35 will be not only a highly capable fighter, but an excellent bomber since the aircraft possesses capable self-defence systems and a range of over 1300 km—more than double that of the present F/A-18 Hornet.¹⁴ In the future, the Joint Strike Fighter will be able to perform surface strike against maritime targets as well as attack land objectives.

On present and projected trends, therefore, it seems that the F-35 will be a comprehensive air-technology package. Nonetheless, advanced armaments, precision munitions and a range of 1300 km do not automatically translate into usable military power in a world of asymmetric terrorism and rogue states. If the Australian version of the F-35 is a land-based aircraft, it will only be capable of striking at targets within the Indonesian archipelago. Even with the added purchase of new refuelling tankers to replace the B-707, the RAAF’s projected F-35s will still have limited range as land-based aircraft.¹⁵ The question that must be posed is this: how will land-based aircraft provide permanent air cover to Australian forces in a hostile situation in the Asia-Pacific? In any crisis situation that requires the projection of air power overseas, Australia is limited in its strategic options because it must rely on friendly or host-nation support to provide airfields from which the RAAF can operate.

By contrast, carrier-based aircraft can deploy anywhere in international waters and remain within range while needed, thus providing strategic ‘presence’. Indeed, by merely being in an area, carrier-based aircraft can exert pressure. A good example was the military build-up outside Iraq in 2002 that resulted in the Hussein regime admitting UN weapons inspectors. Carriers and their aircraft present a unique force package that can be used in a variety of ways to project and maximise the effects of military power.

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In the past Australian forces have deployed to the Middle East, Africa (Rwanda and Somalia) or even Europe in order to support Australia's interest in preserving international peace and stability. Accordingly, the future F-35 should be sea-mobile and the RAAF should be equipped with the CV version of the aircraft. In addition, acquiring an Australian sea-mobile version of the F-35 would leave open the possibility for RAAF aircraft to operate not only from RAN vessels or from land bases, but also from British and American carriers.

There is, moreover, a case for the RAN to contemplate acquiring sufficient F-35s to protect its ships, both in an air-to-air role and for executing anti-shipping strikes against enemy warships. A submarine threat could be countered by the same methods that are used currently: a combination of anti-submarine warfare vessels and helicopters that have interoperability with assets such as the RAAF's AP-C3 Orions. The role of any future Navy F-35 fighters would essentially be one of force protection and anti-shipping strike, while the RAAF F-35s would be employed to attack land-based targets. The Navy's aircraft would be flown by personnel trained essentially in sea strategy and tactics, and would complement the RAN's array of surface-to-surface and anti-air missiles. Both RAAF and RAN aircraft could, of course, be used in air defence roles.

A FUTURE CARRIER FORCE: THE PROBLEM OF FINANCIAL COST

What would be the cost of the suggested strategic rearrangements? The carrier-based F-35 is more expensive than the land-based version, and acquiring two carriers would also be costly. Moreover, the RAN's projected Air Warfare destroyers would still be needed because defensive systems required against aircraft at a distance are not the same as those required to defend against missiles at closer range. The optimum defence capability for Australia at sea is the combination of the aircraft carrier and the F-35.

Britain's two new aircraft carriers will cost the taxpayer £2.9 billion or AU\$9.2 billion.¹⁶ In terms of current Australian defence spending, such a cost would be prohibitive. It should be noted that the United Kingdom's

defence spending is 2.8 per cent of its GDP on defence compared with Australia's 1.9 per cent of GDP. In April 2003, the *Australian's* international and defence correspondent, Greg Sheridan, argued that '... we [Australia] have a defence force that is just too small. We have an expeditionary rhetoric, a defence of Australia force structure doctrine and a pacifist budget'.¹⁷ New carriers would also involve other costs,

The optimum defence capability for Australia at sea is the combination of the aircraft carrier and the F-35.

particularly in staff, since the RAN would need to expand its current personnel in order to cope with two large vessels. A possible alternative to a CV force would be for Australia to seek to acquire the Tomahawk missile system, which is capable of being launched from submarines and/or surface vessels. The ADF could consider a cruise missile option for a future force, although such an option might not provide the same level of precision strike as modern carrier-based air power.

CONCLUSION

This article has tried to ‘fly the kite’ of carrier-based air power for the ADF. Although this solution has proven unpopular since the 1980s, and is both expensive and challenging in force structure terms, carrier-borne air power may, in the decades ahead, become a necessity for the ADF. Australia is an island-continent with a vital stake in helping to maintain a stable international environment, not least because the majority of its trade depends on secure sea-lines of communication. Additionally, in an era when threats to national security can develop at short notice and frequently require off-shore deployments in defence of the national interest, sea-based air power can provide the ADF with a potent method of force protection.

In contemporary security conditions, air power at sea is a matter for both the RAN and the RAAF to contemplate, if only because of the range of threats against which Australia must defend itself. The best way for Australia to cope with an uncertain security environment is to grasp the nettle and to spend a significant sum of money in order to equip the ADF with a flexible, offshore joint force with organic aviation. Such a force, based around two aircraft carriers equipped to deliver modern air power, wherever and whenever necessary, is the type of long-term insurance policy that the nation requires to protect its future in the first quarter of the 21st century.

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MILITARY TECHNOLOGY

BIOTECHNOLOGY AND WAR

THE NEW CHALLENGE

CHRISTOPHER COKER

The body is the first and most natural tool of man.

Marcel Maus

It is often said that science fiction is a genre of cognitive estrangement, a combination of the cognitive (the rational, scientific) and estrangement (translated as alienation from the familiar and the every-day). Yet most science fiction writing is an extension, or extrapolation, of the present. If science fiction were concerned only with estrangement, we would not understand it. If it were only about cognition, it would be a work of science rather than of science fiction. It is the combination of the two that allows science fiction to challenge the ordinary and what we take for granted.

Looking at the future of war in 1908, we would have learnt much from a book written by H. G. Wells, in which he predicted the coming of an atomic war. The novel is set in 1958 (pretty accurate timing) but its novelty ends there. In Wells's tale, the planes that bomb America's cities are the biplanes of 1908 and the bombs are hand bombs dropped over the side of the aircraft by the pilots. If we want to glimpse the future of war today, where do we go? We could start with Orson Scott Card's *Ender's Game*, in which we find that the training of soldiers in their early years takes the form of 'games' in a special Game Room. The government has taken to breeding military geniuses and then training them in the art of war.

Another influential science-fiction book is Leo Frankowski's *A Boy and His Tank*, which tells of a group of colonists on a planet combining Virtual Reality with tank warfare. Frankowski's world is one in which warriors bond with their tanks, and their tanks with them. One of the most telling lines in the book is, 'kid, if your tank is loyal you don't have to be!'. Significantly, the books by Card and Frankowski are both used inside the current American military. Card's novel is used to teach in the leadership course at the Marine Corps University at Quantico. In 1991, Frankowski's *A Boy and His Tank* was proofread by a soldier from the First Cavalry Division while he was deployed in the Gulf, awaiting Operation *Desert Storm*.

Both of the above novels illustrate the new forces that are transforming the face of war. Three revolutions have shaped armed conflict since 1945: the atomic revolution, the information revolution and the biotechnology revolution. Although, according to some commentators, we may have entered a post-Cold War 'second nuclear age', atomic weapons are still not employable by states. For most thinkers on future warfare, then, it is the information and biotechnology revolutions that are of the greatest importance in the 21st century. For Western societies that are forever sensitive to public distaste for military action, both of these revolutions may offer practical opportunities for the pursuit of war in the future.

THE CONVERGENCE OF THE BIOTECHNOLOGY AND INFORMATION REVOLUTIONS

Although the theme of this article is biotechnology, it is becoming clear that the information technology and biotechnology revolutions are not distinct. Indeed, digital biology is likely to be the key to the future in almost every walk of life. The decoding of the human genome would have been impossible without the increase of computing power provided by the information revolution. Genetic manipulation requires the decoding and recombining of information codes of living matter, and this process is made possible only by an exponential increase in processing power. Conversely, the language of the information technology age has been significantly influenced by nature. What the human genome project reveals is that we have almost the same number of genes as the chimpanzee. What makes us different—what makes us the intelligent creatures that we are—is the networking and recombining capacity of our cells, particularly our brain cells, through millions of electrochemical connections. It would seem that, in terms of networking and feedback loops (the basis of cybernetics), the human brain is similar to the Internet that dominates our computer-run societies.

In time, scientists who understand the processes of nature—especially those that know how complex adaptive systems work—will be able to build computers that can *evolve* (rather than solve) most conceivable problems. In computer programming,

‘evolutionary algorithms’—programs that permit evolution in computer space—are dictating the pace of change. In an attempt to create more complex computer ‘brains,’ scientists are also studying complex neural networks in the human brain in the expectation of constructing ‘digital chromosomes’ with many of the same features as our own DNA. When it comes to war, digital biology is already redrawing the rules of engagement. Instrumentally, war is being defined in biological terms. Existentially, the warrior too may soon be enhanced through cyborg technologies and genetic re-engineering, which promise him or her the chance to breed out the imperfections of the past, the chance *to breed true*.

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It is a challenge that is typical of the age in which we live, one in which the biological is privileged more and more over the cultural. It appears, as evolutionary psychologists tell us, that human behaviour is far more genetically determined than we had previously thought, and that, by modifying our genes, we may well be able to enhance the activities we do well and have always done well as a species. One of the activities that we have excelled at over the centuries has been war. There is nothing to suggest that we will be going out of the war business; indeed, quite the reverse is the case.

TOWARDS POST-HUMAN WAR: THE CHALLENGE OF THE FUTURE

Biology (but not yet biotechnology) has already changed the way in which we look at military operations, and the use of force in post-military contexts. For example, ‘The Marine Corps After Next’ (MCAN) Branch of the Marine Corps Warfighting Laboratory has been exploring what it calls a ‘biological systems inspiration’ for future warfighting. According to its website:

For the last three centuries we have approached war as a Newtonian system. That is, mechanical and ordered. In fact, it is probably not. The more likely model is a complex system that is open ended, parallel and very sensitive to initial conditions and continued ‘inputs.’ Those inputs are the ‘fortunes of war.’¹

The Marine Corps goes on to suggest that, if it is assumed that war will remain a complex and minimally predictable event, the structures and tactics that we employ will enjoy operational success only if they are dispersed, autonomous, adaptable and small.

The characteristics of an adaptable, complex system are similar to those found in biology. To deal with the biological is to do least damage to the 'environment'. In armed conflict the environment may be broadly understood to be the social and political, as well as ecological, context within which war is fought. When the term 'ecology' was first coined in the 1860s, it described the holistic study of living systems interacting with their environment. Ecologists look at communities of organisms, patterns of life, natural cycles and demographic changes. Such activity is precisely what a new generation of American military strategists is now engaged in doing, and systemic thinking was evident during the Second Gulf War of 2003. The aim of the war was to incapacitate the Iraqi leadership in a swift warfighting campaign while preserving as much of Iraqi society and human environment as possible. The Coalition warfighting campaign succeeded in achieving most of its objectives with smaller, more dispersed forces that often fought with adaptability and autonomy. The Iraqi economic infrastructure was preserved, a humanitarian disaster failed to materialise and Iraqi society remained largely intact.

In the future, the influence of biotechnology is likely to be found not in the instrumental but rather in the existential dimension of war. This reality is not inconsistent with the experience of earlier Revolutions in Military Affairs (RMAs). Most military revolutions, in one way or another, have impacted on the warrior's view of his own profession. For example, the use of the long bow (followed by the introduction of cannon) destroyed the ideas of chivalry and active courage. Courage became more passive in nature; it also became valued in terms of a new currency, namely blows received, not blows given.

The rise of mechanisation on the industrialised battlefields of the late 19th and early 20th centuries brought further change. Machine warfare locked the warrior into a system in which his performance was increasingly evaluated in industrial terms of productivity and predictability. In essence, in mass armies such as those that predominated in Europe after 1870, the warrior became a 'worker'. Now, in the information age, the military professional has increasingly become an information processor and locked into a cybernetic world. The coming biotechnological revolution promises to transform the profession of arms again, perhaps more radically than we have ever seen before.

Of the many technologies that are changing the military professional's sense of 'self', three are essential to the soldier's 'post-human' future. The first is *performative* and involves the phenomenology of human-machine interaction. The interface

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between humans and machines is changing as computers become more interactive and sophisticated in military operations. The second technology is *behavioural*, in the sense that we have begun to turn the analytical methods of molecular biology into engineering tools. Most of the technologies available today are compensatory (they compensate for injury or degradation of the body, including spare parts and cosmetic surgery). In the future, it is highly likely that the human body will be enhanced through a fusion between organic and cybernetic materials.

The third technology is *normative* and refers to the ways in which genetic manipulation and the use of synthetic drugs are rapidly extending the range of human actions beyond the possibilities of natural selection. Both genetics and

synthetic drugs may eventually influence the way in which military professionals conceive of their interactions with enemies. In all three cases—performative, behavioural and normative—technological advances no longer involve an extension of the human body as has been the case since the first tools and weapons were invented. Technology in all three cases is being incorporated or assimilated into the human body at an increasingly fast pace.

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THE HUMAN–MACHINE INTERFACE

The interaction of soldiers, sailors and aviators with machines has been a feature of the military profession for a century and is likely to accelerate in the future. The US military has been working on fusing the human body and various machines functionally rather than attempting to mesh them physically. For example, systems analysis, social psychology, computer-mediated systems and, above all, personnel management techniques have all been designed to help pilots use machines more effectively in order to enhance the parameters of human performance.

Through cognitive engineering, the US Air Force (USAF) has gone further than any other service in seeking an interface between human and machine. In trying to modify the cognitive processes of its pilots, the USAF has sought to make its aviators more operationally efficient. In the high-performance, computer-based aircraft of the 21st century, pilots have to be capable of split-second responses. Given the complexity

of technology, the minds of pilots have to be made more machine-friendly than ever before. Increasingly, the goal of military training is 'design oriented'—that is, it is aimed at producing operators that can process information faster, and thus design their reactions in combat with greater speed and skill.

Functionally, we are already wired into digital networks that enhance our ability to process large amounts of information. The Internet is the case in point. Some of the research projects in the United States already under way may be harbingers of the military future. One of the most famous is the McDonald Douglas 'Pilot Associate', which has been an ongoing program since 1986. This program is designed to allow 'expert systems' to evaluate the input from external sensors as well as monitor and diagnose all the aircraft's on-board subsystems—including the pilot—and it will be able to initiate actions if the pilot is unable to take decisions himself.

What is new in the early 21st century, however, is the reality that we are now exploring ways in which to mesh machine and body not only functionally, but also physically. Today a range of words and terms are employed to describe our evolving cyborg status, from biotelemetry to 'human-machine interfaces' and bionics (the copying of natural systems). Increasingly, engineering is being transformed into a biologically based discipline. Currently, in the Massachusetts Institute of Technology's Artificial Intelligence Laboratory, robots are assembled from silicon, steel and living cells. The activators of these simple devices are muscle cells cultivated in the laboratory, the precursors of the prostheses that will one day be installed seamlessly into disabled human bodies. Surgical body modification and biochemical alterations (for example, through the use of botulinum toxin) are already commonplace. Within fifty years, or even earlier, these developments could be applied to enhance the abilities of tomorrow's military professionals.

One popular science-fiction vision of the biotechnological future is the way in which people interact with computers by incorporating silicon into their bodies. In William Gibson's 'cyber punk' stories, data is transferred via 'wet-wired brain implants' or computer chips into human brains. These and other futuristic visions promise a world in which there will be a sophisticated interface between our nervous system and silicon—a world in which neural implants will enhance visual and auditory perception as well as interpretation, memory and reasoning. It will be a world, too, in which the distinction between computers and humans will be gradually blurred.

Fibre-optic projectors can already throw images onto our retinas, thus allowing us to see directly without the intervening medium of a television or computer screen. Moreover, research is well under way to help enhance human auditory senses through implants in the ear. True to science fiction writer, William Gibson's vision of the future, the USAF is investigating growing neurons in silicon chips in order to improve the communication between humans and machines, in effect allowing chips to be activated by hormones and neural electrical stimulation. The Defense

Advanced Research Projects Agency (DARPA) has a Brain–Machine Interface Program that, in its own words, aims ‘to create new technologies for augmenting human performance through the ability to access non-invasive codes in the brain in real time and integrate them into a peripheral device or systems operation.’² In plain English, this aim involves enhancing human performance by working out how the brain controls movement and using the brain to control external devices, transmitting (as has been done successfully with monkeys) brain signals over the Internet in order to operate a robotic arm hundreds of miles away. This experiment by DARPA may herald the coming of a future age in which a warrior’s brain—perhaps part carbon, part silicon—may be able to operate weapons by the power of thought.

If war is to remain central to human culture in the future, then the soldiers’ bodies, as well as their personalities, may have to be reconfigured.

TECHNICITY: THE RISE OF CYBORG WARRIORS?

Colonel Frederick Timmerman, Director of the US Center for Army Leadership and former editor-in-chief of *Military Review*, has stated, ‘that there will be future warriors is the only certainty’. Timmerman’s future belongs to those countries—principally, of course, the United States—that will be able to ‘transform and extend the soldier’s physiological capability’ by revolutionising the way in which technology is applied. If war is to remain central to human culture in the future, then the soldiers’ bodies, as well as their personalities, may have to be reconfigured. In this regard, the cyborg condition has enormous implications for our humanity and our cultural idea of war. For if endurance can be artificially enhanced, will we have to rewrite the ethos of the warrior as man and machine coevolve?

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It is important to note, however, that cyborgs are not quite what science-fiction writers would like us to imagine—at least, not yet. The popular view of the military cyborg can be found in two recent Hollywood films, *Robocop* and *Universal Soldier*. In the first film, the cyborg is a product of the Detroit Police Department, a subsidiary of OmniConsumer Products (OSP). The ‘Unisols’ (another industrial brand name) that appear in the second film, Robert Emmerich’s 1992 *Universal Soldier*, are cyborgs of a different stamp. Their hyper-accelerating bodies turn dead flesh into living

tissue. Following their death in Vietnam, the two principal combatants in the film are flown back home to be packaged in ice, surgically eviscerated and refilled with cybernetic equipment, thereby being transformed into true 21st-century soldiers. A serum injected into the back of their skulls voids their memories. They represent the ultimate killing machines, devoid of fear in the face of death largely because, to all intents and purposes, they are already dead to themselves.

What both of these films offer the viewer is a vision of a future in which biotechnology is pioneered by the private sector. In this respect, technology is beginning to transform the ontology, or the science of being in war, as we have traditionally understood it. It is important to recognise that biotechnology can take three forms. First, it can be restorative by recreating normal functions through replacement of lost limbs and organs. Second, biotechnology can be reconfiguring, creating post-human possibilities by adapting humans to the environment. It is interesting to note that the original work of Manfred Clynes, who first coined the term ‘cyborg’, was on how to adapt humans to outer space. The final form of biotechnology is that of enhancing human abilities, and this form is likely to be the aim of much military research in the future. It is this third option that is probably central to the future of war, especially if science can enable us to escape the constraints of Darwinian evolution.

The question that arises is: by re-engineering themselves, will soldiers develop a self-image as members of an exclusive caste? The process of ‘technologising’—in which bodies are reassembled in order that they can function optimally, with excellence enhanced—is central to the cyberpunk science-fiction of William Gibson. In Gibson’s imaginary world, cyborgs are creatures whose identities are no longer determined by social criteria such as class, ethnicity or even nationality but by *technicality*—that is, by the new architecture of the body.

In Gibson’s world, cryogenic processes and enhanced digitalised senses redefine identity, just as cyberspace produces its own virtual communities. In one of Gibson’s short stories, Johnny Mnemonic, a principal character, has electronically upgraded vision and prosthetised fingers that house a set of razor-sharp, double-edged scalpels, myo-electrically wired into her enhanced nervous system. She is no longer an individual born into a social or ethnic group from which she derives her sense of self. Rather, she is a customised and functional product of a cyborg culture, and she has little respect for others that are not like her. What Gibson offers us is a vision of a separate caste—a world in which the respect one warrior has traditionally given another is no longer a product of culture but of bio-engineering. What his cyborgs admire in each other, writes David Tomas, is technical virtuosity and operational speed—attributes that have been directly integrated into their own prosthetic and genetic architecture.

‘NATURAL BORN’ KILLERS: BIOTECHNOLOGY AND THE WARRIOR CULTURE

The Human Genome Project represents one of the most significant steps in our evolution. On one level, the project allows us to subject our humanity, which we have taken as a given, to biotechnological intervention. In theory, it might be possible to breed a warrior DNA, or manufacture a race of warriors, or ‘natural born’ killers. This is the promise of such novels as *Ender’s Game*. The object would be twofold: first, to make soldiers impervious to fear, fright or anxiety, and thus to make them more courageous (or foolhardy) in battle; second, to make military professionals more effective at killing. In pursuing the first objective, of course, one can accomplish the second.

For the ‘born’ warrior is a killer, as well as one that is prepared—if necessary—to lay his life on the line. In an opening paragraph in her much-acclaimed book, *An Intimate History of Killing*, Joanna Bourke writes that ‘the characteristic act of men at war is not dying, it is killing,’ and it is as well always to keep that rubric in the forefront of one’s mind. The soldier–killers analysed by J. Glenn Gray in his seminal 1959 study, *The Warriors*, are among the most formidable and terrifying warriors of all. They are men devoid of remorse or reflection, and they exist in all armies at all times. Homer’s Achilles was the supreme killing machine; so too was the Alexander depicted so vividly in Arrian’s history of the Macedonian campaigns. Killing, Arrian tells us without a trace of irony, is what Alexander did consummately well.

Is killing a result of culture or nature? Evolutionary psychology argues that humans are born with a common set of preferences, predispositions and abilities fashioned by natural selection. These abilities enabled us to develop and become the dominant species on the planet. In other words, when we are born, we are pre-equipped with abilities such as the ability to learn a language. We have something akin to a piece of computer programming that is designed specifically to enable us to acquire language skills. Experience—in the form of hearing our parents talk, for example—is just the input for the program.

It would also appear, however, that, while we are all programmed to be violent, some individuals are genetically more prone to violence than others. One of the reasons that, even in the mid-21st century, war is likely to remain a male activity is that, across cultures, men kill other men twenty or forty times more often than women kill other women. The great majority of killers are of an age in

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which the soldier is at his prime, usually between the years of fifteen and thirty. In this same age group, some men are more inclined to kill than others. In Western society, for example, 7 per cent of young men commit 79 per cent of repeated violent offences. If this is true of society in general, it must surely be true of the military, which in a democracy, at least, tends to be a microcosm of society as a whole.

Of course, violence and war are not the same. A good soldier is not the personality type that makes an intractable violent young offender: impulsive, hyperactive, with low intelligence and usually an attention deficit. Unlike soldiers, young offenders are also

resistant to discipline. The latter dislike being controlled, and the worst of them are often psychopaths who lack a conscience and are more likely, if they seek war, to be found in paramilitary organisations that set their own rules. Very rarely are young, violent offenders to be found in military units whose members are bound by close fraternal ties and tend, as a result, to enjoy a high degree of self-esteem.

However, one of the interesting phenomena of war is the extent to which a very small percentage even of professional soldiers kill with any real enthusiasm. It has been calculated, for example, that 1 per cent of fighter pilots accounted for at least 35 per cent of enemy aircraft kills in World War II. Clearly, they were not only more talented but more aggressive than their counterparts. On the ground the figures are even more remarkable. Take, for example, Lance Sergeant Simo Hyha of the Finnish Army who, in three months in the Winter War of 1939, killed 219 Soviet soldiers with a standard-issue service rifle. Another born killer was Sergeant Alvin York of the American Expeditionary Force in World War I (memorably portrayed in film by Gary Cooper). Sergeant York killed twenty-eight Germans in the battle of the Argonne in one day alone, 8 October 1918, a month before the Armistice. Looked at differently, York single-handedly accounted for the equivalent of two German infantry companies. As well as killing twenty-eight soldiers he captured another 182, and as a result York may have transformed a tactical situation along a key sector of the front line.

Killing does not seem to come naturally in all situations to all soldiers, even the most highly trained. Natural born soldiers are not made; they are born—and there are very few of them. That is why the military has preferred the discipline of collective units such as gun crews, which are more easily controlled and which, being often distant from the battlefield, are also less emotionally involved—in a word, they are more ‘mechanical’. The greatest cruelties in war have been the impersonal ones of remote decision, system and routine, especially when they can be justified as operational necessities.

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Looking at matters from the perspective of the evolutionary psychologist, we can make a number of assumptions. We are not born to kill, just as we are not born to engage in war. Killing is a contingent strategy connected to complicated circuitry that allows us to compute subconsciously, whether it is in our interest to kill or not. We deploy aggression as a strategy and we do so much less than we have done before. Like war, violence has declined among the rich nations not because of morality or ethical codes. Ethics tend to legitimise, after the fact, the contingent strategies we have already chosen. Ethics are cultural and learnt, and if we have become more ethical (in our own eyes, at least), it is because we have become more cosmopolitan (or less hostile to strangers) in our outlook. Moreover, the technologies that promote literacy, travel, and knowledge of history have all contributed in different ways to our growing cosmopolitanism. Our social imagination has expanded as a result. Through television and film, we are able to project ourselves into the daily lives of other people, even though they are remote from us both physically and sometimes emotionally.

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GENETICS AND MILITARY PERFORMANCE

If our postmodern societies continue to discourage violence or sublimate it through sport, then they may find themselves with a smaller pool of talent from which to recruit natural born soldiers. Thus we may have to manipulate the gene pool if we are to stay in the business of war. Drug enhancement rather than genetic engineering is likely to be a key factor in such a process. It is probably far too early to talk of the genetic engineering of soldiers—something that, if it happens at all, we are more likely to encounter beyond the first half of the 21st century.

One method of genetic engineering that has been made popular by science fiction writers is cloning—that is, the transplanting of a mature human cell with its full DNA pattern into a human egg whose nucleus has been removed. Cloning is the way to transmit the genetic signature of one parent to an embryo, thus effectively creating a genetic identical twin of the parents. Cloning has given rise to the fear, stated elegantly by Richard Dawkins, of ‘phalanxes of identical little Hitlers goose-stepping to the same genetic drum’. Nonetheless, current scientific opinion regards that the cloning of human beings will remain genetically difficult, if not impossible, for years to come. Instead, cloning is more likely to be used to provide cell banks for the living—for instance, in replacing parts lost on the battlefield. The future of cloning probably lies in spare-part surgery rather than in the replication of human beings.

A more likely route to the future is manipulation of our genes. By drawing reproduction into a highly selective social process that is far more successful at spreading good genes than sexual competition, we are truly embarking on a new voyage. Within the next fifty years we may be able to modify ourselves, to design our own babies, and possibly produce better soldiers. The technological powers that we used in the past to alter the natural environment can now be directed at changing ourselves by modifying not so much human nature as the behaviour of specific human types, including those of the warrior. Such changes may be made possible by a spectrum of breakthroughs. These breakthroughs include the matrix-like arrays called DNA chips that may soon be able to read 60 000 genes at a time. The manufacture of artificial chromosomes that can now be divided as successfully as their naturally occurring cousins is another breakthrough. Then there are the advances in bio-informatics—that is, the use of computer-driven methodologies in order to decipher the human genome.

Already we can modify a trait in a directed fashion by altering or selecting particular gene variants. Changing a single gene in an animal is now a routine process. Research in this area has been spurred on by scientists and their claim that they can decipher the relationship between our genes and our behaviour in such areas as criminality, alcoholism, and drug addiction. The key is to identify a combination of gene variants common to many people with similar endowments (such as athletic prowess), and then to manipulate the human genetic system.

With so much genetic information available on every human being—from simple, single-gene disorders to complex, polygenic moods and behaviour traits—it is becoming attractive for employers to use genetic data to select prospective employees. As early as the 1970s, the discovery of the sickle-cell anaemia trait prompted the US military to use genetic screening for the first time. Carriers of the recessive gene—most of them African-Americans—were denied entrance into the US Air Force Academy for fear that they might suffer the weakening of their red blood cells in a reduced-oxygen environment.

The US military purportedly went further in 1992 when it launched an ambitious program to collect several million DNA samples from its personnel. The exercise was aimed at facilitating the accurate identification of men and women lost in combat. However, in the legal battle that followed a refusal by two Marines to give blood under the Fourth Amendment right to privacy, a fear was expressed that the same genetic samples could be used for biomedical research. Such research might serve to identify the best military genes, or to weed out soldiers with the worst: those most susceptible to fear. If it is becoming possible to isolate genetic traits, then it should also be possible to enhance personality traits such as risk-taking that would be required by Special Forces, and to produce above-average levels of emotional stability for pilots in the virtual spaces that they occupy with computers.

Will all of this potential genetic manipulation result eventually in the emergence of a warrior elite—a caste genetically distinct from civilians? Traditionally the military has often seen itself as culturally distinct in its attachment to a value system that honours duty, courage, heroism and, indeed, the very concept of honour itself. Yet in a coming biotechnological age, biology may transcend culture. With the emergence of genetic screening, why demarcate a warrior by class, ethnicity or race? Why not do so on the basis of genotype—on the basis of positive discrimination (isolating certain ‘positive genes’) or negative discrimination (screening to detect predispositions to mood and behavioural instability)? Biotechnology is likely to pose compelling ethical and moral questions to military professionals over the course of the next few decades.

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MILITARY CULTURE, NEUROSCIENCE AND THE IMPLICATIONS OF PHARMACOLOGY

A more profitable subject of speculation—simply because it has been happening for some time—involves the modification, or control, of human behaviour through neural pharmacology. In the immediate future, military authorities may be tempted to try to manipulate the endogenous opiate system in an attempt to decrease sensitivity to pain, and thus enhance physical stamina and mental endurance. Already, the genetically modified soldier is part of the Pentagon’s search for an Extended Performance Warfighter—a program that focuses on using devices other than drugs to enhance performance. TMS or electromagnetic energy may allow scientists to ‘zap’ a soldier’s brain, so giving an individual the capability to stay awake, fight and make decisions for a week. In the future, devices attached to clothing may also be employed in order to gauge a soldier’s mood by the number of eye blinks. Internal implants able to monitor the human heartbeat may be able to administer tranquilisers or sedatives without the soldier’s awareness of the process.

Lest all of the above seem far-fetched, it should be noted that the enhancement of athletic abilities by drugs has been with us in sport for at least three decades. For instance, the banned hormone Erythropoietin, which raises the oxygen-carrying capacity of red blood cells, can boost endurance by between 10 and 15 per cent. Metabolic and physiological enhancers are now a central part of professional sport. Apart from sporting ethics, the only questions about the use of such drugs concern the issues of detection and side effects. The social pressure to re-engineer

the athlete in order to win, and to win more spectacularly than in the past, has generated a relentless use of pharmacology in sport. Similarly, the equally insistent need to win in war is likely to accelerate the use of pharmacology in future military operations.

Every army in history has attempted to reduce stress and thus improve combat performance by whatever means that came to hand. Alcohol is merely the oldest method. Today, through continuous advances in neuroscience, it is proving cheaper, easier and much more productive to control anxiety and fear through pharmacological means. Drugs such as Librium and Valium already treat anxiety, while Prozac and Zoloft fight depression. Prescribed drugs have been used to reduce stress and fatigue, and to enhance wakefulness for up to seventy-two hours at a time among USAF pilots and anxiety suppressants have been given to pilots going into combat. According to some reports, Viagra may have been given to some Special Operations Forces to boost testosterone levels and thus aggression.

Manipulating human emotions through the means of pharmacology goes well beyond issues of physical and psychic endurance. In the future, we may even be able to abolish guilt and thus neutralise the often-traumatic consequences of showing courage in combat. What if by swallowing a pill a soldier could immunise himself from a lifetime of crushing remorse? The prospect of a soul absolved by medication is not far-fetched. Feelings of guilt and regret travel neural pathways in a manner that mimics the tracings of ingrained fear, and thus a way of addressing one should address the other. Experiments have been conducted at the University of California at Irvine to inhibit the brain's hormonal reactions to fear, softening the formation of memories and the emotions that they evoke. The beta-blocker, Propranolol, has been employed to nip the effects of trauma in the bud, in effect short-circuiting the very wiring of primal fears.

Another research team at Columbia University has discovered a gene behind a fear-inhibiting protein, so uncovering the traditional 'fight or flight' imperative at a molecular level. The question thus arises, will we in the West soon be able to blunt the human conscience and mediate out of the psyche regret, remorse, pain or guilt? Is the ultimate end of 'consequence management' to make the soldier blind to the consequences of his own acts? Is this the thin end of a dangerous wedge: the emergence of a morally anaesthetised soldier?

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CONCLUSION

It is not in the existential but the *metaphysical* dimension of war that the influence of biotechnology may be the most radical. The metaphysical dimension is the way in which death is conceived as sacrifice. It is the way in which a soldier interprets the meaning of his death. Frequently that meaning is specific to a particular culture. Inevitably, ethical problems arise when communities have different preferences for ways of living—preferences that we can see as culturally determined. All societies choose the best life possible in the light of their own historical experience and collective self-understanding. It is at this point that ethical differences between communities arise.

We all abide by universal codes, by the demands of human rights, which touch on an altogether-different question—that which the contemporary philosopher Jurgen Habermas calls our ‘self-understanding as members of the same species.’ This self-understanding concerns not culture that is different in every age and every society, but the vision that different cultures have of humanity. In Habermas’s view, the biotechnological revolution threatens this precious self-understanding of our species. Indeed, he believes that recent developments in biotechnology and genetic research threaten to instrumentalise human nature according to technical preferences. The most obvious example is that of parents who want children of a certain skin or hair colour, or who are prepared to breed out what they consider human imperfections, most of them genetic. The human body at this point is no longer sacred because it becomes an ‘object,’ or an instrument of parents or the state, to be modified or redesigned at will. According to Habermas, once we view human bodies, including those of military professionals, merely as defective ‘hardware’ and their minds as enhanced ‘software,’ then our self-understanding as a species is threatened.

The ethical implications of biotechnology are daunting. In his 1999 book, *The Age of Spiritual Machines*, Ray Kurzweil observes: ‘the primary political and philosophical issue of the next century will be the definition of who we are.’ Insofar as the new technologies promise to remake not only our bodies but also our worlds, they raise important and urgent questions about society’s continued engagement with the soldiers who fight in its name. Moreover, if future war is to be a struggle between cultures, between the West and various non-Western peoples, states, societies or regimes, then its *intersubjective* meaning has never

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been more important. For this reason even post-human warfare is likely to be just as ontologically real as before. In the words of one of America's leading contemporary philosophers, Richard Rorty:

Humanity is neither an essence nor an end but a continuous and precarious process of becoming human, a process that entails the inescapable fact that our humanity is on loan from others, to precisely the extent that we acknowledge it in *them* ... Others will tell if we're humans and what that means.

It is the idea of humanity as a process that brings us to the core of the question of biotechnology and war. In the future we will be encouraged to see humanity as a continuing process of 'becoming' human—a process that, through cyborg enhancement (a form of 'participatory evolution'), is now far more technologically determined than it was in the past. At the same time, morality has become far more intersubjective than subjective. This is why the prospect that we may begin to fight 'post-human wars' in the near future should prompt sobering thoughts. Will tomorrow's Western warriors find themselves alienated from a self-understanding of their own species? Will they think of themselves as genetically different from soldiers from other societies who are not experiencing the post-human condition?

ENDNOTES

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MILITARY TECHNOLOGY

DESIGN MYOPIA

SOME HIDDEN CONCERNS IN IMPLEMENTING NETWORK-CENTRIC WARFARE

MICHAEL BONNER AND HAN TIN FRENCH

The Australian Department of Defence has long sought to achieve a clear margin of military superiority against any credible adversary through manipulating advanced military technology. In recent years, network-centric warfare has appeared to offer a range of operational advantages to the Australian Defence Force (ADF) through the process of linking sensors to shooters across the battlespace. These advantages include the creation of a robustly networked force that improves information-sharing, facilitates shared situational awareness and enables synchronisation of military effort in the pursuit of mission effectiveness. Ultimately, it will be the ability of all ADF elements in the battlespace to collaborate and to synchronise their efforts that will make or break future networked military capabilities.

While the Australian capability development community appreciates many of the technical challenges involved in the implementation of network-centric warfare in the ADF, there is much less appreciation of the human dilemmas that networking will

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create. We need a broader and more sophisticated understanding of what kind of machine–human interface networked systems will require in the years ahead. Although the ADF Network-centric Warfare Roadmap outlined in early 2003 considers aspects of the human dimension, these aspects concentrate mainly on doctrine, education and training issues, and largely ignore the human problems involved in successful system design. This article addresses the problem of the human–technical interface in system design by examining the challenges of a naturalistic environment; evolutionary acquisition; situational awareness; mission command and distributed decision-making; and information overload, cyber attack and human engineering.

THE CHALLENGE OF NETWORK-CENTRIC WARFARE IN A NATURALISTIC ENVIRONMENT

The Chief of the Defence Force, General Peter Cosgrove, has stated that ‘the information age holds great opportunities for us, if we seek to harness its strengths and understand its weaknesses.’¹ One of these weaknesses is the lack of understanding by many command-and-control systems designers of the complexity of the human environment in which networked systems will have to operate. The human environment is a naturalistic environment and has been characterised by two writers, J. Orasanu and T. Connolly, as uncertain, unstructured and dynamic, with often shifting, ill-defined or competing goals. Human decision-making must confront time management, stress control, organisational impediments, multiple actors and different stakeholders.²

Command-and-control systems represent the heart of networked warfare. However, many of these systems use classical analytical decision-making paradigms as their principal design foundation. Such an approach reflects the influence of prescriptive methods of automated command decision-making. Unfortunately, a prescriptive situation cannot be easily transferred to the highly unstructured, dynamic decision-making of a naturalistic environment. A realistic approach to net-centricity requires a design that can accommodate the human environment by recognising that any software that is used will be shaped by its users and is not inanimate.

EVOLUTIONARY ACQUISITION IN NETWORK-CENTRIC WARFARE

The real test of a networked military will lie in its ability to link sensors and databases in order to provide military commanders with vital information that, in turn, enables the efficient direction of operations. The rapid rate of development in computing technologies dictates that the acquisition of network-centric warfare technologies needs to be different from that of capital equipment acquisition.

Procurement operatives have used the term *evolutionary acquisition* for a decade to describe computer system acquisition that is based on graduated development. Evolutionary acquisition involves the purchase of commercial, military or government off-the-shelf technologies and allows end-users to employ these systems for military purposes. Incremental adjustments in effectiveness are then made in consultation with those end-users. The benefit of evolutionary acquisition is that it allows advances in software technology to be adopted as they occur and with the demands of users in mind. In the future, evolutionary acquisition should proceed in a manner that carefully balances the requirements of both the individual and the team within the Australian Defence Organisation (ADO) and conforms to new forms of system design and development.

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THE TECHNOLOGY–HUMAN INTERFACE AND MILITARY SITUATIONAL AWARENESS

One of the underlying assumptions of net-centricity is that information-sharing can create common situational awareness. Advanced technology allows users to collect information from diverse locations through the use of sensors deployed on both manned and unmanned platforms. Modern communication networks permit military personnel to share a vast array of information on the dynamics of the battlespace in a distributed manner. Yet it is a mistake to view situational awareness as a phenomenon that is created by technology alone. Determining what situational awareness means requires an active cognitive process by military staffs—a process that transcends mere reliance on technology. The role of human agency is vital. For example, an Australian Army definition states that situational awareness is ‘the ability to interpret facts, information gaps and uncertainty in the battlespace in order to assist decision superiority’.³

Unless military commanders and their staffs are actively engaged in the processing of information, they are unlikely to achieve the levels of situational awareness that create a ‘knowledge edge’ in warfare. A 1999 assessment of knowledge-based warfare in Bosnia and Herzegovina argues that ‘the poor or

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minimal use of available information and the lack of concern about knowledge-related deficiencies suggest that the key obstacle to all information, or knowledge-based military operations, is the brains of leaders.⁴ Without intellectual involvement from military professionals, information that users receive may begin to resemble ‘dots on a screen.’

In emerging Australian military doctrine, military practitioners believe that situational awareness enables self-synchronisation by forces in the field, resulting in enhanced mission effectiveness. Yet, the sharing of information, particularly if it is distributed rather than collocated, does not automatically guarantee a common operating picture. As one US report on the subject notes, ‘the assumption that others will arrive at the same comprehension and projections based on the same input is often false, because each individual will interpret the information in the context of his own goals and mental models.’⁵

A British study of teamwork and situational awareness suggests that:

Teams ... are likely to encounter difficulties in evolving and maintaining accurate and timely shared mental models for taskwork and teamwork. Communications, establishing and maintaining situation [*sic*] awareness, implementing core teamwork behaviours (monitoring, feedback and support), and leading teams effectively, were all challenging problem areas.⁶

While the development of a ‘Commonly Informed Operational Picture’ is a laudable aim, military practitioners must realise that ‘one picture’ may not suit all stakeholders involved in a particular operation.

THE DOCTRINE OF MISSION COMMAND AND THE ART OF DISTRIBUTED DECISION-MAKING

The implementation of an effective Australian network-centric warfare capability may require changes to traditional military command-and-control procedures. In particular, military staffs will need to develop a devolved command-and-control concept that is suitable for use in flattened, less hierarchical organisational structures. If the notion of the ‘strategic corporal’—a soldier of relatively junior rank taking important tactical decisions—is to be realised, then the Australian military will need to encourage and refine the doctrine of mission command. In a mission command approach to military operations, subordinates are given a clear indication of a commander’s intent and are then allowed considerable freedom of action in executing decision-making.

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The main features of network-centric warfare—including improved information-sharing, shared situational awareness, and synchronised activity—are compatible with mission command. Indeed, the adoption of networking by the ADF may result in mission command being given a new lease of life. However, because a net-centric approach confers on senior commanders the ability to micromanage a headquarters as well as to devolve responsibility within both it and the field, it remains to be seen whether mission command doctrine will prevail over tendencies towards greater centralised command and control.

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PREVENTING INFORMATION OVERLOAD AND CYBER ATTACK

Another area of networking that will require attention is the problem of information overload. Ultimately, it will be the ability of all ADF elements in the battlespace to use information gathered from networks to synchronise their common efforts that will make or break future networked capabilities. In this respect, the availability of vast amounts of information through computer networks raises serious concern about when is enough information enough? What General Cosgrove has called ‘information obesity syndrome’ and the danger of ‘paralysis by analysis’ may be the Achilles heel of networked forces. Commanders will have to demonstrate discipline, professional judgment and rigorous time management in overcoming this problem.⁷

One solution that has been advanced to overcome overload is the notion of an information ‘pull’, as opposed to ‘push’, philosophy. In a ‘pull’ philosophy, military professionals filter information, seizing on that which is operationally relevant, and ignoring that which is not. The ‘pull’ approach places a premium on skilful interpretation of information. Under combat conditions, when time is a critical commodity, it is clearly impractical to expect tactical commanders to simply ‘surf’ for information. Commanders will have to make judgments and decisions on the operational significance of information.

In some respects, the ‘push’ approach to the use of information may be more appropriate. In a ‘push’ approach, the analysis of information may require the development of a systems architecture in which commanders can determine which elements of incoming information need to be ‘pushed’ outwards. Different military echelons in a command-and-control structure will require varying amounts of information. As a result, a filtering of highly detailed data will probably become essential in networked military operations in order to prevent information overload.

Apart from information overload, there is also the risk of vulnerability of networks to cyber attack. Reliance on information supplied through networks carries with it the risk of attack by a sophisticated adversary in the form of cyber strikes against communication systems, using viruses and spamming as weapons. Countering cyber attacks may not only absorb a friendly force's valuable time, but may also arouse suspicion that information may have been compromised, thus endangering operational security. From the outset, system design needs to be as robust as possible in order to minimise the vulnerability of a net-centric military system.

HUMAN ENGINEERING AND SYSTEM DESIGN

Automation has generally been designed to replace human control and decision-making in complex systems for reasons of efficiency. Human systems engineering attempts to balance the capability roles of automation systems with the activities of humans. This view was outlined as early as 1951 by Paul Fitts in his work on human engineering. Fitts proposed that computers and humans should be allocated functions appropriate to their respective capabilities, with machines monitoring humans.⁸

In the military realm, however, the relationship between computers and human beings reverses the monitoring role once envisaged by Fitts. In the quest for situational awareness, military professionals cannot be removed from decision loops. Active engagement by military actors is essential if the effectiveness of a networked system is to be ensured. In military operations, the requirement for automation within a networked system should be to facilitate human control over decision-making. Scientists must ensure that function allocation studies that focus on human factors are conducted on command-and-control systems.

The human–system interface is the place where the ‘rubber hits the road’ in network-centric warfare, and compatible software interfaces are a key factor in ensuring high military performance. Interface design must be optimised to suit human capacity since we have not reached the stage where, as in Stanley Kubrick's famous 1969 science-fiction film, *2001: A Space Odyssey*, the automated system (HAL) was so capable that it could outthink and outperform humans.⁹

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CONCLUSION

General Cosgrove has warned that the implementation of network-centric warfare in the future may threaten individual ‘rice bowls’ throughout the ADO.¹⁰ Two of these ‘rice bowls’ may belong to the scientific acquisition and the software development communities, neither of whom may wish to expend the resources necessary to undertake the research work required to ensure that in systems design we meet the requirements of the human–network interface realistically and efficiently.

The Australian defence scientific community must ensure that capability developers are aware of potential pitfalls in the capacity of humans to interact effectively with advanced technology. If awareness of the vital interface between humans and computers is not emphasised within the ADF, then network-centric warfare may risk becoming a costly exercise and fraught with frustration. The ADF needs to undertake careful and detailed studies into the command-and-control compatibility between human operators and computer systems in networked operations.

Our research must concentrate on injecting the factor of a fallible humanity into the networking equation. In recent years, we have endured one expensive command-and-control system failure in the ADF, in the form of the Australian Army Automated Command and Control System (AUSTACCS). In the latter case, scientists did not sufficiently refine their research and development process. Australia’s defence science community must seek to ensure that a similar fate does not overcome Australia’s promising network-centric warfare initiative.

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THE USE OF PRE-EMPTIVE AND PREVENTIVE FORCE IN AN AGE OF TERRORISM

SOME ETHICAL AND LEGAL CONSIDERATIONS

MALCOLM BRAILEY

The June 2002 Bush Doctrine and the September 2002 *National Security Strategy of the United States of America* (NSS) brought the issues of pre-emption and prevention in the use of force to the fore in international relations. In both the Bush Doctrine and the NSS, the United States attempted to deal with three types of new interconnected threat: terrorist groups, weak states and rogue states. Both documents promised to confront global terrorism and to hold to account nations compromised by terrorism, including those that harbour or support terrorists by compelling such states to accept their sovereign responsibilities.¹ The United States declared that it would seek to prevent the activities of rogue states and their terrorist clients *before* they were in a position to threaten, or to use, weapons of mass destruction (WMD). The NSS stated that, in order 'to forestall or prevent such hostile acts [we will], if necessary, act pre-emptively'.²

This article examines the right of a state's self-defence under international law against the emergence of non-state threats and the rise of pre-emption and prevention. It seeks to explain the differences between pre-emptive and preventive military action in customary international law. The article also tries to demonstrate the complexity

of self-defence in an age of transnational terrorism and outlines the emergence of new theories such as interceptive attack and sufficient threat, which have attempted to align ‘anticipatory self-defence’ with the new realities of international security.

SELF-DEFENCE, PRE-EMPTION AND PREVENTION

In order to understand arguments surrounding pre-emption and prevention, it is necessary to examine briefly the idea of self-defence under the United Nations (UN) Charter. Under Article 51 of the UN Charter, a state is given ‘an entitlement to use armed force in order to defend itself against an attack, to repel the attackers, and to expel them from its territory’.³ Most states recognise that self-defence within international law must meet two conditions: necessity and proportionality. The latter condition is often described as the ‘essence of self-defence’.⁴ For example, in 1996, in its advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons*, the International Court of Justice reaffirmed the importance of the principles of both necessity and proportionality. The Court noted that these dual conditions represent ‘a rule of customary international law’ that ‘applies equally to Article 51 of the Charter’.⁵

If necessity and proportionality continue to be the yardsticks of legitimate self-defence, how do they apply to self-defence by pre-emption and prevention in an age of non-state terrorism and WMD proliferation? At what point should a state use force pre-emptively or preventively? Can a state seek to limit damage on itself by acting in advance of a planned attack? First, we must identify the differences between pre-emption and prevention. Pre-emptive self-defence involves the initiation of military action based on a perceived imminent attack and identifies clear advantages in striking first.⁶ Preventive self-defence, on the other hand, may be regarded as the use of force by a state in order to avoid the risk of war occurring later under less favourable circumstances. Jack Levy has identified four differences between pre-emption and prevention.⁷ First, while pre-emption is usually a tactical response to an immediate threat, prevention tends to be a strategic response to a longer-term threat, or to one that has yet to develop. Second, a pre-emptive attack is designed to forestall deployment of existing forces or weapons. Prevention, on the other hand, aims to halt the development of new forces or new weapons systems.

Third, in pre-emption, it is the imminent risk of attack by an adversary that leads a state to take military action against that adversary. In contrast, prevention is caused by the gradual deterioration of a state’s relative military power and the strategic risk

... the anticipatory use of force is usually viewed under the rubric of pre-emption based on a notion of an imminent threat.

that such a deterioration creates. Finally, the incentives to strike first are different in pre-emption and prevention. In pre-emption there is a perceived incentive to strike first. In prevention the incentive to strike first is not necessarily present. Instead, preventive attack may become feasible because of the ‘margin of safety provided by the preventer’s own military superiority’.⁸

In general terms, the anticipatory use of force is usually viewed under the rubric of pre-emption based on a notion of an imminent threat. In this respect, Article 51 and Article 2 (4) of the UN Charter have been influenced by the rules of pre-emptive war in customary international law laid down by the famous 1837 *Caroline* doctrine. In a dispute with Britain over the use of force against Canadian rebels on American soil, US Secretary of State, Daniel Webster, enunciated in 1837 a doctrine of anticipatory self-defence. The latter was based on an imminent threat that was ‘instant, overwhelming and leaving no choice of means and no moment for deliberation.’⁹ Pre-emptive attack may be a legitimate form of self-defence provided action is clearly linked to a defined threat of aggression. In O’Brien’s words,

if there is a clear and present danger of aggression ... military coercion may be employed not only to repel but also to prevent imminent illegal military coercion and, if necessary, to attack the proximate sources of recurring illegal military coercion.¹⁰

The legal case for and against anticipatory self-defence remains contentious, however. A literal reading of Article 51 may yield a clear argument that the right of self-defence arises only if an ‘armed attack’ occurs. Most scholars who favour a restrictive interpretation of self-defence believe that a broad interpretation of Article 51 would provide states with an opportunity to violate the rules prohibiting the use of force.¹¹ A wider reading of Article 51, however, suggests that, by reference to the ‘inherent right’ of self-defence, the UN Charter preserves the earlier well-defined customary right to pre-emptive self-defence. According to a broad interpretation, Article 51 highlights only one form of self-defence—namely response to an armed attack—and does not negate other legitimate actions in self-defence under customary international law.¹² For instance, in his dissenting opinion to the 1986 *Nicaragua* case at the International Court of Justice, Judge Schwebel rejected a reading of Article 51 that implied that the right of self-defence existed ‘if, and only if, an armed attack occurs.’¹³

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Since 2001, the UN Security Council has, in various resolutions, also reaffirmed the ‘inherent right’ of states to act in self-defence against terrorism. In resolutions 1368 and 1373, the council has pronounced that states ‘shall take the measures necessary to prevent the commission of terrorist acts’.¹⁴ These two resolutions support previous debates in the Security Council that ‘the right of self-defence is not an entirely passive right’. Since terrorism involves assaults by small groups employing irregular and ‘hit and run’ tactics, it can be argued that a series of ‘pin-prick’ assaults might be weighed in their totality and count as an actual ‘armed attack’ under the accepted UN definition.¹⁵

INTERCEPTIVE ATTACK AND SUFFICIENT THREAT

In addition, the UN General Assembly’s *Definition of Aggression* refers to the first use of force as constituting only *prima facie* evidence of aggression. Preparation for an armed attack may long precede the actual firing of the first shot and may legally justify a response. Seen from this perspective, then, the use of force by a state acting in self-defence is not so much anticipatory as interceptive in character. The notion of interceptive self-defence is an interesting one. Dinstein defines interceptive self-defence as taking place ‘after the other side has committed itself to an armed attack in an ostensibly irrevocable way’.¹⁶ Under new security conditions, the concept of interceptive attack presents a useful and alternative way of reformulating the right of self-defence in international law. When considered together with wider definitions of what constitutes armed attack—notably the 11 September 2001 attacks on the Pentagon and the World Trade Center—interceptive self-defence may present a legitimate way for states to respond to terrorism lawfully, even under the limitations of Article 51 of the UN Charter.¹⁷

Alongside the idea of interceptive self-defence, Michael Walzer has argued that, for states dealing with the threat of aggression, an exact line between legitimate and illegitimate first strikes should not ‘be drawn at the point of imminent attack but at the point of sufficient threat’.¹⁸ Using the concept of sufficient threat, Walzer has made an important distinction between pre-emptive and preventive war. He argues that prevention—lying on the far end of the ‘anticipation spectrum’—is a strategy of attack that responds to a ‘distant danger’. The motivation for preventive war is likely to be linked to the balance of power between states and may not always meet the conditions of sufficient threat that are required to justify the anticipatory use of force.

Preparation for an armed attack may long precede the actual firing of the first shot and may legally justify a response.

Indeed, international terrorism may justify the use of pre-emptive force in order to nullify 'sufficient' threat. As Walzer notes, 'perhaps the gulf between pre-emption and prevention has now narrowed such that there is little strategic, and therefore little moral, difference between them'.¹⁹

The use of force against an adversary before the outbreak of hostilities may be justified if a state is facing what Walzer terms a 'supreme emergency' during which the very existence of the community of citizens may be at stake. A supreme emergency involves danger beyond 'ordinary war', and both its imminence and apocalyptic character may 'well require exactly those measures that the war conventions bar'.²⁰ The ongoing problem of a global terrorist threat could also meet the requirements for exceptional 'imminence' in order for pre-emptive or preventive actions to be justified during a supreme emergency.

An offensive war by a state against an adversary that presents a clear and present danger, or one that threatens the values and interests of the international community, could be morally permissible and justified as a 'necessary war' of individual or collective self-defence. In this context, Michael O'Keefe has proposed that 'international terrorism could represent a threat to the existence of a state if weapons of mass destruction were used, [and] it could be argued that [such a threat] would represent a supreme emergency'.²¹ Given the scope of recent international terrorist activity and the problems associated with curtailing global WMD proliferation, this approach would indeed seem to encompass Walzer's criteria for both exceptional 'imminence' and the 'nature' of any given threat. Legal support for pre-emptive strategies is not an extension to the scope of self-defence, but is based on a belief that the lawfulness of any use of force against terrorist organisations should rest on a wider interpretation of the definition of armed attack.

It remains important that states seek to legitimise the use of force according to the mutually reinforcing traditions of ethics and international law.

CONCLUSION

In an age of terrorism, the pre-emptive and preventive strategies of recent US policy represent attempts to deal effectively with new threats to national and international security. The work of such scholars as Dinstein and Walzer on when and how force can be used as an interceptive instrument or at a time of sufficient threat also demonstrates the complexity of developing new rules to deal with non-state threats. It remains important that states seek to legitimise the use of force according to the mutually reinforcing traditions of ethics and international law. As Oscar Schachter

writes, the basic premise of international law governing the use of force must be that 'the right of self-defence, inherent though it may be, cannot be autonomous. To consider it as above or outside the law renders it more probable that force will be used unilaterally and abusively'.²²

International terrorism straddles both crime and war, and threatens not so much territorial borders but the inherent rights of a state's citizens. Such a threat is difficult to deal with according to conventional interstate norms. 'When states are attacked', Walzer reminds us, 'it is their members who are challenged, not only in their lives, but in the things they value most, including the political association they have made'.²³ In the past the threat to states was unambiguous; in the early 21st century this situation has changed. In an era of transnational and non-state threats, it should come as no surprise that the international community is faced with a range of new legal and ethical challenges stemming from the rise of pre-emption and prevention.

ENDNOTES

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- 19 *Ibid.*, pp. 75–80.
- 20 *Ibid.*, pp. 228; 251–2.
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- 22 O. Schachter, 'The Right of States To Use Armed Force', *Michigan Law Review*, 1984, vol. 82, p. 277.
- 23 Walzer, *Just and Unjust Wars*, p. 53.

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THE WESTERN WAY OF WAR*

VICTOR DAVIS HANSON

This article concerns war generally and the current war on terror in particular, and reflects on 2500 years of history and culture. From the fighting of early Greece to the wars of the 20th century, there is a certain continuity of Western military practice. Greek phalangites and British close-order volley fire are linked by culture. In his 2001 book *Carnage and Culture: Landmark Battles in the Rise of Western Power*, the author argued that the Western way of war is lethal because it is amoral—that is, it is unshackled by concerns of ritual, tradition or religion. The book was not interested in the morality of Western warfare, but in how military prowess reflected larger social, economic, political and cultural practices that seemingly have little to do with war. Western armies bring to the battlefield an array of advantages that can usually trump an enemy. While one should avoid historical determinism, the menu of Western culture, when applied to the battlefield, gives Western societies at war a number of important advantages.

For example, Western armies have often fought with, and for, a sense of legal freedom. The latter does not mean, as Aristotle said, natural freedom, but simply a construct of freedom. The idea of fighting for legal freedom reflects the reality that Western armies have often been the products of civic militarism and of constitutional governments. In its pure form, civic militarism was a reflection of the willingness of

* This article is based on an address delivered at a Deputy Chief of Army Occasional Seminar at the Royal Military College in Canberra on 7 August 2003.

the citizen body in the Greek city-state, the *polis*, to defend collective rights. Each citizen had a plot in the countryside or a small farm of about 10 acres and all had a stake in a common defence. The Athenian and Theban phalanx was a manifestation of a free citizenry, which fought to uphold the rights of autonomous yeomen.

Lethal, heavy infantry have been a particular Western strength. The latter can be traced to the Greek phalanx tradition and to Hellenic ideas of hoplite warfare and of land ownership. The rise of hoplite militias of the *polis* created the idea of Western warfare as decisive infantry battle waged by free men over property and local autonomy. Individualism and group discipline were aligned. Aristotle has an interesting remark in *Politics*, where he states that Greek armies do not reward people for killing other individuals. When dead soldiers are buried, they do not have markers celebrating individual kills as in many tribal warrior societies. In the West, there has been a linear tradition of attack based on group defence and group discipline—whether the Macedonian phalanx, the Roman legion, the Swiss pikemen or the Spanish *tercio*.

The classical Greek city-state also gave birth to the traditions of free inquiry and rationalism, which have since become Western trademarks. The dual legacy of the Greeks—decisive infantry battle and the *polis*—was to inspire most of later European warmaking during the medieval period and the Renaissance. Military planners sought to preserve the idea of civic militarism of the Greeks alongside superior tactics and technology. Vegetius was translated into modern European languages to glean information on ancient warfare. Phalanxes reappeared in Switzerland, Germany and Italy. Renaissance thinkers reapplied *strategia* (strategy) and *taktika* (tactics) to contemporary pikemen. Machiavelli and Grotius sought to employ armies in constitutional service to the state, arguing that infantry mustered from the populace were the most effective in warfare. By the time of the Enlightenment, the Hellenic idea that war could be regulated reappeared in the form of 18th-century limited war.

European armies have frequently marched to war with weapons that are superior to those of their adversaries because of the marriage—first evident in the Greek city-state—between Western capitalism, finance and logistics. In addition, Westerners have been quick to borrow technical inventions from elsewhere largely because European capitalists and scientists have been utilitarian and pragmatic and, from the 16th century onwards at any rate, had little to fear from religious fundamentalists or an aristocracy wedded to ritual.

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Western armies are technological because technology is the wage of a commitment to scientific rationalism. The reason that the West began to achieve military superiority from the Renaissance onwards was that Western culture encouraged the dissemination of knowledge. Thus, while many of the great military discoveries of the world, from stirrups to gunpowder, were discovered outside the West, it was the West that exploited them because its societies were increasingly scientific in outlook rather than rigidly theological. Firearms, for example, were revolutionary and dangerous to the feudal status quo. Yet, gunpowder was borrowed from the Chinese and firearms were adopted in Europe. As a result, the cannon and the arquebus destroyed feudalism. By contrast, it was because guns could destroy a social order that the Japanese, largely for cultural reasons, ignored them as weapons until the 19th century.

The Western style of warfare puts a premium on the idea of annihilation, of head-to-head combat rather than ritualistic fighting. This style of warfare can be traced back to antiquity. Indeed, from the fighting of early Greece to the industrial wars of the 20th century, there is a certain continuity of Western military practice. Greek phalangites and American mounted infantry are linked by Hellenic characteristics of battle: superior discipline, matchless weapons, egalitarian camaraderie, individual initiative, tactical flexibility and a preference for shock battle. The Spartan general, Brasidas, once dismissed the tribes of Illyria because they could not endure shock battle, and this belief in face-to-face battle is found in the Western way of warfare today.

When guns were added to the Western military tradition, Western armies became even more formidable. Thus, when Hernan Cortés landed in Mexico in 1519 with 1500 Spanish conquistadors, he encountered an Aztec empire of four million people. Although vastly outnumbered, his army was able to destroy the Aztec imperium through applying the superior technology of pike, sword and cannon. Technology, however, also requires tactical organisation. As indigenous peoples such as the Zulus and the North American Indians were to discover in the 19th century, guns without military formations are often ineffective. Firearms required the discipline of the formation and the technique of volley fire.

In 1879, in South Africa, at the battle of Rorke's Drift, some 4000 Zulus were equipped with 800 captured Martini Henry rifles sited at 1000 yards. The Zulu force surrounded a garrison of only ninety-eight able-bodied British soldiers. However, the Zulu warriors fired their rifles as individuals; they shot high and sporadically, and succeeded in killing only sixteen British soldiers. In contrast, before the battle at Rorke's Drift started, British sergeants were preparing to deliver deadly volley

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fire in a method of using firearms derived from Greek formation warfare. Through technology combined with technique, the vastly outnumbered British won the subsequent battle.

Another feature of Western warfare has been a confidence in the capacity for individual officers to undertake decision-making. For example, the Battle of Midway in June 1942 between Japan and the United States is a battle that the Americans should never have won from the point of view of relative resources on each side. The Americans enjoyed superiority only in radar and communications. Japanese dive-bombers and torpedoes were superior to those of the Americans, and in the Zero fighter Japanese aviation possessed a formidable aircraft.

What won the battle for the United States was individual initiative—initiative in breaking the Japanese naval codes, in rapidly repairing the carrier *Yorktown* and in the behaviour of US pilots. Referring to American code-breaking, official historian, Samuel Eliot Morison, wrote that Midway was ‘a victory of intelligence, bravely and wisely applied’. The American admirals demonstrated a degree of flexibility that was not found on the Japanese side. When Admiral Nagumo was informed that the Japanese fleet had sighted US carriers, he made the fateful decision to remove land-based bombs from his attack aircraft and to refit them with torpedoes. He was also concerned at the lack of fighter escorts available. In contrast, once Admirals Spruance and Fletcher realised that the Japanese were vulnerable, they hurled dive-bombers into action irrespective of fighter cover. When American aircraft found the *Hiryu*, it had gasoline, torpedoes and bombs littered on its flight deck, and was blasted to pieces.

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THE TRAGIC VIEW OF HISTORY

Heraclitus of Ephesos, the pre-Socratic philosopher, said that war is ‘the father of all, the king of all’. In Greek political thought, war was not necessarily bad or good; it was only tragic. The Greeks’ tragic vision of war was captured by Herodotus when he observed that ‘in peace, children bury their fathers. In war, fathers bury their children’. Solon, the lyric poet, once warned, ‘Everybody, war has your name on it, and it [war] hunts out young men’. In his first book, of *The Peloponnesian War*, the Greek historian, Thucydides, outlines the reasons for wars occurring. Thucydides has the Athenian statesman, Pericles, say that the people of Athens are fighting the Spartans out of fear or *phobos*, out of self-interest or *ophelos* and for honour or *timē*.

The Greeks understood that peace is linked to a willingness to undertake war. In the fourth book of Thucydides' *Peloponnesian War*, and predating the Roman writer, Vegetius, are the words, 'He who wants peace, prepare for war'. The modern West has a difficult time accepting the bitter truth that wars are ubiquitous; they are part of the human landscape; they are tragic. Wars take on the characteristic of evil or good, according to the moral landscape under which they are waged. Much of this situation is unpalatable to many Westerners because of what the Romans call *luxus*—a mixture of licence, luxury, smugness, cynicism and nihilism. In most affluent, free Western societies, it is very difficult to convey the idea that people should risk their lives to fight for belief. Today the American public, which for the most part does not read military history, has given up the tragic view of history and adopted the therapeutic mentality.

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When the events of 11 September 2001 occurred in the United States, there was a plethora of false knowledge that abounded among commentators about war. The first falsity was the idea that war was a rarity, something that the ancient Greeks would have dismissed as an illusion. In Greece one can drive through the battlefields of Plataea, Tanagra, Oenophyta, Coronea, Delium, Haliartus, Tegyra, Leuctra and Chaeronea—all fought on the farmlands of Boeotia in a single afternoon, attesting to the intensity of war. If one looks at the corpus of Western philosophical thought, it soon becomes obvious, as Plato once said, that peace is a parenthesis. For most of human history the unfortunate and natural state of mankind was one of perennial war, or that which Thomas Hobbes called *bellum omnium contra omnes* or the 'war of everybody against everybody'. As a classicist, the author once examined how many years Athens was at war in the 5th century BC and discovered that hostilities occurred three out of every four years—and this was in the city-state that was the cradle of Western civilisation.

After 11 September 2001, there was no shortage of commentators who informed us that the peaks of Afghanistan were too high for the United States to storm; the country was too rugged and snowy; and it was the graveyard of the Russian and British armies. Few analysts made an informed judgment based on the calibre of the respective forces. We heard little about the historical realities that condition military skill—group discipline, technology and individual capacity—and whether these skills resided in the Taliban forces. As a result, when some commentators predicted that the war would be over in six weeks, they—including the present author—were dismissed as either unhinged or as militaristic.

Sometimes peace can be little more than a truce. The Romans, who were supreme realists, coined the phrase *bellum interruptum*—a peace in which both sides re-arm and prepare to resume fighting. The fatal flaw in Pericles’s thinking in the Peloponnesian War was his defensive strategy to exhaust the Spartans and to withdraw inside the walls of Athens. Although a great statesman, he did not realise that the essential way to defeat Sparta was to march on the Spartan Acropolis, destroy the Spartan Army and free the helots in order to remove the Spartan state’s capacity to make war. The Spartan general, Lysander, a lesser man than Pericles, understood war with realism. Lysander grasped that the key to Spartan victory was to destroy Athenian power based on its fleet.

The great Theban liberator, Epaminondas, did not make the same mistake as Pericles. Following the Peloponnesian War, he fully understood that, in order to defeat Sparta, it was necessary to destroy its army. After ending forever the myth of Spartan invincibility, at Leuctra in 371 BC, Epaminondas gathered a massive army of 70 000 Thebans, Argives and Arcadians, and invaded Sparta. The Thebans ravaged Spartan territory, drove the enemy into the city and freed the Messenian helots. Through the instrument of war, the Thebans ended Sparta’s status in Greece as a major power.

THE CHALLENGE OF RADICAL ISLAM

In many respects, Osama bin Laden’s al-Qa’ida movement is at war with the West mainly out of Thucydidean fear—fear of the combination of personal freedom, market capitalism and secular rationalism, which are the hallmarks of Western modernity. The mixture of Western-style freedom, prosperity and reason is a combination that has a global cultural appeal from which Muslims are not immune—whether that

appeal is found in cell phones, Viagra or heart surgery—and it is an appeal that moves faster than radical Islam can repress. The *madrassa* of radical Islam offers nothing of positive value to the world community and the author does not think that any young Australians are going to say, ‘Hey, Dad, I’m going to the *madrassa* to hang out’. By contrast, the youth of the Islamic world might find playing video games or watching an Arnold Schwarzenegger movie to be attractive recreations. For traditional societies, the challenge of modernity is deep and abiding.

Deterrence is an important factor in preventing the outbreak of wars, but deterrence is often in the eye of the beholder. Al-Qa’ida’s war of terror on the West was encouraged by events that go back to at least 1979. In that year, the storming of the American Embassy in Iran signalled a growth of tension between Islam and the

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United States. In 1983, the killing of 262 American Marines in Lebanon by suicide bombers and the subsequent withdrawal of American forces suggested weakness. In 1993, events in Mogadishu in Somalia created a similar perception. For Islamic terrorists, the reprisal for an attack on Americans in the 1990s was either a cruise missile or a stern lecture, but surely never an all-out war.

Deterrence, once lost, is difficult to re-establish. In the United States today, critics are castigating President George W. Bush for his policies regarding the war on terror. Many classicists, however, would observe that all the President has done is to seek to re-establish deterrence by force of arms in order to try to restore peace. It is Osama bin Laden's great belief that Americans have no stomach for military sacrifice, that they live in shopping malls in a perpetual state of nihilism, looking at stomach rings and listening to compact discs. Yet American soldiers of the Third Mechanised Division, wearing Raybans and with 'anger management' written on their tanks, listened to rock music as they blew apart the Iraqi Republican Guard.

How do wars end? And how will the war on terror end? It seems to the author that, throughout history, wars usually end for good when there is victory or defeat—a reality that again disturbs the modern Western mind. There was a first Punic War, there was a second Punic War, there was a third Punic War, but there was not a fourth Punic War because Carthage was destroyed. There was a first Peloponnesian War, there was a second Peloponnesian War, but there was not a third Peloponnesian War because the Athenians were destroyed. During the American Civil War, if George McClellan rather than Abraham Lincoln had been elected in the North in 1864 on the Copperhead ticket, there probably would have been an armistice with the Confederacy and another civil war twenty years later.

In the Middle East, there have been five inconclusive wars: in 1947, 1956, 1967, 1973 and 1982; yet there has been no resolution of differences by force of arms. Why have we not had another conventional Middle East war? The argument can be made that there is no longer a Soviet Union to act as a patron of the Arab states. Should there be another full-scale war in the Middle East, the Israeli Defence Force (IDF) would quickly capture Damascus or Cairo. A classical military historian might observe that what encouraged the *Intifada* against Israel was the IDF's withdrawal from Lebanon in the 1980s and the later offer to give back 97 per cent of the West Bank. Israeli magnanimity was, in many ways, interpreted as weakness within parts of the Arab world. Whether the Israelis understood it or not, they weakened the concept of deterrence.

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CONCLUSION

The Western way of war is so efficient and lethal that war is seen as impossible between democracies. Many have accepted the truism that democracies do not fight each other, but consensual governments have occasionally gone to war throughout history. Athens wrecked its culture by invading democratic Sicily in 415 BC. Democratic Boeotia fought democratic Athens at Mantinea in 362 BC. The Italian republics of the Renaissance fought each other. Britain and the United States were at war against each other twice—first in the War of Independence from 1776 to 1783 and then in the War of 1812. Yet, if history is any guide, the real danger to world progress is when Western armies turn against each other and deploy the deadly menu of their arsenals.

Today we have reached a paradox in war. Such is the lethal character of the Western way in war that non-Westerners seek to avoid open confrontation with such forces. As a result, we in the West may increasingly have to fight as non-Westerners—in jungles, mountains and cities—in order to combat enemies that avoid our strengths in positional warfare. In consequence, we may not always be able to draw on the Hellenic traditions derived from consensual government of superior technology and the discipline of free soldiers fighting in formation. As products of the Enlightenment, we in the West must not forget the tragic view of history and our heritage from antiquity. Our modern Western societies must not become so educated, so wealthy or so moral that we lose our resolution to use arms in order to protect ourselves.

The Western way of war is so efficient and lethal that war is seen as impossible between democracies.

THE AUTHOR

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THE SMALL CHANGE OF SOLDIERING AND AMERICAN MILITARY EXPERIENCE

ROGER SPILLER

No doubt soldiers have always understood that, when they were charged with a mission that did not look familiar—one that diverged from the agreed upon business of fighting wars—they had entered an unorthodox realm of soldiering. Roughly speaking, such military operations fall under the heading of ‘the small change of soldiering’, to use John Keegan’s now-famous phrase.¹ Finer-gauged definitions are unnecessary as Keegan’s phrase easily incorporates interventions, invasions, punitive expeditions, constabulary operations, occupations, peacekeeping and even colonial or imperial warfare. America’s experience in this type of military operation includes the occupation of Mexico—a classic ‘stability operation’; and the US Army’s role in the Reconstruction of the South after the Civil War as an important early case of ‘nation building’. However, the Army’s operations on the frontier after the Civil War amounted to a very different sort of occupation, and in many ways one of the most complex in American history. Seen from this perspective, Somalia, Afghanistan and Iraq are just the most recent experiences in a long history of such operations and they contribute to a body of professional knowledge that American soldiers are most likely to require in the foreseeable future.

LIMITED WARS AND LIMITED MISSIONS

Apart from their unorthodox nature, what all these campaigns have in common is that they were in some way limited. None approached, nor was intended to approach, the intensity of total war seen in the two world wars of the 20th century. Something a good deal less than the national survival of the United States was at stake. Instead, the limited nature of the campaigns determined their fundamental character. In each of these campaigns, America's aims and methods were bounded in some way by the immediate cause that gave rise to the operation. These less-than-vital circumstances in turn framed the mission of the forces deployed, although hard—and repeated—experience has shown how missions often take on an elastic quality as the shapes and purposes of these struggles evolve. The American operation in Somalia, UNISOM II, is a case in point. What began as a humanitarian relief mission metastasised over time into an altogether different kind of operation, with a tragic result for American policy, American forces and, not least, the people of Somalia.²

Such operations are limited in other respects too; for instance, they are always confined geographically. A minor mission and a limited operational area both require a fine sense of discrimination about the number and kind of troops that should be employed. Having too many troops or having the wrong kind of troops could be just as bad as not having enough. Also, no matter how small a given area of operations, expeditionary forces are never strong enough to cover it entirely, even if it were desirable to do so. The US Army's pacification campaigns in the Philippines were typical in this respect. The Army put its formations and detachments where they would challenge the most intractable problems. Troublesome provinces such as Batangas received a large share of attention while others were left to their own devices. Unable to dominate an entire territory or region by physical means, statesmen and commanders are always forced to discriminate, to decide where limited assets could advance their mission, to calculate where politics might substitute for combat power, or risk dissipating their power and failing altogether.

American statesmen and commanders did, of course, fail. One might be misled to think that, because vital national interests are not immediately in danger, the failure of a limited operation may be of only minor importance. However, the military dimensions of an operation may not be a mirror image of its larger, long-term political importance. The United States' relatively small-scale intervention in the Russian Civil War did much to poison American relations with the USSR during its formative history and for most of the century thereafter. History does not obey a rule of proportionality. Small events may produce great effects. As colonial soldiers have long understood, a politically charged tactical defeat can have strategic consequences.

Limited operations do not conduce to a leisurely pace. American political and military authorities have usually set these campaigns in motion with one eye on the clock. The role of the United States is usually reactive, and this suffuses the campaign with the sense that American forces must move quickly if they hope to take the initiative and take control of the situation. Very seldom is the American public consulted beforehand. Provided the cost in lives, treasure and time does not outrun the American Government's justifications, the sufferance of the public can be assumed, but warily, and not for too long. Therefore, forces engaged in limited operations almost always feel undermanned and out of time. For troops trained only in orthodox soldiering, formulas such as METT-T (Mission, Enemy, Terrain, Troops and Time Available) will always seem at odds with the unfamiliar conditions that they are facing. As one soldier said of his role in stability operations in Panama, 'I didn't sign up for this bullshit.'³

Nowhere is the departure from 'real soldiering' more keenly felt than in the imbalance of combat power between the forces engaged. In limited operations, American forces have rarely faced opponents whose orders of battle approached their own, even—with notable exceptions—in a momentary, tactical sense. The lack of parity between forces works its own important influence on the greater character of the operation. An abundance of combat power on the part of the Americans has naturally led to frustration over policies that prevent the whole-hearted use of such power. Often, on the other side, the very lack of combat power will drive opponents towards the more inventive, less orthodox methods that have become so familiar in 20th-century warfare. From time to time, in cases of what one might term the 'Custer Syndrome', the overconfidence bred by such abundant combat power has been met with very dramatic and wholly unexpected American defeats.

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THEORY AND PRACTICE IN UNORTHODOX OPERATIONS

It is no wonder, then, that soldiers throughout history have never been particularly fond of limited warfare. Given a choice in theory that is never available in practice, soldiers would prefer to meet their own kind in battles where there was no ambiguity about ends, ways and means. Perhaps it is this preference, or prejudice, that has worked against the advancement of military theories of unorthodox operations—a deficiency that has extended even to simple doctrines and methods until quite recently. While modern orthodox warfare has given rise to a vast professional literature to guide every facet of strategic planning, campaign design and operational execution, the same cannot be said of more limited operations.⁴

Perhaps that is because these operations are seen as too much affairs of the moment, too much accidents of history than any well-planned, deliberate orthodox operation could be. Thus, so the argument runs, it is impossible for military theory and doctrine to anticipate these operations in any useful way. We must concede the initiative to reality and realise that improvisation is more important than knowledge in such operations.⁵ Of course, this is an argument for ignoring experience, one's own as well as others'. One might expect such opinions from armies with no experience, seeking to rationalise their ignorance. On the contrary, officers in mature armies with long experience of colonial and expeditionary warfare such as the French were quick to say 'adaptability in the face of each new situation, not the application of some pat formula of the Ecole de Guerre, made for success in the colonies.'⁶ The ambiguous character of these operations was supposed to create bold, innovative military leaders who could reinvigorate the staid practices of the orthodox army when they finally returned home. The common view among expeditionary soldiers that this kind of soldiering was beyond the reach of codification certainly worked against any but the most informal, ass-in-the-saddle doctrines.⁷ Indeed, only a very forgiving definition of doctrine could be applied to the nostrums that were handed down like saddle blankets from soldier to soldier on the American frontier after the Civil War.⁸

While it is certainly true, as Andrew Birtle has observed, that doctrine in the modern sense did not exist in the 19th-century Army,⁹ the differences between the state of the military art as it existed for orthodox operations and the state of the art for unorthodox operations were difficult to ignore. The difference in the two bodies of knowledge was the sign of a preference being enacted by an increasingly professional officer corps. Choices were being made about what was most important to learn and what could be dealt with informally. The distance between these two bodies of corporate knowledge has persisted throughout the 20th century and into the 21st. As a consequence, the US Army still greets unorthodox campaigning as if it were a new day, where improvisation and hoping for the best overrules experience.

Yet there is no intrinsic reason why the Army should react this way. The US Army's experience alone is sufficient to inform the creation of an 'American school' of limited warfare.¹⁰ Hardly a year has passed in the past two centuries in which American soldiers have not been engaged in such missions, with very little time out for the world wars. With the advent of the Cold War, not only did the frequency of contingencies intensify, but so did their scope of consequence. Between 1945 and 1976, arguably the most dangerous period of the Cold War, the United States employed its armed forces in support of its foreign policy 215 times.¹¹ Behind every one of these operations lay the possibility that the conflict might escape its limitations, and spin toward a confrontation between the superpowers. After a period of relative quiescence during the 1980s, the pace of American contingency operations surged again. During the dozen years of the Bush and Clinton administrations, the United States employed its armed forces in contingency operations grand and small on more than a thousand occasions.¹² What have we learnt from all this experience? A collective look at 'limited' military operations suggests that the US Army still has much to learn about unorthodox conflict—if only because it has forgotten so much. Notwithstanding the wide variety of intent, type, scope and result in this type of operation, certain shortcomings still seem to appear with depressing regularity.

These shortcomings are evident from the very beginning of such operations and do much to set the course for how they will play out. In no case cited in this article will one see an instance in which the principal actors took heed of the nation's hard-won experience, studied the problem at hand with any discipline, or allowed their actions to be shaped in any way by the body of knowledge available to them. How American policy is framed and how the Army's mission is defined exercise a critical influence over all subsequent action. The translation of policy into a military mission has, however, always been fraught with difficulty. It has been so difficult that Army leaders often relented in the face of presidential insistence, as Secretary of War Newton Baker did when he received President Wilson's less-than-exact guidance for intervening in the Russian Civil War.¹³ All too often, Army generals have adopted

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a dog-in-the-manger attitude when confronted by a wilful president, preferring to comfort themselves with the illusion that their role is only to follow orders, so that they can be held blameless if the mission goes awry.

The traditional lack of collaboration between American policy-makers and soldiers tends to create a false picture of what might be expected from the mission about to be launched. All parties, civil and military, have tended to overestimate how much of any given problem military force can solve. One repeatedly sees the assumption made by policy-makers and soldiers alike that the exercise of sufficient force alone would obviate the need for an expert understanding of the problem before them. Experience indicates quite the opposite. If anything, it is possible to hypothesise that the political dimension of these operations is always miscalculated. From the Mexican War to the Philippines, to Russia, Germany, Vietnam, Panama, Bosnia and beyond, missions guiding American action have fallen short on this very score. A misshapen strategy thus passes its deficiency of vision down the echelons until the price is paid in the field. Yet, armed with even the best-framed mission—one that provides expert, professional guidance for execution—soldiers will be forced to improvise. Missions always change simply because the situations that gave rise to them change. Furthermore, as a kind of military codicil to Heisenberg's Principle of Uncertainty, one may assume that, as soon as American soldiers enter the operational environment, the character of the experiment is unavoidably altered.¹⁴ This may be the reason that another rule seems appropriate for these kinds of operation: missions never contract.

Uncertain policies, inadequately framed missions and a longstanding professional bias against unconventional operations virtually guarantee that US soldiers will be assigned to this type of operation, with little doctrine to guide them and less training to protect them. The usual disparity of force evident at the onset of a mission naturally breeds confidence among soldiers, but the opposition is not required to comply with expectations. Often, planning assumed—wrongly—a compliant noncombatant population. A wrong-headed assumption on such a question spells the distance between a short, uneventful operation and an all-out resistance movement.¹⁵ The haste to respond and the focus on immediate action militate against 'what happens next' planning. As if the presence of combat power alone will render all other questions moot, intervening forces are usually caught off guard as the operation changes shape and gradually de-militarises (or re-militarises) itself. This is usually the phase in which the occupying power learns that the noncombatant population's initial reaction was less approval than grudging acquiescence. Depending on the depth of popular resistance, the opposition to the intervening power may reconstitute itself, as indeed it did during the Philippines War.¹⁶ If modern military planners are unable to look beyond the first shots, the old problem of enemy reconstitution will seem wholly new. At that point, execution defaults to improvisation, which in fact is not so much a plan as the absence of a plan.

VINCIBLE IGNORANCE AND THE US MILITARY

Often unprepared American soldiers have been confronted by the complex challenges of occupation duty. Faced with this unattractive prospect, American political and military leaders rarely took their thinking beyond the point of settling old scores and stabilising the country long enough to depart. Yet, the American experience with occupation operations is so extensive that one can easily discern recurring themes: temporary government, population control in general, suppression of residual resistance, resettlement of displaced noncombatants, rejuvenation of supply and distribution systems, infrastructure repair and institutional reform. With the one exception of the American occupation of Germany after World War II, in preparation for which the Army had very wisely established a School of Military Government two years earlier, American soldiers have suffered the disadvantages of ignorance time and again, plunging into operations where they were forced to learn as they ran.¹⁷ Abundant knowledge offers no guidance simply by existing. Ideas are like orphans: unless adopted, they will not serve their rightful function.

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If the US Army will not consult the wisdom of its own experience, the question is ‘Why not?’. If actions are not informed by fact, what remains other than passion, prejudice or wishful thinking? One veteran of the Vietnam War recalled with some heat an incredible resistance to lessons learnt after the war. He also remembered the old saying that the war did not really last eight years, but one year eight times. The late Douglas Pike, an eminent scholar of the Vietnam War, believed that this resistance to knowledge permeated every level of the American politico-military system. To describe this phenomenon, Pike used a term coined by Aldous Huxley—vincible ignorance: a state of mind in which one does not know, and understands that he does not know, and does not believe that it makes any difference. Pike’s characterisation of how vincible ignorance works in action is worth recounting:

... we first committed ourselves to the war and then began to think about it comprehensively. The highest level leadership did not initially sit down and address in detailed and extended fashion its strategic position, did not discuss and analyze enemy strengths, weaknesses, and probable strategies, did not wrangle and argue and finally hammer out a fully articulated strategy.¹⁸

There was in this behaviour a sense of enormous self-confidence, indeed a kind of unconscious arrogance on the part of the Americans. As Pike goes on to explain, this is not to say that no-one in the system understood the situation and knew what

answers were required. On the contrary, the United States had experts aplenty, willing to put their knowledge to work. ‘The villain in the piece,’ he writes, ‘was not so much particular people but the system itself.’¹⁹ The system somehow arrested the necessary translation of knowledge into action.

Certain institutions seem to be especially susceptible to these misfires, as if the institution subordinates all its functions to its own survival. Where an organisational hierarchy manages knowledge by subordinating it to process, the potency of the knowledge that the institution does possess is inevitably dissipated. With all operations reduced to routine, knowledge counts for less and less until its acuity—its capacity for affecting change—simply disappears. We have in two recent tragedies a non-military variant of Pike’s vincible ignorance. A comparison of the United States’ two Space Shuttle disasters reveals virtually identical institutional shortcomings. In both cases, NASA’s ‘institutional culture’ was assigned a greater weight of responsibility by accident investigators than the immediate technical reasons for the crashes. The management of expert knowledge, which existed in abundance at all organisational levels, nevertheless worked against its critical influence over the larger, policy-level decisions made within the agency.²⁰ After the Challenger disaster in 1983, both a Presidential Commission and a Congressional Investigation recommended corrective reforms in how NASA managed critical knowledge. The recently released Columbia Accident Investigation Board report identifies the same deficiencies in the agency’s organisational culture—seventeen years later.²¹

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CONCLUSION

In 1944, the British military historian and theorist, B. H. Liddell Hart, published a brief meditation on his professional life entitled, *Why Don't We Learn From History?* Considering the experience he and his countrymen were living through at the time, Liddell Hart’s answer was quite optimistic. World War II had reached its apogee when he was writing. The war had grown to global proportions. To many at the time, the war seemed the tragic result of civilisation’s failure to heed the lessons of World War I. Liddell Hart’s optimism was all the more remarkable because he had personal reasons for doubting the value of knowledge as a guiding force in contemporary public action. He had been intimately involved in his nation’s debates over foreign

and military policy for nearly two decades. Immediately before the war, he had served as an advisor to the Secretary of State for War in the ill-fated Chamberlain Government, which had added the word ‘appeasement’ to every politician’s lexicon of nightmares. Liddell Hart’s reputation suffered when the government fell, and he spent the war in a kind of intellectual exile. During this period, he still claimed that his faith in the power of experience to inform reason was undiminished. Liddell Hart was putting on a brave face, however; he surely knew better by then, if not long before. He seemed to admit as much later, wondering whether there was ‘a practical way of combining progress toward the attainment of truth [that is, knowledge] with progress toward its acceptance.’²² In some modern armies, this process might be manifested as doctrine.

For soldiers that have direct experience of military planning and active service in limited operations, Liddell Hart’s optimism seems closer to denial than reality. Very likely, these veterans could recount an episode in their own experience in which ‘pre-rational’ thinking suppressed informed professional judgment.²³ In the author’s experience, the answer to Liddell Hart’s question comes down to two reasons: ignorance and the kind of arrogance Douglas Pike described so well. The first of these is certainly corrigible. The second is, finally and regrettably, as close to an historical constant as anyone is ever likely to isolate. For a modern army with much to do, the only possible corrective is to learn how to learn from itself. Learning is never automatic, however, and history makes no guarantees in any case.

ENDNOTES

- 1 John Keegan, *The Face of Battle*, Viking Press, New York, 1976, p. 16: ‘For there is a fundamental difference between the sort of sporadic, small-scale fighting which is the small change of soldiering and the sort we characterize as battle.’
- 2 See Lieutenant General Thomas Montgomery’s presentation, ‘UNISOM II: Nation Building in Somalia’, in *Armed Diplomacy: Two Centuries of American Campaigning*, US Army Training and Doctrine Command with the Combat Studies Institute, August 2003, <www.cgsc.army.mil/csi/>.
- 3 Oral interview cited by Dr Lawrence Yates in ‘The Transition from Combat to Nation Building in Panama’. See *Armed Diplomacy: Two Centuries of American Campaigning* at <www.cgsc.army.mil/csi/>.
- 4 The exceptions are few and important. The classic study of these forms of operation is Colonel C. E. Callwell’s *Small Wars: A Tactical Textbook for Imperial Soldiers*, Grenhill Books, London, 1990 (orig. Her Majesty’s Stationery Office, London, 1899); and Frank Kitson’s *Low Intensity Operations: Subversion, Insurgency, Peace-Keeping*, Archon Books, Hamden, CT, 1971 (orig. Faber and Faber Ltd, London, 1971).

- 5 This was exactly the argument posed by France's leading colonial soldiers of the 19th century and no small number of American soldiers. See Douglas Porch's discussion of France's 'colonial school' of soldiering in 'Bugeaud, Galliéni, Lyautey: The Development of French Colonial Warfare', in *The Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed. Peter Paret, Princeton University Press, Princeton, NJ, 1986, esp. pp. 403–4. See also Perry Jamieson, *Crossing the Deadly Ground: U.S. Army Tactics, 1865–1899*, University of Alabama Press, Tuscaloosa, AL, 1994, esp. pp. 36–53; and Robert Wooster, *The Military and United States Indian Policy, 1865–1903*, Yale University Press, New Haven, CT, 1988, pp. 136–41.
- 6 *Ibid.*; the phrase is Porch's.
- 7 Jamieson, *Crossing the Deadly Ground*, p. 37.
- 8 Attack Indian villages in winter, kill the ponies and the buffalo, use converging columns, use Indian auxiliaries but do not ever trust them, use firepower as a substitute for ingenuity, and so on. See *ibid.*, pp. 36 *et seq.*
- 9 See Andrew Birtle, *US Army Counterinsurgency and Contingency Operations, 1860–1941*, US Army Centre of Military History, Washington, DC, 1998, p. vii.
- 10 Add to the American experience that of the French, British and Russian armies, to name only three of the most prominent modern expeditionary armies, and there is no reason for military theory and doctrine in this field to remain dormant.
- 11 Barry M. Blechman and Stephen S. Kaplan, *Force without War: U. S. Armed Forces as a Political Instrument*, Brookings Institution, Washington, DC, 1978, p. 16.
- 12 Barry M. Blechman and Tamara Cofman Wittes, 'Defining Moment: The Threat and Use of Force in American Foreign Policy', *Political Science Quarterly*, vol. 114, issue 1, Spring 1999, p. 2 of 21, viewed 2 September 2003, <<http://web8.epnet.com>>. The criteria used in this count appear to have been a good deal less rigorous than Blechman and Kaplan's earlier accounting. Here, Blechman would include small-scale missions such as the Army's relatively well known 55-man 'mission training team' deployed to El Salvador in the 1980s.
- 13 See Major Jeffrey Stamp's essay, 'Lost in the Snow: The U. S. Intervention in Siberia during the Russian Revolution', in *Armed Diplomacy: Two Centuries of American Campaigning*, at <www.cgsc.army.mil/csi/>.
- 14 One may see this phenomenon in virtually every intervention mentioned in *Armed Diplomacy: Two Centuries of American Campaigning*.

- 15 The removal of US forces following the ‘Black Hawk Down’ disaster in Mogadishu may be taken as a case of mission contraction, but this instance is more correctly seen as mission failure. The same may be said of another case, the bombing of the Marine Barracks in Beirut in 1983. This tragedy seems to have come about because the Marines’ mission expanded in the eyes of their enemies. The Marines’ subsequent withdrawal from Lebanon, therefore, could also be seen as the result of mission expansion.
- 16 See Brian Linn, ‘The U. S. Army, Nation-Building and Pacification in the Philippines.’ The reconstitution of the German army into pockets of guerrilla resistance was an important early concern in planning for the Allied Occupation of Germany. See Robert S. Cameron, ‘U. S. Constabulary Activities in Postwar Germany’, in *Armed Diplomacy: Two Centuries of American Campaigning*, at <www.cgsc.army.mil/csi/>.
- 17 The occupations of both Germany and Japan are important exceptions. However, these occupations accomplished something less than their promoters claimed at the time, and a distinct line was drawn between military government and ‘nation building’ as the term is used presently.
- 18 Douglas Pike, ‘Conduct of the Vietnam War: Strategic Factors, 1965–1968’, in *The Second Indochina War*, Proceedings of a Symposium held at Arlie, VA, 7–9 November 1984, Centre of Military History, U.S. Army, Washington, DC, 1986, pp. 99–116; see esp. p. 110–11.
- 19 *Ibid.* Two classic works offer the depth and texture of modern organizational theory to Pike and Huxley’s interpretation of ‘vincible ignorance’. See Graham T. Allison, *The Essence of Decision: Explaining the Cuban Missile Crisis*, Little Brown, Boston, 1971; and Irving L. Janis, *Victims of Groupthink*, Houghton Mifflin, Boston, 1982.
- 20 Diane Vaughan’s study of the *Challenger* disaster is more forthright: ‘routine and taken-for-granted aspects of organizational life... created a way of seeing that was simultaneously a way of not seeing’. See Vaughan’s *The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA*, University of Chicago Press, Chicago, 1997, p. 394.
- 21 Vaughan, *The Challenger Launch Decision*, pp. 389 *et seq.*; and Columbia Accident Investigation Board Report, Volume 1, First Printing, Columbia Accident Investigation Board Limited, Washington, DC, August 2003, esp. pp. 121–70, viewed 26 August 2003, <www.caib.us/news/report/default.html>.
- 22 B.H. Liddell Hart, *Why Don’t We Learn From History?*, Hawthorne Books, Inc., New York, 1971 (orig. Allen & Unwin, London, 1944, p. 70).
- 23 The term is Diane Vaughan’s from *The Challenger Launch Decision*.

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WAYS IN WAR

TOWARDS AN AUSTRALIAN WAY OF WAR

CULTURE, POLITICS AND STRATEGY, 1901–2004

MICHAEL EVANS

The ultimate source of strategy lies in the values of the people of a nation

Admiral Henry E. Eccles

In June 2002, the Department of Defence published a 25-page booklet called *The Australian Approach to Warfare*. This publication identified the manoeuvrist approach, a preference for advanced technology, and a requirement to engage in joint and coalition operations as being the main features of an Australian way of war in the 21st century.¹ These features are, of course, not confined to Australia and can be found in other contemporary Western militaries such as those of the United States and Britain. Of much greater interest was the publication's emphasis on the role that national culture plays in the employment of a country's armed forces.

Although a section of *The Australian Approach to Warfare* was devoted to the subject of national culture, it was impossible in the limited space available to do more than sketch a few generalities about the interaction of liberal democratic values with military force.² As a result, the content of the publication proved valuable not so much for the conclusions that it reached, but for the questions that it posed. Above all, *The Australian Approach to Warfare* raised a single compelling question:

how do culture, politics and strategy interact in a liberal democratic society such as Australia, and to what extent has this combination of forces shaped Australia's way of war over the past century?

The purpose of this article is to investigate this question by trying to identify the main historical connections between Australia's culture, its politics, and the development of its strategy and way of war. Five broad areas are examined. First, in order to provide historical context, the idea of distinctive ways in warfare is analysed. Second, the article contends that a way of warfare cannot be understood, even less defined, unless it is examined in relationship to the associated concepts of political culture and of strategic culture. Third and fourth, the components of Australia's political culture and its links to strategic culture and a national way of war are sketched. Finally, several of the contemporary challenges that defence planners face in developing Australia's strategy and way of warfighting in the early 21st century are discussed.

THE IDEA OF WAYS IN WARFARE

Historians have long been interested in the idea that the way in which a particular nation fights reflects its political and social structure. As the doyen of British military historians, Michael Howard, has put it, 'the military system of a nation is not an independent section of the social system but an aspect of it in its totality'.³ There is a diverse literature on ways in warfare. Well-known 20th-century examples of the genre include Sir Basil Liddell Hart's 1932 work, *The British Way in Warfare* and Russell F. Weigley's celebrated 1973 book, *The American Way of War*.⁴ In the early 21st century, the genre shows little sign of intellectual exhaustion. Indeed, even before the events of 11 September 2001 in the United States revived the cultural history of war in academe, the American scholar, Victor Davis Hanson, had achieved bestseller status with a provocative study entitled *Why the West Has Won*. Hanson's book caught the popular mood in much of the English-speaking West and was followed by other major studies such as John A. Lynn's, *Battle: A History of Combat and Culture*.⁵

The literature on ways in warfare raises the important question of definition. When we discuss the idea of a way in warfare, are we discussing policy, strategy, operations, tactics or all of these? Does a way of war refer mainly to strategic theory or to operational practice? Unless a degree of clarity is established on these issues, scholars of military affairs run the risk that the way in warfare concept will become so generalised as to have little, or no, analytical value. For this reason, there has to be an interdisciplinary approach to the subject—an approach that combines perspectives from both history and from the social sciences.

WAYS IN WARFARE, AND CONCEPTS OF POLITICAL AND STRATEGIC CULTURE

The idea that countries possess distinctive ways of warfare can only be understood in relationship to the modern concepts of political culture and strategic culture. In the 1950s and 1960s, social scientists such as Gabriel A. Almond and Sidney Verba developed the concept of political culture in the quest for a better understanding of the relationship between ideas and actions in politics.⁶ Political culture has been usefully defined by the leading American social scientist, Lucian W. Pye, as ‘the set of attitudes and sentiments which give order and meaning to a political process and which provide the underlying assumptions and rules that govern behaviour in the political system. It encompasses both the political ideals and the operating norms of a polity.’⁷

By the 1970s and 1980s, the study of political culture stimulated the development of the concept of strategic culture by leading Anglo-American scholars of strategy and statecraft such as Jack Snyder, Ken Booth, Colin S. Gray and Carnes Lord.⁸ In 1990, the British scholar, Ken Booth, provided perhaps the clearest definition of strategic culture when he wrote:

The concept of strategic culture refers to a nation’s traditions, values, attitudes, patterns of behaviour, habits, symbols, achievements and particular ways of adapting to the environment and solving problems with respect to the threat and use of force.⁹

What is the difference, if any, between a strategic culture and a way in war? While there is an intimate relationship between the modern notion of strategic culture and the older, more historical idea of a way of war, they do differ in methodology and scope. Strategic culture is essentially about what factors influence defence policy at the highest level in government; its main concern is how to conduct wars. A strategic culture, then, deals with how a nation views the place and role of military force in statecraft.¹⁰

In contrast, the idea of a way in warfare is more restrictive in scope and is usually concerned with the operational aspects of military strategy; in other words, it concentrates on military practice or how to fight wars. For this reason, the idea of a way of war is probably best viewed as a subset of strategic culture.¹¹ The notion of a way in warfare as a reflection of the values of a broader strategic culture is well illustrated by the 1993 edition of the United States Army’s FM 100-5 *Operations*. In a section describing ‘The American Way of War’, the manual states:

The [American] people expect the military to accomplish its missions in compliance with national values. The American people expect decisive victory and abhor unnecessary casualties. They prefer quick resolution of conflicts ... In the end, the people will pass judgment on the appropriateness of the conduct and use of military operations. Their values and expectations must be met.¹²

When it comes to devising a way of warfighting, military planners have to translate the values of a nation's political culture from the idiom of theory into the idiom of strategy. For the purposes of this article, a way of warfare is defined as the set of attitudes and beliefs held within a military establishment about how to devise the most effective strategy and operational method of achieving the political objective of war in accordance with national values and beliefs.

Moving from the general to the specific, how have Australia's political and strategic cultures impacted on the national approach to warfighting over the past century? In order to answer this question we must first examine the components of Australia's political culture, and analyse their influence on Australia's strategic culture and way of war.

'THE FRAGMENT THEORY': AUSTRALIA'S POLITICAL CULTURE

Australia's political and strategic cultures are deeply Western in character and—to the extent that any theory can provide a basis for understanding political and strategic behaviour—they are best understood in terms of American historian, Louis Hartz's 'fragment theory'.¹³ According to Hartz, Australia is an historical offspring of European civilisation in general and of Britain in particular—a society transplanted into an alien environment where cultural loyalties persisted long after the growth of local nationalism. As a colonial fragment, Australia bore the powerful cultural imprint of 19th-century British values and beliefs, symbolised by what the patriarch of Federation, Sir Henry Parkes, called 'the crimson thread of kinship'.¹⁴

Not surprisingly, then, the main precepts of Australia's political culture are drawn from the worlds of Anglo-Saxon government, philosophy and law. Similarly, Australian strategic culture reflects variations on Anglo-Saxon and Anglo-American ideas about the use of force by liberal democratic societies. In 1901, when the modern Australian state was formed, it was based on a political culture that reflected five broad and overlapping characteristics: utilitarianism, egalitarianism, conformism, collectivism and materialism. Collectively, these five characteristics provided the foundation stones of the Australian Federation.¹⁵ In order to understand the anatomy of Australia's political culture, it is necessary to examine each of these components in turn.

The first characteristic of Australian politics—utilitarianism—is perhaps the most important component. The impact of utilitarianism on Australia can best be conveyed by a brief comparison with the founding of the United States. Both

... the main precepts of Australia's political culture are drawn from the worlds of Anglo-Saxon government, philosophy and law.

Australia and America began existence as Hartzian colonial fragments of Britain. However, whereas America's early colonising fragment was imbued with John Locke's 18th-century ideas of individual freedom—which led to a war of independence and a utopian view of nationalism—Australia's colonial fragment did not undergo any great revolutionary struggle to establish democracy. Instead, Australia was, in Richard Rosencranz's words, 'born modern' and, in the course of the 19th century, 'won reform without nationality [and] social change without unity'.¹⁶

As a result, 19th-century Australian colonial politics were dominated by the utilitarian ideas of Jeremy Bentham, the reformism of the English Chartist movement and a social view of nationalism. These features ensured that the Great South Land developed as a New Britannia rather than as a New Jerusalem. Australian nationalism was, and remains, social and conservative rather than ideological and utopian in character. The central idea of Benthamite utilitarianism is that a civilised society should reflect the greatest happiness of the highest number of people. The operation of material interests for all, not abstract ideals or special rights for some, is at the core of utilitarian political philosophy.¹⁷

Those that triumphed in Australian politics by 1901—such as Edmund Barton, George Reid and Alfred Deakin—were Benthamites, and they made utilitarianism the dominant political ideology of 20th-century Australia. This philosophical consensus meant that the Australian national style of politics became pragmatic and instrumental, and centred around social economics, emphasising the requirements of material prosperity. As Ian McAllister has noted, 'to the extent that Australia has any identifiable political character, it is based on utilitarianism and a belief in common purpose, uniformity and an ultimate social good'.¹⁸ Through utilitarianism, the Australian political system came to reflect an instrumental view of the political process that emphasised the need for social harmony, fairness and equality.

The second characteristic of Australian political culture—that of egalitarianism with its ethos of mateship and 'fair go'—is closely related to the idea of utilitarianism. The notion of egalitarianism stems from both the need to cooperate in a harsh frontier environment and the intrinsic social character of Australian nationalism. Unlike America, Australia has historically always given priority to the needs of social and economic equality. In terms of ethical principles, the ideals of social harmony and the common good have tended to rank more highly as Australian political objectives than the ideal of individual self-expression as enshrined in the American Bill of Rights.¹⁹ One consequence of egalitarianism is that Australian political ideas and institutions tend to reflect a strongly legalistic frame of mind.²⁰

Australian nationalism was, and remains, social and conservative rather than ideological and utopian in character.

The third feature of Australian political culture—conformism—can be traced to the fact that the harsh squatter frontier did not favour individual initiative. One example of the stark contrast between the 19th-century American and Australian frontier experiences is instructive. Between 1803 and 1805, Meriwether Lewis and Lewis Clark traversed America from east to west, discovered a fertile interior and returned to proclaim America's Manifest Destiny. In 1860–61, Robert O'Hara Burke and William Wills crossed Australia from south to north but, on their return journey from the Gulf of Carpentaria, both men perished in a vast and infertile interior. Thus, unlike the American pioneer who could always strike out for the fertile West, the Australian pioneer was confronted by a frontier where physical existence itself was threatened.²¹

The Australian bush came to consist of scattered outback communities of selectors and pastoral workers. The isolation and harshness of the pastoral frontier and its lack of resources placed a premium on social cooperation or what Rosencranz calls a 'conformitarian pattern'.²² There was a powerful emphasis on conformity of Anglo-Celtic ethnic background and on unified belief. Conformity was regulated by means of selective immigration and the White Australia policy. The identity and survival of the scattered Australian settler communities was guaranteed by conforming to a set of shared cultural values as 'independent Australian Britons'.²³ In this manner, conformism ensured that the parallel values of utilitarianism and egalitarianism could be transmitted within a British cultural framework.

Closely connected to conformism is the notion of collectivism in Australian political culture. Again, this feature of Australian political culture is well illustrated by a comparison with conditions in the United States. Collectivism implies group action and, in the Australian context, is intimately linked to the role of the state.²⁴ Unlike America, in Australia the state, not the individual settler, was the creator of civil society. Government was regarded as the administrative agent of the electorate—the facilitator, rather than the enemy, of individual freedom and economic equality.²⁵ As a result, state paternalism—that which the French writer, Albert Métin, described in 1901 as Australia's *le socialisme sans doctrines* (socialism without doctrines)—came to be regarded as a useful means of achieving socioeconomic goals for the benefit of all.²⁶

As Australia's greatest political historian, Sir Keith Hancock, put it famously in 1930: 'Australian democracy has come to look upon the state as a vast public utility, whose duty it is to provide the greatest happiness for the greatest number.'²⁷ Australian democracy was based on the embrace, not the rejection, of the power of the state. This position was described by W. A. Holman, later Labor premier of New South Wales, who observed in 1905:

We regard the State not as some malign power hostile and foreign to ourselves, outside our control and no part of our organised existence ... We recognise in the Government merely a committee to which is delegated the powers of the community.²⁸

Finally, there is materialism as a characteristic of Australian political culture. Materialism is perhaps a natural consequence of a political culture firmly based on utilitarian values. Australian political debate, past and present, has been firmly centred on economics and the administration of prosperity for as many citizens as possible. For critics, materialism as reflected by the general anti-intellectualism of Australian public life and the alleged lack of ideas of a nation defined by suburbia is a matter of despair. To quote the politician and writer Frederick Eggleston:

[Alexis] de Tocqueville remarked of Americans that they were much attached to general ideas. This is emphatically untrue of the Australian. He has no Bill of Rights; he takes them for granted, and they are never queried. Jefferson's Declaration of Independence would move him less than the Gettysburg Address of Lincoln.²⁹

Hence, Patrick White could write of 'the Great Australian Emptiness, in which the mind is the least of possessions.' Similarly, Robert Hughes observed that 'there is no tradition of intellect in Australia. There are only intelligent men'.³⁰

By 1901 all of these elements of political culture—utilitarianism, egalitarianism, conformism, collectivism and materialism—were reflected in the great Australian Settlement that accompanied Federation. As Paul Kelly has noted in his seminal 1992 work, *The End of Certainty*, the Settlement of 1901, fashioned by the founding fathers of modern Australia—Barton, Deakin and Reid—came to be based on five great interconnected pillars of public policy.³¹ The first three pillars were socioeconomic in character and were designed to bring prosperity based on social justice. They were state paternalism, industry protection and wage arbitration. The fourth and fifth pillars, the philosophy of White Australia and the ideology of imperial benevolence, were socio-political in nature and reinforced the first three domestic foundation pillars. White Australia buttressed the social nature of Australian nationalism by supplying a unifying philosophy that came to form the bedrock for Australia's development for well over half a century. For its part, imperial benevolence allowed Australia to exploit its cultural links in order to seek military security first as part of the British Empire and, later, in the fold of the Australia, New Zealand, United States (ANZUS) alliance.³²

AUSTRALIA'S STRATEGIC CULTURE

Having sketched an outline of the main characteristics of Australia's political system, what connections can one make between Australian political culture and its strategic culture? In simple terms, for much of the 20th century, Australian strategic culture operated to protect the domestic pillars of the great 1901 Settlement against any potential threats that might emerge from the Asia-Pacific region—a region in which Australia had no natural allies. There have been four main features of

Australian strategic culture that have conditioned Australia's way of war over the past century. These features have been the reality of liminal geopolitical status, the triumph of a continental philosophy over island-consciousness, the irrelevance of Australian strategic theory to military practice and, finally, the tendency to fuse statecraft with strategy in order to defend values in times of war or prolonged security crisis.

... for much of the 20th century, Australian strategic culture operated to protect the domestic pillars of the great 1901 Settlement ...

THE REALITY OF LIMINAL GEOPOLITICAL STATUS

If one dominant feature characterises Australia's strategic culture from 1901 until the mid-1960s, it is the clash between Asian geography and European history. The paradox of geographical proximity to, but cultural distance from, Asia and of geographical distance from, but cultural intimacy with, the Anglo-Saxon heartlands has been at the heart of Australia's modern security dilemma. This Janus-faced dilemma has often been portrayed in the language of danger, dread and even of paranoia.³³ Yet, while these elements have been present, it is far more useful, as Richard A. Higgott and Kim Richard Nossal have suggested, to conceive of Australia in terms of being a liminal, or 'threshold', state. In international relations theory, the concept of liminality refers to a country that has an 'in-between location' and is suspended between two different worlds in which there is access to both, but in which permanence in either appears to be elusive.³⁴

It is important not to confuse the liminal, or 'threshold', concept with the notion of Australia as a 'torn country'. The latter is found in Samuel P. Huntington's influential 1996 book, *The Clash of Civilisations and the Remaking of World Order*.³⁵ According to Huntington, 'a torn country is one that has a single predominant culture which places it in one civilization but its leaders want to shift it to another civilization'.³⁶ Moreover, a torn country is one in which identity is difficult to define.³⁷ Australia is not a torn country because the basic foundations of its Anglo-Celtic civilisation are not seriously contested and there is no widespread desire among the electorate to abandon Western identity.³⁸

For the above reasons, the more restricted notion of liminality, with its 'in-between' connotation, is a more appropriate analytical term to employ than the emotive idea of a culturally torn country. Applied to Australia, the idea of liminality provides a useful analytical tool to describe the nation's enduring geopolitical dilemma. Like Turkey, the North Atlantic Treaty Organisation's Muslim-majority state, Australia is Asia's 'European-majority state'.³⁹ Both Turkey and Australia are shaped by the politics of liminal status, being simultaneously both 'odd-man in' and 'odd-man out' with

their immediate geographical regions. Australia's 'natural' geostrategic environments are regional: South-East Asia and the South Pacific; yet for reasons of politics and cultural heritage, its major strategic allies since 1901 have been the United Kingdom and the United States, both of whom have been, or are, global powers.

The significance of liminality in Australia's strategic culture is that it has created a permanent oscillation between the imperatives of a defence policy defined by Eastern strategic geography on the one hand, and by Western historical values on the other hand. The tension has been between 'continental defence' versus 'forward defence', between the use of limited human and economic resources in either the protection of territory or the use of offshore forces to help preserve a favourable global balance of power. It is important to note that Australia's liminal status is a permanent condition that cannot be resolved; it can only be managed by carefully balancing a static geographic position with a nimble and activist diplomacy.⁴⁰

The strategic challenge of maintaining a balance between geographical position and historical legacy has not changed in nearly a century. In 1914, Prime Minister Joseph Cook described preserving the balance as 'the art and the problem of highest statesmanship'.⁴¹ Similarly, at the beginning of the 21st century, the current Prime Minister,

John Howard, has observed that the acid test of Australian statesmanship remains in 'not having to make a choice between your geography and your history'.⁴² Preserving the balance between geography and history is a challenge worthy of an Australian Bismarck or Kissinger and, because Australia has seldom produced such towering figures, policy has often oscillated between the defence of geography on the one hand and the defence of interests on the other hand.

... Australia's liminal status is a permanent condition that cannot be resolved; it can only be managed by carefully balancing a static geographic position with a nimble and activist diplomacy.

THE TRIUMPH OF CONTINENTAL AWARENESS OVER ISLAND-CONSCIOUSNESS

In 1964, the leading geographer, Saul B. Cohen, described Australia as a classic 'trade-dependent maritime state' whose interests were tied to a larger offshore Asian and Oceanic geostrategic region.⁴³ Yet Australian strategic culture is dominated by a powerful sense of landscape in which the country is seen first and foremost as a continent and not as an island. The powerful sense of continental awareness in Australian strategy has ensured that, over the past century, with the exception of the period between the early 1950s and the mid-1960s—a period of prolonged security crisis—Australia has sought to pursue its peacetime defence policy based around its physical geography.⁴⁴

The dominance of continental awareness over island-consciousness was evident from the moment Prime Minister Edmund Barton described the 1901 Federation as representing ‘a nation for a continent and a continent for a nation.’ In many respects, much of Australia’s defence policy in the 20th century was based on a strategic interpretation of Barton’s formula. Thus, while the Anzac sacrifice on the beaches of Gallipoli in 1915—the greatest amphibious operation of World War I—dominates Australia’s conception of modern nationhood, neither Gallipoli nor a genuine maritime consciousness have ever dominated the mainstream of Australian strategic thought. Even the grim experience of a maritime strategy campaign against Japan for national survival in the South-West Pacific during World War II has not proven a lasting influence on Australian strategic culture.⁴⁵

Australia’s antipathy towards a maritime approach to strategy has not gone unnoticed. In 1930, Frederick Eggleston, one of the pioneers of modern Australian strategic analysis, wrote: ‘We do not have that sense of the sea and our surroundings which is generally developed in an island people.’⁴⁶ In his important 1965 study of Australian defence, the scholar, T. B. Millar, was moved to remind his readers that ‘the first point to remember about the Australian island–continent is not that it is a continent but that it is an island.’⁴⁷ In 1977, yet another defence analyst, B. N. Primrose, observed that one of the greatest intellectual weaknesses in Australia’s perception of strategy was the absence of a maritime tradition.⁴⁸ Indeed, part of the intellectual justification for adopting a strategic policy based on continental defence in the 1980s may have been based on an assumption that a maritime tradition was alien to the Australian strategic experience. For example, in November 1987, Kim Beazley, then Minister for Defence, stated: ‘Australia is not a maritime nation and its people do not sustain much of an interest in Australian maritime strategy.’⁴⁹

Australia has always tended to be drawn towards a continental-style doctrine of sea power. As Alan Robertson has observed, much of what passes for sea power doctrine in Australian strategy has been based on ‘a continentalist’s idea of maritime strategy’—an intellectual approach that owes more to a reading of Theodore Ropp than to Julian Corbett.⁵⁰ In Australian strategic culture, then, the sea has consistently been viewed as a defensive moat and not as a maritime manoeuvre space—a ‘sea–air gap’ that separates the continental landmass from the South-East Asian archipelagos.

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Such a strategic approach ignores the reality of a maritime environment in which the northern archipelagos comprise a large number of islands, and essentially form what is a ‘sea–air–land gap’ that requires the use of joint military forces. Since the late 1990s, when Australia belatedly rediscovered the value of a maritime concept of strategy, its advocates have spent much of their energy struggling to escape from the straitjacket of a narrow conception of continental defence.⁵¹

THE IRRELEVANCE OF STRATEGIC THEORY IN AUSTRALIAN MILITARY PRACTICE

Closely linked to liminal geopolitical status and a continental consciousness in Australian strategic culture is the irrelevance of strategic theory to Australian military practice. In the 20th century, the dilemma caused by liminality and the influence of continentalism in Australia’s strategic culture created a schism between the theoretical importance of defending geography and the reality of warfighting practice in times of crisis. While strategic doctrine should never be a fixed blueprint, it should provide at least some guidelines to military practice. Yet no-one can study Australian military history and not be struck by the fact that Australia’s peacetime strategic culture has seldom matched the reality of its way of war. In Australian strategic history—again with the exception perhaps of the forward-defence era of the 1950s and 1960s—peacetime strategic theory has usually tended to be the exact opposite of military operational practice. Indeed, the disparity between theory and practice amounts almost to a form of strategic dissonance.⁵²

In peacetime, Australia’s vast continental geography has always suggested that the best strategy is one that mobilises the nation around a fortress strategy. In the 20th century, this approach gave Australia three great fortress strategies: the Federation era strategy of continental naval defence between 1901 and 1914; the Singapore bastion strategy of the 1920s and 1930s; and the Defence of Australia ‘sea–air gap’ strategy of the 1980s and 1990s. Paradoxically, none of these strategies proved indicative of the reality of war, while each in its time became a strategic orthodoxy that could only be altered by the lessons of military practice. The truth is that, in times of conflict and crisis—from the World Wars through Korea and Vietnam to East Timor in the 20th century to Afghanistan, Iraq and the Solomons in the 21st century—the requirements of statecraft have always demanded that Australia fight overseas.⁵³

... no-one can study Australian military history and not be struck by the fact that Australia’s peacetime strategic culture has seldom matched the reality of its way in war.

In 2003, observing the curious disjunction between theory and practice in Australia's continental fortress doctrine adopted in 1987—and with its essentials reaffirmed in 2000—the leading American strategic analyst, Eliot Cohen, commented:

[Geographical] 'Defence of Australia' remains intact in theory, but abandoned in practice, as Australian soldiers, sailors and airmen patrol East Timor, restore order in the Solomons, fight alongside American commandos in Afghanistan and Iraq, and prepare to intercept dubious merchant ships off the Korean coast. Governments rarely explicitly forswear their strategic doctrines: rather they modify them quietly in theory, or simply abandon them in practice.⁵⁴

In practical terms, the defence of Australian national values and the upholding of political interests in order to help secure a favourable political balance of power have always been more important than a defence built around immutable geography. Modern Australian defence planners have often ignored Nicholas Spykman's famous 1944 warning against allowing geographic determinism to dominate strategy and statecraft: 'geographic facts will not change but their meaning for foreign policy will.'⁵⁵

FUSING STATECRAFT AND STRATEGY IN TIMES OF WAR OR SECURITY CRISIS

Because strategic theory has been such a poor guide to military practice, Australia has been most successful in managing the competing demands of its liminal geopolitical status in times of crisis when it has sought to integrate its statecraft with its strategy. As Alan Renouf put it in 1979, 'the first objective of Australia's foreign policy should [always] be to preserve the country from attack and from the threat of attack.'⁵⁶ The fusion of diplomacy with defence permitted Australia to overcome its liminal geopolitical dilemma through alliances based on expeditionary warfare in times of war or security crisis. From the Transvaal veldt in the early 20th century to the sands of Bagram at the beginning of the 21st century, the use of offshore warfare became an operational expression of the remarkable strategic fusion between Australia's statecraft and strategy in the quest for national security.

Brigadier F.P. Serong, perhaps the most important 20th-century Australian theorist of unconventional warfare, has noted that Australia's military impact—particularly in the second half of the 20th century—has often tended to be applied on a minimalist basis. Any operations, wrote Serong, were, and should continue to be, 'essentially a military deployment in support of a diplomatic position—never the reverse.'⁵⁷

... the use of offshore warfare became an operational expression of the remarkable strategic fusion between Australia's statecraft and strategy ...

The combination of statecraft with strategy, of diplomacy with alliance politics and offshore warfare, provided the principal means for Australia to counter 20th-century threats of German militarism, Japanese imperialism and Chinese communism.

It is likely that the same combination of factors will be the principal method by which Australia will prosecute the 21st-century war against Islamo-fascism over the next decade. Overall, then, in the wars and security crises of the 20th century, particularly from the 1940s to the mid-1960s, Australia's fusion of statecraft and strategy proved remarkably successful. The country was able to ensure that defence spending did not become a drain on domestic economic development and therefore impede the spread of prosperity under the 1901 Australian Settlement.

THE AUSTRALIAN WAY OF WAR

Effectively, the Australian way of war has been based on fusing strategy and statecraft through the agency of offshore warfare using volunteer forces in coalition operations. This approach to national warfighting was used both in the unlimited struggles of the World Wars and in the limited wars that have occurred since 1945. In most of these struggles, because of the predominance of infantry in Australia's various military contributions, the Anzac tradition has acted as an important transmission belt for the interpretation of national values in an overseas military setting.

However, the Anzac tradition reflects Australia's social nationalism rather than the principles of military professionalism. The Anzac tradition emphasises pragmatism, egalitarianism and mateship—all of which derive from the features of Australian political culture discussed earlier and all of which predate World War I. Moreover, it is important to remember that Anzac is a military tradition of 'defence without militarism'.⁵⁸ The Anzac ideal is as much about the compassion of John Simpson and his donkey at Gallipoli as it is about Albert Jacka's ferocious combat exploits on the Western Front. Writing about the military impact of Gallipoli, the Western Front and Kokoda on Australian nationalism, Rosencranz observes:

... the Australian way of war has been based on fusing strategy and statecraft through the agency of offshore warfare using volunteer forces in coalition operations.

These historic exploits have not transformed Australian nationalism. The significant fact of present-day nationalism is its social character. Australian soldiers of two world wars were called 'diggers', the lineal descendants of gold-camp radicals and the wars did not make heroes of Generals Monash and Blamey.⁵⁹

The overseas character of the Australian way of war continues. In August 2002, in the wake of Afghanistan and the build-up to Australian participation in the campaign to oust the Hussein regime in Iraq, Australia's leading political analyst, Paul Kelly, surveyed Australian defence policy between 1945 and 2002. Kelly noted the persistent expeditionary character of the Australian military tradition and the vital linkage in it between statecraft and strategy. He described the Australian way of war as being based on a careful integration of maximum political support with limited military liability within an alliance framework. In an echo of Serong's minimalist strategy of 'military deployment in support of a diplomatic position', Kelly remarked perceptively:

For half a century [since World War II] the Australian way of war has been obvious: it is a clever, cynical, calculated, modest series of contributions as part of US-led coalitions in which Americans bore the main burden. This technique reveals a junior partner skilled in utilising the great and powerful while imposing firm limits on its own sacrifices.⁶⁰

... Anzac is a military tradition of 'defence without militarism.'

CULTURE, POLITICS AND STRATEGY: TOWARDS AN AUSTRALIAN WAY OF WAR FOR THE 21ST CENTURY

At the beginning of the 21st century, Australia finds itself in the midst of a transformation of its political culture—a transformation that will almost certainly influence, and perhaps change, its strategic culture and its way of war in the first quarter of the new millennium. The changes to the political economy of Australia over the past quarter of a century have been profound. Between the 1980s and the advent of the 21st century, most of the pillars of the Australian Settlement of 1901 were swept away by the combination of the end of the Cold War, the collapse of Marxism–Leninism, and the coming of a new age of market liberalism and globalisation.

In the new century, state paternalism—'socialism without doctrines', the main feature of utilitarian political philosophy—has been replaced by a neo-liberal ideology emphasising that the proper role of the state is to provide opportunity for the individual. The 20th-century system of industry protection has essentially collapsed, giving way to free-market capitalism and to Australia's developing a competitive economy open to the international money market. The edifice of wage arbitration that once symbolised the essence of Australian egalitarianism has been largely replaced by the concept of enterprise bargaining, heralding the final victory of market forces over organised labour. The doctrines of White Australia, restricted immigration and ethnic conformity have long been replaced by a national policy of

multiculturalism. Finally, reliance on imperial benevolence has diminished since Asia has ceased to be seen only as a region of threat and has instead become a zone of economic opportunity and a place of constructive security engagement.⁶¹

The disintegration of a political culture built around the Australian Settlement has had an equally powerful impact on Australia's strategic culture. This situation can be best illustrated by examining the attempt, once again, to institutionalise Australia's peacetime strategy around the primacy of continental geography in the quarter of a century between 1972 and 1997. During this long period, there was a concerted attempt by peacetime defence planners to meet the requirements of Australia's liminal geopolitical position by emphasising the development of military capabilities to serve strategic geography.

The supremacy of the geostrategic approach in Australian defence—as symbolised by the 1986 Dibb Report and the 1987 and 1994 Defence White Papers, and confirmed by the essentials of the *Defence 2000* White Paper—was made possible due to four factors.⁶² First, the traditional fusion between statecraft and strategy in Australia's approach to war appeared to be discredited by involvement in the long and unsuccessful Vietnam War of the 1960s. There was a corresponding loss of confidence among defence planners in the value and relevance of offshore operations. This situation created a vacuum that was filled by geostrategists such as Paul Dibb whose focus was firmly on refining a doctrine of continental defence. Second, the relative predictability of the late Cold War strategic environment, with its lack of military commitments, favoured the theory of continental defence. For much of the period between the mid-1970s and the mid-1990s, strategic theory ruled without a serious challenge from the acid test of operational practice.

Third, the fact that the 1970s and 1980s became the most peaceful decades in Australia's military history since the 1920s and 1930s provided a long period of time in which the imperatives of continental defence could be absorbed by a generation of Australian military professionals and civilian policy-makers. A narrow geographic defence of Australia became almost an orthodoxy, and this status was reflected by Dibb's description of the 2000 White Paper as encapsulating the 'St James version' of Australian defence policy.⁶³ The final factor in the primacy of continental defence was the remarkable economic transformation of the 'tiger states' of the Asia-Pacific between the mid-1970s and the mid-1990s. The economic development of the Asia-Pacific region suggested the dawn of an age of regional stability that seemed to vindicate the principles of geographic defence over those of operational readiness for offshore operations.

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operational practice.

Unfortunately, politics, unlike geography, do not stand still. As the post–Cold War world was transformed by the twin forces of the information revolution and economic globalisation, Australian policy-makers discovered that the attempt to align national strategic culture narrowly around geography could not serve political interests in a fluid and unpredictable international system. The transnational conditions of globalised security in the 1990s respected no borders, while the Asian economic crisis of 1997 suggested the onset of a period of sustained regional instability. As a result of these new forces, Australia soon found itself facing the familiar dissonance between its declaratory strategic theory and its actual military practice.

During the long era of continental defence, operations in the service of political interests and national values—such as the operations in the Gulf War, Cambodia, Somalia, Rwanda and East Timor—were usually declared to be marginal to the primary role of defending strategic geography. In reality, however, these offshore operations gradually became central to the functioning of Australian defence policy. Moreover, beginning with East Timor in 1999, as such operations increased in size and intensity, they rapidly exposed the limitations of force structure capabilities designed to reflect the use of military force as an instrument not of Clausewitzian politics, but of a type of neo-Mackinderite geographic determinism. In the early 21st century, the interconnected security environment, the rise of global terrorism and the proliferation of weapons technology mean that threats are now against societies rather than frontiers, and cannot easily be quarantined by distance and terrain. Threats now form an indivisible mosaic, increasingly bypassing the security that physical borders once afforded.⁶⁴

Given the new realities of the 21st century, the Australian way of war needs to reflect three factors. First, a national way of war must recognise the intimate connections between politics, strategic culture and warfighting. In particular, those concerned with devising an Australian approach to warfighting must acknowledge the shaping power of Australia’s liminal geopolitical position and the need to manage this status with a judicious mixture of statecraft and strategy. Second, Australian strategists will have to recognise the compelling need to address the theory–practice mismatch between military planning and military experience. The current Minister for Defence, Senator Robert Hill, has described the theory–practice mismatch in the following terms:

... the dissonance between theory and practice in Australian strategy can only be addressed by the encouragement of an education in strategic affairs ...

I do think there is... a disconnect between [strategic] doctrine and reality. Our primary responsibility is the direct defence of Australia yet our troops are more heavily engaged than at any time [since] at least Vietnam in a multitude of tasks around the world.⁶⁵

Ultimately, the dissonance between theory and practice in Australian strategy can only be addressed by the encouragement of an education in strategic affairs that emphasises a connection between breadth and knowledge of military history, the impact of technology and the importance of political economy.

In an age of globalised security, there is no longer any such phenomenon as convenient warning time. As a result, Australian defence planners have no choice but to align the nation's declaratory strategy directly with real-world operational requirements. In the 21st century, Australian strategic culture must provide a womb in which to nurture a way of war. Australian strategists must, like their political counterparts, become theorists of praxis. They must pay heed to Clausewitz's famous warning that strategic theory without reference to historical experience is 'about as relevant to combat as the craft of the swordsmith is to the art of fencing'.⁶⁶ In short, unless Australia's strategic ideas become embedded in military practice, they will cease to serve any meaningful purpose.

The urgent challenge for the present generation of Australian defence planners is therefore to become fencing masters rather than merely swordsmiths. However, strategists can only master the use of the sword if they learn to appreciate the historical nexus between culture, politics and strategy. In 2004, an observer cannot help but notice the contrast between the strength of a number of new Australian operational concepts and the relative lack of innovative strategic ideas. Such useful operational concepts as multidimensional manoeuvre, littoral operations, network-centric warfare and complex warfighting are yet to be situated in a new strategic calculus that defines the direction and type of force structure that the Australian Defence Force will require over the next decade.⁶⁷

Third, and finally, Australia must grasp, and rigorously capitalise on, the post-11 September 2001 rise of a 'whole of government' approach to national security. In some respects, this process has begun with the publication of the 2003 *Defence Update*, the 2003 Foreign Affairs White Paper and the 2004 papers on Transnational Terrorism and National Counter-Terrorism Policy.⁶⁸ All four of these publications indicate a growing congruence of understanding on such important issues as the globalisation of security, the indivisibility of threats, the strategic threat of mass-casualty terrorism and the predominance of interests over geography. The development of

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an integrated approach to national security promises to assist in balancing Australia's liminal geopolitics while institutionalising the previously ad hoc fusion between statecraft and strategy. Any national security strategy that emerges will be vital in integrating the competing needs of national, regional and global security interests.

CONCLUSION

Frederick Eggleston once wrote that Australia possessed 'politics without doctrines,' by which he was suggesting that the most important ideas were already embedded in everyday practice.⁶⁹ The same has not been true of Australian strategy, which has often been preoccupied with theoretical ideas based on a narrow geographical determinism. In terms of defence policy, Australia has often possessed 'strategy with doctrines,' but such doctrines have seldom been embedded in military practice. In peacetime, the Australian ideal has been to try to develop a way of war as an expression of a fortress strategy, so exploiting the geographic fastness of the continent.

Yet, in every war and security crisis faced since 1914, the geographical ideal has always been eclipsed by political reality. Australia has always taken up arms in defence not of its geography, but of its liberal Western values. Accordingly, any credible Australian way of war over the next decade must reflect Australia's longstanding Western philosophical and cultural traditions. Australia's political system has a Benthamite tradition; its foreign policy is Cartesian; its diplomacy remains Westphalian; and its defence policy is essentially Hobbesian.⁷⁰

It is precisely because Australia is so firmly trapped between Western history and Eastern geography that the country must focus energetically on understanding the international system. As the leading political scientist, Hugh Collins, has perceptively observed, Australia is a country that historically has relied for its security and prosperity on a favourable balance of world order:

[Australia's] interests and identity cannot be enclosed within a consistent set of boundaries. Australia is a country without a region. Its future and its fate lie on the complex networks of global interdependence. The conditions of world order are the immediate conditions of Australian security and prosperity. This gives the country a high stake in defining these international conditions, but also means that changes in international norms and transnational regimes will have direct impact upon domestic politics.⁷¹

Any national security strategy that emerges will be vital in integrating the competing needs of national, regional and global security interests.

Australia may not be able to resolve its liminal geopolitical status. However, its military planners and civilian policy-makers can surely improve their grasp of the art of strategic balance from a sophisticated study of the complex interactions between geography and history, strategy and statecraft, and between national, regional and international security requirements.

In an age of strategic unpredictability marked by the rise of transnational threats, Australia needs a multifaceted security outlook—one that is simultaneously globally attuned, regionally focused and alliance-oriented. To achieve such a complex balance requires a mixture of historical awareness, geographical realism and nimble statecraft. In this respect, the study of Australia's warfighting practice, of its political culture and of its strategic culture are not abstract tasks divorced from questions of policy. Rather, such study helps us to improve our understanding of how the shape of the future is conditioned by the way in which the past impinges on the realities of the present. In this sense, self-knowledge becomes the greatest form of strategic wisdom.

Australia has always taken up arms in defence not of its geography, but of its liberal Western values.

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MILITARY HISTORY

‘OUT-GENERALLED, OUTWITTED, AND OUTFOUGHT’

GENERALS PERCIVAL AND BENNETT IN MALAYA, 1941–42

LIEUTENANT GENERAL JOHN COATES (RETD)

Looking back at the Malayan campaign of 1941–42 from the distance of more than sixty years, what is most striking is how quickly the Japanese invaders triumphed. In large measure it was a triumph of command. The Japanese commander of the XXVth Army, General Tomoyuki Yamashita, had assumed command only in November 1941, a few weeks before the invasion. He inherited someone else’s plan and put it into action with stunning effect. In seventy days Yamashita’s forces advanced the length of Malaya, destroying a number of British Empire brigades in the process, and captured Singapore on 15 February 1942.

Yamashita’s principal opponent for most of this time was the General Officer Commanding (GOC) Malaya Command, Lieutenant General A. E. Percival. The latter has gone down as probably the most unfortunate figure of the campaign.¹ It is important to note, however, that Percival was never in overall command and, over a period of two months, he witnessed a bewildering series of Commanders-in-Chief Far East come and go, including Brooke-Popham, Pownall and Wavell. Yet, ultimately, it was Percival who ‘carried the can’ for the cumulative mistakes of the

British commanders. Indeed, of all the images to come out of the melancholy Malaya campaign, the photograph of Percival and his group of British surrenderers—with their white knobby knees and Bombay bloomers, marching ignominiously towards the Ford Factory under a white flag to meet the victorious Yamashita—is the most abiding. Unlike Percival, Bennett escaped from Singapore, having told his troops not to escape but to stand fast. Returning to Australia, he was ‘kicked upstairs’ and promoted to the rank of lieutenant general. However, he was posted to Western Australia and was never again given an active command during the war.²

In his book *Singapore: The Chain of Disaster*, Major General S. Woodburn Kirby, the British Official Historian of the war against Japan, argues that the blame for defeat in Malaya–Singapore must be placed squarely on the shoulders of successive British governments. It was British government decisions from as early as 1919 that built up a chain of errors leading inevitably to disaster.³ Woodburn Kirby believes that the British made major errors in the military conduct of their campaign. He also contends that, by early 1942, nothing could have been done to save the Singapore garrison.

It is the conduct of the Malayan campaign with which this essay is mainly concerned. In particular, it seeks to examine the decisions taken at key points by two of the principal figures on the British side, Percival himself and Major-General H. G. Bennett, commanding the Australian Imperial Force, including the 8th Australian Division. The article analyses the attempt by Percival and Bennett to hold, in virtual isolation, a piece of coast and river from the mouth of the Muar River to a point 40 km inland with a single, inexperienced Indian brigade in riverine and swamp country. The Muar was a considerable obstacle whose tactical value was squandered during the fighting.

Churchill ... declared that the Japanese would ‘fold up like the Italians’ and went on to describe them as ‘the wops of the Far East’.

THE FALL OF MALAYA: THE STRATEGIC BACKGROUND

In terms of strategy, there is strong evidence to suggest that, after becoming Prime Minister in May 1940, Winston Churchill was extremely reluctant to look farther east than India in matters of Empire and Commonwealth defence. Field Marshal Dill, Chief of the Imperial General Staff, almost resigned over the issue of the relative priority of the Middle Eastern and Far Eastern theatres of operations.

Churchill was proven consistently wrong in his threat assessment of Japan. He had long believed that the Japanese were no match for Western nations. For example, in 1938, he had confidently asserted that the Japanese would never dare to confront

the English-speaking nations militarily, because the latter could wage war ‘at a level at which it would be quite impossible for Japan to compete’. Churchill did not change his views once in power. In 1941, he declared that the Japanese would ‘fold up like the Italians’ and went on to describe them as ‘the wops of the Far East’.⁴

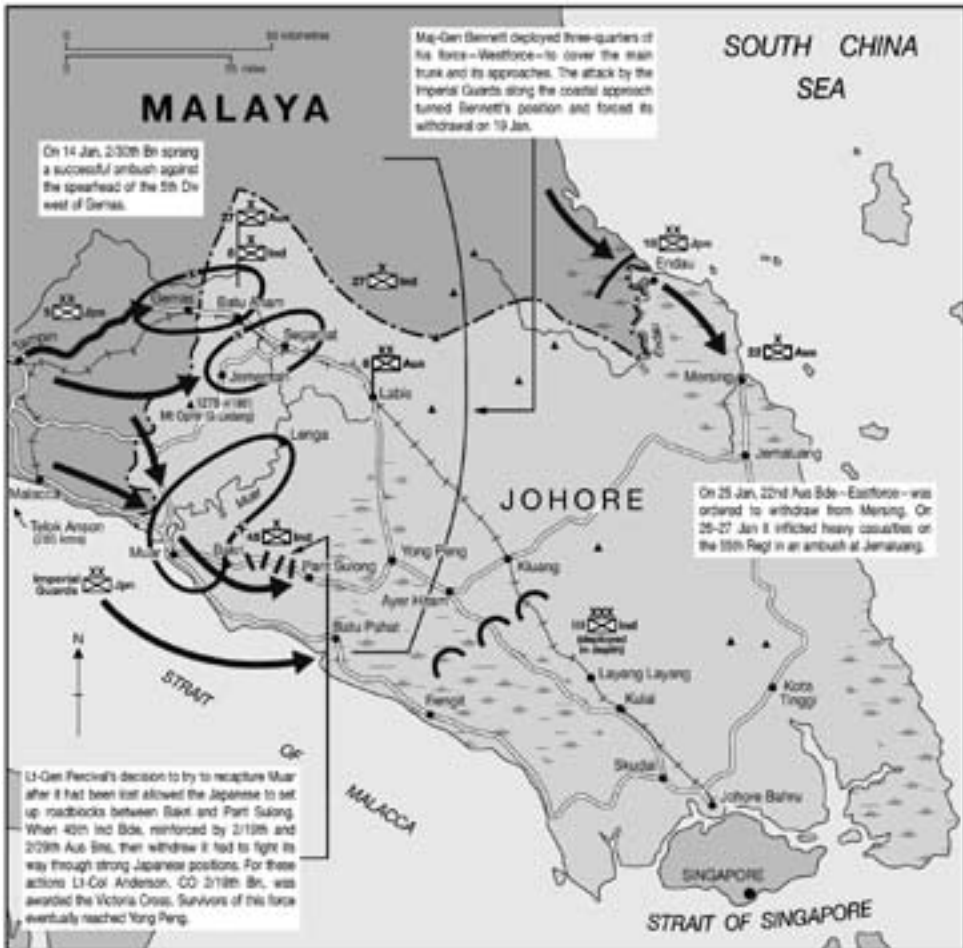
What bothered even Churchill’s most loyal supporters was that even material support for the Soviet Union appeared to have greater priority in British strategic planning than the defence of Malaya, Burma and Australasia.⁵ At a time when Percival in Malaya was clamouring for further reinforcements of infantry, and particularly of armour, Churchill went so far as to contemplate the use of the 18th and 50th divisions serving on Russia’s southern front. In the event, several hundred tanks and ten squadrons of front-line aircraft were given as gifts to the Soviet Union.⁶ Churchill’s approach to the defence of the Far East reinforced a belief that his policy was to appease, rather than confront, Imperial Japan. As a result, British forces deployed to Malaya, while being more than token, were not realistic.

BRITISH UNDERESTIMATION OF THE JAPANESE

Like Churchill, the British command in Malaya did not have a realistic understanding of the abilities of the Imperial Japanese Army and Navy. The ‘Japanophiles’, who sought an objective analysis of Japan’s strengths, were outnumbered by the ‘old China hands’, whose views on Japan were unalterably ethnocentric. The ‘Japanophiles’ took care to assess Japanese military proficiency objectively and against a template of Western criteria.⁷ Contrary observations that stressed Japanese military inferiority came generally from the school of ‘old China hands’, and the latter’s prejudices remained more prevalent among the local British military staffs in places such as Singapore, Burma and Hong Kong.

Colonel G. T. Wards, the ‘Japanophile’ British Military Attaché in Tokyo, gave the then GOC, Major General J. E. Bond, and the Singapore garrison an illustration of the menace that the Japanese armed forces represented. On a visit to Singapore, Wards told his audience that he had participated in Japanese ground-force manoeuvres and exercises both in Japan and in China. He warned his colleagues that the Japanese Army was ‘a first-class fighting machine’ and emphasised the extreme physical fitness of the Japanese troops, their fanatical patriotism, marching prowess and the efficiency of both unit and sub-unit commanders. The Military Attaché also noted the professionalism of the Japanese General Staff, including its ability to handle large formations of troops over immense distances.

The ‘Japanophiles’, who sought an objective analysis of Japan’s strengths, were outnumbered by the ‘old China hands’ ...



Wards punctured a number of British myths about the Japanese. These myths included a belief in Singapore military circles that the Japanese forces never operated by night and that they were poor mechanics, drivers and pilots. Wards pointed out the Japanese military's immense talent for secrecy, surprise and deception. Japanese commanders knew infinitely more about the British Empire forces in Malaya than senior British officers knew about Japan's armed forces.

However, Wards's valuable advice did not receive proper attention in Singapore's military circles.⁸ This situation occurred despite the fact that Wards's observations were supported by two 1940 War Office military pamphlets on the Japanese armed forces.⁹ The atmosphere of self-deception among senior officers in Malaya remained palpable right up until the outbreak of hostilities in 1941. One of Brooke-Popham's officers in Singapore told an arriving Australian officer that 'the Japanese Army is a bubble waiting to be pricked'.

Indeed, summing up Wards’s 1941 talk, Major General Bond told his assembled officers that the Military Attaché’s statements were unnecessarily alarmist and were far from the truth, and that superior intelligence kept the British apprised of every Japanese move. The last claim was untrue. The four-digit, mainline Japanese Army code was not penetrated on a systematic basis until troops of the 9th Australian Division captured the Japanese 20th Division’s entire cipher library at Sio in New Guinea in January 1944.¹⁰

Although neither Percival nor Bennett was in Malaya at the time of Wards’s visit in 1940, it is uncanny that neither officer chose to challenge Bond’s views. Even as his forces were bundled back onto Singapore Island, Percival elected throughout the campaign to adhere to English public-school ‘good form’ by refusing to alarm the local population. For his part, Bennett, in his first instruction to his command in Malaya, suggested that the Japanese lacked the ‘jungle mindedness’ that he intended to instil in his own troops. As Bennett put it:

The belief that Bennett was a rigorous trainer of troops in the Malayan jungle persisted long after the end of the war.

Our enemy will not be so trained [in jungle warfare and] is unaccustomed to any surprise attack and reacts badly to it. Generally speaking he is weak in small unit training, and the initiative of his small units is of a low standard.¹¹

Similarly, a Malaya Command Training Instruction of the same period stated that the Japanese soldier was ‘peculiarly helpless against unforeseen action by his enemy.’¹² The belief that Bennett was a rigorous trainer of troops in the Malayan jungle persisted long after the end of the war. In 1962, as a young officer, the author studied Colonel E. G. Keogh’s potted history of the Malayan campaign. Keogh concluded by stating that:

General Bennett has become a controversial figure. But on one point there is no room for controversy—he trained his troops thoroughly. If Percival had caused his other subordinates to train their troops as hard and as well as Bennett trained his, the story of Malaya might well be very different.¹³

In fact, nothing could have been farther from the truth.¹⁴ Bennett did not supervise the training of troops, almost never went into the jungle himself and, as his own diary makes clear, was overwhelmingly concerned with what he perceived as his personal destiny to move to the upper echelons of the Australian Army.¹⁵ Bennett’s almost total preoccupation with self-interest is revealed in a letter to Frank Forde, the Minister for the Army, on 27 January 1942. With the Japanese closing rapidly on the Straits of Johore, Bennett wrote:

When the war commenced, I was senior to both Blamey and Lavarack and was superseded, not on account of inefficiency, but merely because of jealousy. Also, certain people wanted to see a permanent soldier and not a citizen soldier at the head. If you bring anyone else here to command the Australian Corps when it arrives [*sic*], I will ask to be relieved. I will take it as a note of lack of confidence in me. I was a Major General when Lavarack was a Lieutenant Colonel.

Both troops and staff had to look elsewhere for inspiration to men such as Colonel J. H. Thyer, Bennett's General Staff Officer Grade 1 (Operations) and to Taylor, the commander of the 22nd Brigade, in order to try to discern their real military task in Malaya.

In turn, an overconfident cynicism, which was natural to Bennett, probably accounted for his own low assessment of the potential Japanese enemy.¹⁶ A considerable inertia pervaded Malaya Command's estimates of Japanese military capability. Even an effective GOC, Malaya—such as Major General Dobbie, himself an eyewitness of Imperial Japanese Army manoeuvres in 1936—retained a qualified view of the effectiveness of the Japanese Army. It would be surprising if the then Colonel A. E. Percival, Dobbie's Chief of Staff in Singapore, differed from that assessment.

Yet, as the Allies subsequently found to their cost, the Japanese Army in 1941 was vastly different from what it had been half a decade earlier. Percival was only one among many senior officers whose judgments had not moved with the times. Indeed, when General Wavell—the newly appointed Supreme Commander ABDA (American, British, Dutch, Australian) Command—visited Singapore on 7–8 January 1942, he was appalled to find that no effort had then been made to defend Singapore Island, except for the establishment of the prewar naval guns. Percival admitted that he had not undertaken defensive measures because he believed that 'building defences was bad for morale'.

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THE DEFENCE OF NORTHERN JOHORE

The defence of the Muar River should have been the main line of resistance in Northern Johore. An altercation that occurred between Bennett and Thyer helps to put into perspective Bennett's low estimate of the likelihood that the Japanese would use the west coast route as a major thrust line. On 1–2 January, a Japanese force was moved down the west coast by boat to points west and south-west of Telok Anson,

and deployed behind the British defence line. The combined strength of the Japanese was over four battalions, and there was little doubt that they would use the stratagem again if circumstances permitted.

As his diary reveals, Bennett was aware of Japanese movements. Yet, when Thyer suggested to Bennett that the Japanese might employ similar tactics in the east, the former’s advice was met with an illogical rebuke:

There are still signs of [a] lack of [a] sense of proportion in Thyer who has passed it on to his staff. He worries interminably about remotely possible hair brain schemes the enemy might adopt but ignores completely the big problem. He has on his brain a likelihood that the enemy will come up [the] Pahang or Rompin rivers by large boat—then by light craft then by foot over 50 miles of jungle. Why should he?¹⁷

Since the Japanese Imperial Guards Division was about to use a similar scheme of manoeuvre against the 45th Brigade’s position on the Muar, Bennett might have profited from listening to Thyer. Instead Bennett remained obdurate and, in any case, matters had become more complex because Wavell insisted on a complete change in the plan for the defence of Johore.

In his original plan, Percival had allotted the defence of the key north-western area of Johore to Lieutenant General Lewis Heath’s 3rd Indian Corps, with Bennett commanding in the east of the state. On 8 January 1941, Wavell realised that the loss of Johore would almost certainly mean the loss of Singapore. As a result, the ABDA Commander insisted that the plan be changed and decided that Bennett showed greater fighting spirit than either Percival or Heath. Consequently, Wavell resolved to entrust the main defence of Johore to Bennett. However, in doing so, the ABDA Commander failed to detect the flaws in Bennett’s character and did not recognise the deep dissent in the latter’s division. Heath was ordered into a reserve position behind Bennett’s force and, to add to the complicated nature of the British defence dispositions, took Bennett’s 22nd Brigade under his command.

Wavell’s tactical interference undercut Percival’s already-diminishing authority and was damaging. For instance, the division of the defence of Johore, latitudinally instead of vertically, was counterproductive. Such a disposition meant that when he came to withdraw his own force, Bennett would be butting his way through Heath’s communications.¹⁸ If Yamashita had planned the British Empire’s defence of Johore himself, he could not have acted more firmly in his own interests.

If Yamashita had planned the British Empire’s defence of Johore himself, he could not have acted more firmly in his own interests.

By now, it had become evident that the Japanese were speeding up their timetable of attack through their ability to turn the flanks of any linear defensive line across the narrow peninsula using amphibious hooks from the sea. In defensive terms, the Japanese approach meant that Bennett was confronted by Heath's force positioned directly behind, instead of having an unimpeded run back along his own lines of communication with delaying positions in depth. Inevitably the two British forces would confound each other's attempts to achieve a clean break before the advancing Japanese. To add to these problems, Bennett compounded matters by the manner in which he laid out the 'Westforce' defence.

For some time Thyer had been warning Bennett that the two main Japanese approaches—a down the main trunk road from Kuala Lumpur and from the coastal approach—deserved equal tactical consideration. It is clear from evidence that Bennett did not view the coastal approach with the gravity it deserved. In consequence, the general concentrated three of the four brigades of his command, 'Westforce', on the main trunk approach. Moreover, he deployed his weakest brigade, the 45th Indian, into 40 km of tangled, swampy river front, backed by only a single battery of Australian artillery.

These tactical dispositions meant that, from the outset, Bennett was committing himself to defeat in detail. He should have recognised that, if the Japanese broke through along the coast, his own flank would be turned. Bennett should also have appreciated that, even if he were not as severely threatened along the main trunk approach, he would have to conform to the withdrawal of the 45th Brigade or risk being cut off. Thyer was pressing him to give equal attention to the coastal approach by using two brigades there, and also two brigades in tandem along the main trunk approach. The general failed to heed the advice, and the outcome was exactly as Thyer had foreseen.

It should have been apparent to Percival and Bennett that it was operational speed or, in modern parlance, tempo that mattered to the Japanese. The Japanese forces lacked interest in using the jungle and were intent only on maintaining a high rate of speedy advance by moving down the main routes in Malaya with tanks, infantry and engineers. Their only use of the jungle was in order to cloak the movement of their two enveloping hooks. In short, Yamashita's campaign was a *Blitzkrieg* rather than a jungle operation.

By refusing to believe that the coastal route was a main approach, Bennett neglected the defence of the area. His disposition of the 45th Indian Brigade at the Muar River gave the brigade no chance of countering a strong series of Japanese attacks by two regiments of a Japanese division. Battalions were split to create

... Yamashita's campaign was a *Blitzkrieg* rather than a jungle operation.

forward companies. The 7/6th Rajputana Rifles was responsible for 12 km of front in close country; the 4/9th Jats for the next 24 km inland; while the third battalion, the 5/18th Garhwal Rifles, was in reserve more than 16 km away at Bakri. These dispositions were not forced on Bennett. They were entirely his decision.

The three battalions of the 45th Indian infantry brigade on the left flank at Muar were inexperienced. Noting the infantry’s difficulty in having to defend simultaneously a river line, the brigade’s left flank and its rear against potential seaborne landings, Percival later wrote:

To make matters worse, the brigade commander had been told [by Bennett] to establish an outpost position across the river and two companies each of the [two] forward battalions were allotted to it. In my opinion this was a tactical error. The river obstacle should have been used as the basis of the defence and there should have been no more than a few patrols in front of it. I have the impression that Gordon Bennett’s attention was concentrated unduly on what he considered to be his main front and that he looked upon the Muar sector rather as a flank from which no real danger was likely to develop.¹⁹

In addition, the 45th Brigade had originally been designated for desert service and many of its British company commanders were second lieutenants. Alan Warren gives a graphic account of soldiers of the 45th Brigade in action against the Japanese Imperial Guards:²⁰

The Garhwali’s adjutant, Captain Rodgers, was now in command at Simpang Jeram, and he decided to form a close perimeter in a rubber estate. The estate was overlooked from higher ground but it was the best position available. The Japanese attacked the perimeter from the shelter of the village. The young riflemen were bewildered and they fired wildly. As the situation worsened Rodgers and Lieutenant Robson... each manned a Bren gun at the forward corners of the perimeter, an indication of the low state of the sepoys’ training. Robson was shot in the chest crawling out to retrieve ammunition... Rodgers ordered a retreat shortly before he was killed. In the meantime a counter-attack towards Simpang Jeram by another Garhwali company had ground to a halt. By evening the battalion had been bundled back to Bakri.²¹

In response to receiving a series of alarming reports from Brigadier H. C. Duncan, the 45th Brigade’s commander, Bennett belatedly sought to reinforce the brigade. He moved his divisional reserve, the 2/29th Battalion, into action, followed by the 2/19th Battalion from the 22nd Brigade on the East Coast.

Percival’s own mistakes then compounded Bennett’s errors. Despite the fact that the Japanese had already overcome the 45th Brigade’s defence, Percival decided on 17 January to make every effort to hold on to the Muar area. He sought to avoid a hurried withdrawal of the rest of ‘Westforce’ from the Gemas–Segamat positions to Yong Peng and Ayer-Hitam, where the main trunk road swung westward, making

it dangerously within reach of a Japanese seaborne hook. Percival's strategic thinking was dictated by a belief that the longer he could delay the Japanese, the greater his ability would be to mount a counteroffensive. Unfortunately, the problem Percival faced was that Japanese envelopment tactics meant that parts of his force were consistently being cut off and defeated in detail.

An example of Japanese tactics was the landing of a battalion from the sea at Batu Pahat. The actions of this battalion as a 'cut-off force', together with the speed of movement of the Imperial Guards, meant that Bennett's entire left flank was compromised. Without the brilliant leadership of Lieutenant Colonel C. G. W. Anderson, who took command of the remnants of the 45th Brigade following Brigadier Duncan's death in action, the entire force would have been cut to pieces by the Japanese.²² The brigade's casualties were severe, and only a few soldiers eventually broke through the Japanese forces to reach their own lines at Yong Peng. Japanese troops bayoneted to death the wounded from Anderson's group that had been left in and around a hut at Parit Sulong.

There were some outstanding tactical actions by Australian forces, including an excellent ambush by a company of the Australian 2/30th Battalion at the Gemenchuh River near Gemas. The two-pounder guns of the Australian 2/4th Anti-Tank Regiment at Bakri also accounted for eight Japanese tanks. Yet what was needed was not isolated tactical victories but operational and strategic success.

Right from the beginning, Bennett's thought processes tended to play into the hands of the Japanese. A close reading of Bennett's diary, then of the Thyer papers in the Australian War Memorial, reveals a man deeply flawed by his egotism. For instance, worthwhile suggestions by his staff were usually treated as a form of treachery unless they accorded exactly with the commander's own views.²³ Although Bennett had had a highly successful career as a front-line soldier in World War I, he had long since exceeded his military ceiling. The problem was that, while Bennett had continued to serve in the militia between the world wars, he had failed to keep abreast of new developments in warfare in any intellectual sense.

... the problem Percival faced was that Japanese envelopment tactics meant that parts of his force were consistently being cut off and defeated in detail.

PERCIVAL'S COMMAND

General Yamashita's explanation of the reasons for his own success in Malaya throw light on General Percival's performance in Malaya in 1941–42. In a report written five months after the fall of Singapore, Yamashita was noticeably censorious of

British command failure. The British commanders were, he wrote, ‘out-generalled, outwitted, and outfought’ by their Japanese counterparts.²⁴ Yamashita concluded, in particular, that Percival was personally responsible for a large share of the defeat. Percival, noted the Japanese commander, was a ‘nice good man’ who was neither a dynamic leader nor an inspiring general, and who ‘was good on paper but timid and hesitant in making command decisions.’²⁵

During the fighting on the mainland, and later on Singapore Island, Percival held innumerable conferences with his staff, seeking consensus, rather than giving clear, unambiguous orders. Woodburn Kirby described the scene:

At these conferences in the forward area, Percival arrived looking tired and worn and usually failed to take control. Bennett would then take the floor putting forward impracticable proposals until Heath would break in with a sensible suggestion based on sound military considerations, which Percival would accept and act upon.²⁶

At a press conference in Singapore not long before Percival’s force capitulated to the Japanese, Ian Morrison, the Australian correspondent of *The Times* newspaper, noted of Percival that ‘much of what the general said was sensible. But never have I heard a message put across with less conviction, with less force... It was embarrassing as well as uninspiring.’²⁷

... while Bennett had continued to serve in the militia between the world wars, he had failed to keep abreast of new developments in warfare in any intellectual sense.

GENERAL BENNETT’S MISTAKES

It is clear that Bennett made three major errors in his defence of northern Johore. First, his design for battle was limited, as seen in his belief that relatively small local actions such as the Gemas ambush and aggressive patrols might succeed in halting the Japanese and cause them to rethink their planning. Second, by failing to hold the Muar River in greater strength, Bennett opened his own ‘back door’ in a manner that the Japanese were bound to exploit—even though they also planned to use the main trunk route as an equally important thrust line.²⁸ Third, and probably most serious of all, Bennett told his ‘Westforce’ orders group on 10 January 1942 that there would be no further withdrawal from the forward positions assigned to them. As a commander, and given shortages of equipment, he should have known that his officers were incapable of carrying out such an order.

It is useful to contrast Percival's defences in Malaya in 1942 with those of General William Slim in Burma at Imphal and Kohima in 1944. Slim turned his positions into self-sufficient and pre-stocked 'strong points' that were resupplied by air. Casualties were also either evacuated by air, or medical resources were bolstered in order that those who were badly wounded could remain in place for extended periods of time. As a result, Slim's troops outlasted the pressure of Japanese attack. However, in Malaya neither Percival nor Bennett had prepared such a detailed plan. Moreover, they lacked both the air assets to perform essential logistic tasks and the equipment to stop the Japanese, who were replenished from the sea and were thus capable of outflanking British defences. Thus, despite having told his commanders that there would be no withdrawals, Bennett was incapable of carrying out his own strategy. In consequence, when the Imperial Guards broke through at Muar, his main force was compelled to withdraw or risk being cut off.

CONCLUSION

Both Percival and Bennett presided over a military disaster. Percival demonstrated an inability to 'grip' his command, or to inspire it to greater effort. Never once, in the fighting from the Thai border to Johore, did he ever look like wresting the initiative from the Japanese. In Johore, he attempted to hold the Muar position for far too long, thus allowing the Japanese to trap many forward British and Commonwealth troops who then had to fight their way out, taking many casualties and almost all their equipment in the process. For all his haughty declarations that he would stop the Japanese, Bennett made decisions that ensured his becoming, in Lodge's words, 'but one of a team of defeated generals.'²⁹ At the Johore Straits, Bennett could only ruefully survey his own defeat. 'This retreat,' he remarked, 'seems fantastic. Fancy 550 miles in 55 days—chased by a Jap [*sic*] army on stolen bikes without artillery.'³⁰ Worse was to follow, and Bennett's subsequent defeat on Singapore Island was to complete the collapse of Malaya.

ENDNOTES

- 1 On Percival's command in Malaya see Clifford Kinvig, *Scapegoat: General Percival of Singapore*, Brassey's, London, 1996; and 'General Percival and the Fall of Singapore', in Brian Farrell and Sandy Hunter (eds), *Sixty Years On: The Fall of Singapore Revisited*, Eastern Universities Press, Singapore, 2002, pp. 240–70.
- 2 On Bennett see A. B. Lodge, *The Fall of General Gordon Bennett*, Allen & Unwin, Sydney, 1986.
- 3 Major General S. Woodburn Kirby, *Singapore: The Chain of Disaster*, Cassell, London, 1971.

- 4 Quoted in John Ramsden, *Man of the Century: Winston Churchill and His Legend since 1945*, Harper Collins, London, 2002, p. 206.
- 5 Kinvig, ‘General Percival and the Fall of Singapore’, p. 246.
- 6 Alex Danchev and Daniel Todman (eds), *Field Marshal Lord Alanbrooke, War Diaries 1939–1945*, University of California Press, Berkeley, CA, 2001, pp. 206–7.
- 7 John Ferris, ‘“Worthy of Some Better Enemy?”: The British Estimate of the Imperial Japanese Army 1919–41, and the Fall of Singapore’, *Canadian Journal of History*, August 1993, vol. XXVIII, p. 249; and ‘Student and Master: The United Kingdom, Japan, Airpower, and the Fall of Singapore 1920–1941’, in Brian Farrell and Sandy Hunter, *Sixty Years On: The Fall of Singapore Revisited*, pp. 94–122.
- 8 Woodburn Kirby, *Singapore: The Chain of Disaster*, pp. 74–5.
- 9 ‘Tactical Notes for Malaya’, quoted in Lionel Wigmore, *The Japanese Thrust*, Australian War Memorial, Canberra, 1957, p. 67; and Australian War Memorial, *Japanese Army: Notes on Characteristics, Organisation, Training etc.*, 940 540952 J469, issued by the General Staff, Army HQ, Melbourne, September 1940.
- 10 John Coates, *Bravery Above Blunder: The 9th Australian Division at Finschhafen, Sattelberg and Sio*, Oxford University Press, Melbourne, 1999, pp. 246–7. There is evidence that the Far East Combined Bureau (FECB) and the Joint Intelligence Committee in London were, by early 1941, making reasonably accurate estimates of what the Japanese might do. However, their effectiveness was nullified because Brooke-Popham, the Commander-in-Chief, was ‘temperamentally disposed to believe that the Japanese simply would not dare attack Malaya’. See Richard J. Aldrich, *Intelligence and the War against Japan*, Cambridge University Press, Cambridge, 2000, p. 51.
- 11 Wigmore, *The Japanese Thrust*, p. 67.
- 12 *Ibid.*
- 13 E. G. Keogh, *Malaya 1941–42*, Directorate of Military Training, Melbourne, 1962, p. 179.
- 14 See Alan Warren, *Singapore: Britain’s Greatest Defeat*, Talisman, Singapore, 2002, p. 37. Brigadier D. S. Maxwell, the commander 27th Brigade, and a friend of Bennett, later told Gavin Long that ‘what I was to emphasise is: the training of infantry in Malaya was due to [Brigadier] Taylor. I only carried on his methods’, AWM 67, Item Notebook 2/109, Interview with Brigadier D. S. Maxwell.
- 15 Quoted in Lodge, *The Fall of General Gordon Bennett*, p. 119.
- 16 Wigmore, *The Japanese Thrust*, p. 82.
- 17 Bennett Diary, 2 January 1942.
- 18 The revised plan also proposed to concede the Tampin Gap without a fight. Here, the trunk road, railway and coastal route come much closer together than further south and the gap could have been held more economically. It is a criticism made by Woodburn Kirby, *Singapore: Chain of Disaster*, p. 186.

- 19 Lieutenant General A. E. Percival, *The War in Malaya*, Eyre & Spottiswoode, London, 1949, p. 222.
- 20 Warren, *Singapore 1942: Britain's Greatest Defeat*, esp. pp. 160–70.
- 21 *Ibid.*, p. 161.
- 22 Anderson, normally the Commanding Officer of the 2/19th Battalion, was later awarded the Victoria Cross for his outstanding leadership.
- 23 For instance, when the idea of the Gemas ambush was first raised, Bennett intended that it should aim to destroy a Japanese brigade-sized force. Thyer and Maxwell were able to head him off by experimenting with the concept at Jemaluang on the east coast [later the scene of a successful ambush by Taylor's 22nd Brigade]. The experiment demonstrated that attempting to ambush an entire brigade far exceeded the capacity of Australian communications to control such a large killing area. Bennett then dropped the idea. AWM93 Records of the War of 1939–45: Colonel J. H. Thyer.
- 24 Akashi Yoji, 'General Yamashita Tomoyuki: Commander of the Twenty-Fifth Army,' in Farrell and Hunter, *Sixty Years On: The Fall of Singapore Revisited*, p. 197.
- 25 *Ibid.*
- 26 Woodburn Kirby, *Singapore: The Chain of Disaster*, p. 205.
- 27 Ian Morrison, *Malayan Postscript*, Angus & Robertson, Sydney, 1943, pp. 156–7.
- 28 Lodge, *The Fall of General Gordon Bennett*, ch. 5.
- 29 *Ibid.*, p. 114.
- 30 Bennett Diary, 31 January 1942.

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INSIGHTS

REFLECTIONS ON DEFENCE SELF-RELIANCE AND THE AUSTRALIAN– AMERICAN ALLIANCE*

MAJOR DAVID CALDWELL

Defence self-reliance has been defined as indicating ‘a national will to depend as little as possible on external decisions and resources.’¹ In an Australian context, the idea of self-reliance was first formally introduced into defence policy in the 1976 White Paper and was reaffirmed by the 1987, 1994 and 2000 Defence White Papers as a main feature of official strategic thinking. Yet, while Australia has adopted self-reliance, the latter is a posture that can only operate effectively within an alliance framework. The Defence Department outlined this rationale in the 1987 White Paper, which stated that Australia’s concept of self-reliance must be ‘set firmly within the framework of our alliances and regional associations.’²

The basic premise of Australia’s approach to defence self-reliance since 1976 is that the Australian Defence Force (ADF) must be capable of defending Australian territory from direct attack without relying on assistance from other countries.

* This article is based on an essay that won third prize in the Chief of Army’s Essay Competition for 2003.

However, Australia's commitment to self-reliance in all aspects of defence strategy has never been absolute. For example, *Defence 2000* states that Australia would not hesitate to seek help from her allies and would plan for a significant degree of support in non-combat areas including intelligence, surveillance, resupply and logistics.³

Moreover, should Australia be attacked by a conventional enemy, substantial American military support would be essential. In this respect, self-reliance is underwritten by American power, with the latter acting as both a deterrent and as a force multiplier for the ADF. In other words, there is a strong reciprocal relationship between the doctrine of self-reliance and the sheet anchor of the Australian–American alliance. Australia must be able to mount a credible self-defence since, as A. D. McLennan has noted, ‘the [ANZUS] treaty is an adjunct to the national defence effort, not a substitute.’⁴ Because of the alliance, Australia requires a degree of self-reliance to prepare not simply its own defence, but also to support its US ally if necessary. The paradox between self-reliance and alliance dependence is that, without the US alliance, defence of Australia is likely to prove difficult. Yet, without a policy of self-reliance, the US commitment to the alliance might wane. Allies must be able to be effective partners.

Self-reliance and the alliance also perform in a reciprocal fashion within the Asia-Pacific region. The US alliance assists Australia in its quest for regional security in the Asia-Pacific and Australia's ties with the United States promote Canberra's regional role. In many respects, the Australian–American alliance reinforces US strategic engagement in the region. The alliance is a platform that allows Australia to play a meaningful, intercessionary role between East Asian states and the United States. As William Tow has noted, ‘the alliance ... provides Australia with a much greater strategic standing by affiliation than it would otherwise have.’⁵ Similarly, in the South Pacific, it has been pointed out that ‘the continued firm commitment of the US to come to the assistance of Australian forces when required, gives (Pacific) Islanders, in a sense, the best of two worlds: the security of an alliance and the independence of nonalignment.’⁶

In technological terms, the reciprocal relationship between self-reliance and the US alliance has allowed Australia to develop RMA-style technologies that reinforce a degree of self-reliance in areas

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such as intelligence, surveillance and reconnaissance. Because of the US alliance, Australia has access to the latest military technology, which it could not possibly develop on its own, and receives preferred status in the procurement of military equipment. Further agreements enable the supply of munitions and equipment in a crisis, thus decreasing the need for large-scale stockpiling. The important logistic support that the United States provides has allowed Australia to invest in key areas such as platforms, technology, personnel and training. The Australian–American alliance underwrites self-reliance by permitting access to cutting-edge technology and contributes to interoperability.

A defence policy that is based on a mixture of self-reliance and alliance dependency provides Australia with a range of unique opportunities. The price of this approach, however, is a political one and resides in a constant need to balance an independent national policy against vital alliance interests. Skilful policy-making should always be aimed at maintaining a balance and should never become a simplistic choice between incomplete self-reliance on the one hand or complete dependence on an alliance on the other.

A defence policy that is based on a mixture of self-reliance and alliance dependency provides Australia with a range of unique opportunities.

ENDNOTES

- 1 G. J. Pauker, S. Canby, A. R. Johnson and W. B. Quandt, *In Search of Self-Reliance: US Security Assistance to the Third World Under the Nixon Doctrine*, Defence Advanced Research Projects Agency, RAND, Santa Monica, CA, 1973, p. 3.
- 2 Department of Defence, *The Defence of Australia—Defence White Paper 1987*, Australian Government Publishing Service, Canberra, 1987, p. vii.
- 3 Department of Defence, *Defence 2000: Our Future Defence Force*, Defence Publishing Service, Canberra, 2000, p. 47.
- 4 A. D. McLennan, 'Australia's Security Dilemma', *Policy*, vol. 18, no. 3, Spring 2002, p. 22.
- 5 W. T. Tow, 'The Future of Alliances: AUSMIN as a Case Study', paper presented at 'Maintaining the Strategic Edge: The Defence of Australia in 2015 Conference', Strategic and Defence Studies Centre, Australian National University, Canberra, 21–23 September 1998.
- 6 Cited in F. A. Mediansky (ed.), *Strategic Cooperation and Competition in the Pacific Islands*, Centre for South Pacific Studies, University of New South Wales, Sydney, 1995, p. 310.

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RETROSPECT



The *Retrospect* section of the *Australian Army Journal: For the Profession of Arms* is designed to reproduce interesting articles from the Australian Army's earlier journals, notably the *Commonwealth Military Journal* and the *Australian Army Journal* from the 1940s to the mid-1970s. In this edition of the journal, we are reprinting an edited version of the then Lieutenant Colonel John Monash's winning entry in the inaugural 1912 Australian Army's Gold Medal Military History Essay Competition. Monash was then serving in the Victorian branch of the Australian Intelligence Corps.

Monash's winning entry on the American Civil War was originally published in the April 1912 edition of the *Commonwealth Military Journal*. The essay has been well described by Monash's biographer, Geoffrey Serle, as 'an illuminating original article, expounded with utter clarity in a moderate scholarly manner but drawing firm conclusions'. Monash used the 1864 Wilderness campaign to reflect on a range of military issues: the personal qualities of commanders, attrition and manoeuvre, the power of defensive entrenchments and the use of ground. Of particular interest to readers will be Monash's perceptive comment that 'the universal failure of the infantry assaults [in the Wilderness campaign] is undoubtedly to be found in

the lack of proper fire preparation by both infantry and artillery. The necessity for close mutual co-operation between these arms in attack and defence is here forcibly illustrated.

Monash wrote at a time of great change in warfare and on the eve of the 20th century's first cataclysmic industrial war. In World War I, through military education and operational experience, Monash was to emerge as one of the greatest masters of 20th-century all-arms tactics, and traces of his thinking on the 'orchestration' of the combat arms can be found in his 1912 essay. At the beginning of the 21st century—a time of equally great change in tactics and strategy—readers may find much of interest in the early writings of the man whom A. J. P. Taylor described as 'the only general of creative originality produced by the First World War'.

LESSONS OF THE WILDERNESS CAMPAIGN, 1864

LIEUTENANT COLONEL JOHN MONASH

Less than fifty years ago—and so within the memory of men still living—there raged, in the then sparsely peopled, wild and broken region of Northern Virginia, a titanic struggle of armed forces. The campaign was sustained through many days of fierce bloodshed and grim privation, directed by the indomitable determination of great leaders and supported by armies actuated with the highest ideals of patriotism and of duty to their cause. Although in the short space of half a century much has changed in the details of war organisation, ordnance and material, the Virginian campaign continues to present many features of profound interest to the military student. The campaign affords numerous and pregnant illustrations of the fundamental principles of the science of war that a close study of these operations, and of the war of which they formed a part, is rightly deemed to be a profitable and necessary contribution to a sound military education.

The Virginia campaign is of especial application to the Australian student. Many aspects of the contest—including the character and training of the troops engaged, and that of their leaders, the topographical features of the theatre of war, and the circumstances that influenced its strategical and tactical development—bear a close analogy to Australian conditions of the present day. In this campaign, much can be found that will illuminate the problems that will confront the Australian soldier when called upon to uphold, in earnest, the integrity of his country's interests.

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The campaign that opened in the Virginia Wilderness in the early summer of 1864 was the turning point in the War of Secession and marked the first stages of the steady pressure that led to the final overthrow, a year later, of the Confederate resistance. From the outset of the war in 1861, the North held the advantages of greater numbers and of superior resources. Yet, when the winter of 1863 arrived, the North had not had any overwhelming success in crippling the pretensions of the Confederate States to independent sovereignty. Grave errors in the Union Government's political direction of the war and a marked inferiority in military capacity on the part of the Federal generals contributed to the indecisive outcome of the military operations over the first three years of the war. Up to the beginning of 1864, the South had succeeded in maintaining its political, if not its territorial, integrity. The Confederacy's prestige in the field remained unimpaired. There was high hope in the South that, if during another summer the Confederacy could ward off the menace of the extinction of its armed power, either the North would give up the weary struggle, or that England or France, or both, would intervene in its favour.

THE SIGNIFICANCE OF THE WILDERNESS CAMPAIGN

It was the Wilderness campaign more than any other phase of the war that was the determining factor in the struggle between North and South. This factor is not the campaign's only claim to be regarded as important by the military student. Indeed, alongside an abundant illustration of tactical principles, there is a compelling interest in the spectacle of the heroic contest of two great military leaders, Robert E. Lee and Ulysses S. Grant. The former struggled with greatly inferior strength and resources to uphold a dying cause. The latter, although better equipped, faced enormous difficulties of mobility and supply, was weighted down by the heritage of the failures of his predecessors and needed to bring to his task a steadfast perseverance and a never-flagging determination.

The armies that opposed each other in this campaign were citizen armies. In substantial entirety they were composed of men without previous military training or traditions, unaccustomed to military discipline or to the self-suppression necessary for successful corporate action. They were men drawn from the ranks of a young, vigorous and high-spirited nation, bred in an atmosphere of personal liberty and independence. They were also men who were well qualified physically, and those large levies recruited in the rural districts

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of both the Union and the Confederacy for the arduous work of campaigning were skilled in bushcraft and horsemanship. In these and many other characteristics, the armies that fought in the American Civil War furnish an accurate prototype of any fighting force that could be placed in the field in Australia at present.

Most of the subordinate officers in the armies of the Civil War were, like the rank and file, without military training or education, and without war experience. There was, however, in the higher ranks a leaven of highly trained and experienced officers. America possessed in the West Point Military Academy an institution whose renown and utility stood in those days as high, and whose influence was as potent as it is today. Most of the superior commanders on both sides were graduates of that academy. A number that had taken up regular soldiering as a profession had war service in several Indian rebellions and in the Mexican War. While the training and experience of these officers was abundantly manifested during the Civil War, the lack of it in many of the commanders of detached forces and of subordinate units amply demonstrated the necessity for educated and competent leadership in all military undertakings. These American shortcomings constitute a striking lesson in one of the fundamental necessities of war organisations—a lesson that Australian statesmen cannot afford to disregard. There is a close analogy here with Australian conditions, possessing as we do few officers with war experience, or with high professional education, and fewer still with both qualifications in combination.

In the character of the terrain, the conditions prevailing during the war generally, and in the Virginia campaign in particular, approximate closely to those of any probable theatre of war in Australia—especially our populated eastern and southern seaboard. The density and distribution of population in the territories that lay between Washington and Richmond, the respective capitals of North and South fifty years ago, resemble closely the conditions that prevail today along the coastal districts between the Australian State capitals. The military resources of the district between Washington and Richmond—in supplies, transport and animals—were speedily exhausted, and the armies in the field had to depend on distant areas of collection and inviolable lines of communication. The difficulties of supply, effective reconnaissance, mobility and manoeuvre were thus of an extreme order. While such conditions were unlike those that prevailed in Western Europe during the wars of the 19th century, the description of them pertains to the greater portion of the inhabited Australian continent.

There remains yet one other analogy to be drawn with Australia, involving considerations more potent than any other in their influence on the conduct of war. Both the Federated and Confederate States were democracies governed by the majority vote of their peoples. The exponents of the popular voice were the political leaders who reflected in their own views the will of the electorate and often attempted to interfere in the direction of the war. Communities as a whole,

however, are notoriously ignorant on questions of military history and policy, and on the basic principles of strategy. In a democracy, State administration stands in such close relationship with the people that the danger of the pressure of ill-informed public opinion is extreme. During the first three years, the Government of Abraham Lincoln on the one hand, and that of Jefferson Davis on the other, insisted on dictating the details of the strategy to be employed, and interfered with the discretion and freedom of action of their generals.

Disastrously for the South, this interference continued until the end of the war in 1865. By the close of 1863, however, Lincoln's shrewd capacity had enabled him to learn the lesson of non-interference and to appoint Grant as supreme commander of the Union armies in March 1864. Grant was able to prosecute his plans without hindrance, and even without review, and Lincoln firmly insisted on supporting him through a storm of popular criticism and political assault. The result affords perhaps the most pungent and significant lesson of the Wilderness campaign. From the moment that the new Union policy of non-interference was invoked, the Federal cause marched steadily towards its victorious goal.

Existing Australian political conditions are not dissimilar to those of America. An Australian Government depending on a narrow majority might—in default of so instructive a precedent—find itself tempted, if not actually compelled, to yield to public clamour that demanded interference with the detailed conduct of operations of war. In this and other areas, the civil war was replete with situations and conditions that are likely to repeat themselves in an Australian campaign in our own time. Thus, a closer study of the development of such situations and of the influence of those conditions cannot fail to be of instructional value to us.

THE STRATEGICAL SITUATION, 1863–64

An understanding of the strategical situation at the close of the winter of 1863–64, and of the outcome of the hostilities of the preceding three years, is essential to a proper appreciation of the causes and effects of subsequent events in the Wilderness campaign. Since early in 1861, the Federal Government had embarked on the task of compelling by force of arms the seceding States of the Southern Confederacy to submit to its sovereign power under the Constitution of the United States. The strategical conception that controlled these operations may be summed up thus: to preserve inviolate the seat of the Union Government in Washington and to capture Richmond, the seat of the Confederate Government. Every other consideration was subordinated to these main strategic objectives. Thus, very thoroughly and very persistently, was violence done to the fundamental principle of strategy, namely that the true objective of a belligerent is to seek out and destroy the armed power of his antagonist. For three years, Union armies marching to the capture of

Richmond were checked in their advance. They were attacked in their flanks and hastily recalled to the defence of Washington, which was counter-threatened time and again by the brilliant manoeuvring of the South's commanders, Robert Lee and Stonewall Jackson.

The advent of Grant as Union Commander-in-Chief in March 1864 resulted in several significant changes in the strategic methods of the Northern armies. In the first place, as supreme commander of the seventeen Federal armies in the field, Grant determined that these armies should no longer be employed on disconnected and independent enterprises. They should be used to prevent as far as possible any concentration of force by the Confederates. It is instructive to note that Grant's calculations were realised to the fullest extent. During that long, sustained series of awful fighting in the Wilderness from the Rappahannock to the passage of the James, the Confederacy found itself unable to reinforce effectively Lee's Army of Northern Virginia. The result was that Grant was free to deal with Lee in the strength with which he found him in his winter quarters on the Rapidan River. Grant's general plan of campaign against Lee was based on a conception new to the war. The ulterior political objective still remained the capture of Richmond, but the immediate objective was to make Lee fight to prevent its capture by means of a continuously sustained threat of outflanking and of interposing between him and his principal base.¹

Grant knew and respected Lee's energy, initiative and daring. He counted deliberately on Lee's giving battle wherever and whenever the opportunity offered itself.

Grant's grim purpose in this was to wear out the Confederacy's strength by a process of 'attrition'—an expressive term, as used by himself, and one that tersely describes the actual course of events. Although the Federal losses were by far the heavier, the resources of the North enabled Grant to make good his wastage. The Confederacy, however, was unable, through sheer depletion of its fighting strength, to replenish the ranks of Lee's decimated brigades. The result of the Wilderness campaign was therefore decisive in its influence on the war. It was, in the most literal sense, a process of destruction of the enemy's armed resistance and in this way carried into effect a fundamental principle of strategy.

Yet this very campaign, the direct result of which was the ultimate victory of the Federal arms, was, when considered in detail, marked by a series of brilliant successes and sustained tactical victories on the part of the Confederates. Time after time, through forty days of almost continuous fighting, the Confederate troops outmanoeuvred and outfought their Union enemy. We have thus the curious and

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pitiable spectacle of a series of wonderfully sustained Confederate victories in detail, leading inevitably to the defeat of the Southern cause as the ultimate result of the whole of the operations.

THE LESSONS OF THE WILDERNESS CAMPAIGN

It would be impossible within the limits of an article to attempt even a brief narrative of the military operations that began on 3 May 1864. On that day, Grant, with an army of four corps—totalling some 119 000 men with 376 guns—plunged into that broken and tangled region of Northern Virginia lying west of Fredericksburg, known as the ‘Wilderness’.

Here Grant encountered the masterly Lee, with his rapidity of decision, his energetic execution and his wonderful capacity for choice of ground. With his outnumbered three army corps of only 62 000 men, Lee successfully and repeatedly interposed his forces between the Federal advance and Richmond. By his superior tactical handling to counterbalance the odds against him, Lee would have succeeded against any less indomitable antagonist than Grant.

This article is concerned less with a consecutive narrative of the operations themselves as with an attempt to draw from their results lessons likely to be instructive to us in Australia in the present day. Some striking analogies to Australian conditions in general have already been indicated. It remains to consider, however, what aspects of this campaign in the realm of grand and minor tactics, in the constitution of armies, the leading of troops, and of combined actions, serve to illuminate the problems of an Australian campaign in our own time.

THE QUALITY OF LEADERSHIP: GRANT AND LEE

In the view of the author, by far the most pregnant lesson of the Wilderness campaign is the vital influence on military operations of the personal qualities of the leaders. For the North, the main factor in the ultimate success of the Union cause was the steadfast determination of General Ulysses S. Grant to persevere in his plan of throwing his forces again and again on his agile and resourceful adversary. Checked in his marches, forestalled in his attempts to seize tactical positions, hurled back with enormous losses from fierce assaults launched against the Confederate defences, Grant endured in the field. He was a leader of grit and endurance and, as he declared in one of his letters to Halleck, he would persist in his line of operations, even if it

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took him 'all summer'. Students of the war cannot help but appreciate the contrast between Grant's attitude and that which characterised the Union commanders of the previous three years. Time after time in the Virginia theatre, a Federal invasion culminated in a great battle followed by defeat and retirement, leaving the assumption of the offensive to Lee's Army of Northern Virginia. The new element in the situation in 1864 was the personality of Grant. Following a succession of defeated Federal leaders such as Hooker, Pope and McClelland, Grant inspired his own army with a capacity for sustained and concentrated effort. He held his troops inflexibly to one offensive purpose, never for a moment relinquishing the initiative, and raised their morale to enable them to sustain the rigours of an arduous campaign. At the same time, as Grant's objective became clear, Lee was compelled more and more to act on the defensive and to abandon his favourite and often-successful expedient of a crushing counterstroke.

Nowhere was Grant's dominant quality of determination evidenced more strongly than at Cold Harbor, the fourth and the last of the great pitched battles of the Wilderness campaign. It may be that Grant's plan of battle was on this occasion unskilful and crude.² It may also be that Colonel G. F. R. Henderson's taunt was justified that Grant 'lost his temper' at again finding strongly entrenched Confederate lines flung across his path. Yet, undismayed by previous failures in using his vastly superior numbers to overwhelm Southern breastworks at Spotsylvania, North Anna and Totopotany, Grant unflinchingly resolved at Cold Harbor to re-attack vigorously, thereby pinning Lee to his positions and preventing him from assuming the offensive.

In General Robert Lee the Confederacy possessed a military leader of the highest calibre. Lee had entered on this campaign with the undimmed prestige of a general whose bold strategy, tactical skill, and enterprise had enabled him to achieve, with much inferior resources, a long and unbroken succession of victories. Lee's very name was a terror to the Northerners, and even Grant himself was compelled to pay unwilling tribute to the reputation that Lee had earned for sudden attack from an unexpected quarter.

When moving the Union Army of the Potomac across the Rapidan River on 3–4 May 1864, Grant felt compelled to leave a whole army corps of 20 000 men under Burnside at Culpeper Court House lest Lee attempt to fall on his rear. Although Burnside then moved into the Wilderness fighting by forced march, he arrived too late to turn that series of indecisive and disconnected encounter battles into a victory for the North. As it happened, one of Lee's three corps—the one under the command of Longstreet—lost its way on its long march from Gordonsville, not entering the battle till dawn on 6 May. If the Army of the Potomac had not on 4–5 May been deficient by a whole army corps, there is little doubt that Grant's overwhelming superiority in numbers would have pinned Lee to his forest positions,

leading to envelopment from the south. In this very direct way, it may be said that, to Grant, the known and recognised moral qualities of Lee were worth a whole army corps.

Admirable as was Grant's quality of determination, what words can convey an adequate tribute to the moral qualities of Lee? In a lost cause, he preserved—in the face of a constant drain of losses, both of men and material—the solidarity, mobility and unity of action of his ragged and ill-fed regiments. To the very last, to his soldiers 'Marse Robert' remained the one general who was unconquerable. One may indulge in the reflection that the Wilderness campaign is destined to figure in history more by reason of the personal qualities of the two great leaders than in any other aspect.

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SUBORDINATE COMMANDERS AND MILITARY ORGANISATION

When we look at the subordinate commanders—the generals in command of corps and divisions—we find, at least on the side of the Federals, many instances of a lack of independent initiative. Whether these problems were due to Grant's dominating personality or to the doctrines prevalent at the time, it is clear that the Federal brigadiers and generals of division had not learnt the value of mutual cooperation. Nor had they learnt the utility of exercising the independent local initiative that the Germans put into practice only six years later, and to which may be attributed, more than to any other circumstance, the success of German arms in the war with France [in 1870].

Grant's generals habitually looked to him for definite orders before acting. Thus at Cold Harbor, where the Federals attacked with four corps in the fighting line, adjacent commanders failed in the exercise of initiative on the spot. There is little doubt that, both in the bush-fighting in the Wilderness and in the attempt to rush the Salient at Spotsylvania, a greater unity of action and cooperation between commands, and a readier aptitude for prompt and independent action would have operated to bring about very different results. It must now be recognised that, with the greatly extended battle lines of modern days, the man on the spot is in a better position to judge the changing needs of the situation before him than the Supreme Commander a considerable distance away. The true principle is that the subordinate should not be hampered by too precise or detailed instructions, but is

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to be encouraged to act according to local circumstances. He must, without waiting for orders from the rear, extend that cooperation to neighbouring bodies of troops. What is true of army corps is equally true of brigades and battalions.

While still considering the higher command some anomalous conditions in the organisation of the armies are worthy of notice. There was a wide difference in the constitution of the several corps on both sides. Thus, three Union corps were composed of four divisions each, while the fourth (Sedgwick) had only three divisions. There was an even greater disparity in the composition of the divisions, varying as they did from four brigades to only two brigades. In three of the Union corps, there was no divisional artillery but a separate artillery brigade as corps artillery. In Burnside's corps (the IXth) each of its four divisions had its own artillery brigade.

Such irregularity of composition may, under some circumstances, be an advantage in deceiving the enemy as to the real strength and disposition of forces. The varying composition of the Japanese divisions in their last war [with Russia in 1904–05] has been cited in support of this view. However, in the author's opinion, any such advantages are entirely overshadowed by the enormously increased difficulties of all staff work, administrative services and by problems in the handling of formations through wide disparity in numerical and tactical construction.

A second anomaly that cannot escape attention is the peculiar organisation of the chain of command, particularly on the Union side. Grant was Commander-in-Chief of the whole of the United States Armies. He elected, for the soundest of reasons, to attach himself personally to the army that was to operate against Richmond. This force was composed of the Army of the Potomac (three corps) under General Meade, the victor of Gettysburg, and an independent army corps under Burnside. It was not until Cold Harbor, some three weeks after the Wilderness operations began, that Burnside's corps was merged with the other three corps of Hancock, Warren and Sedgwick into one compact army command.

The inconveniences of the earlier organisation must have been extreme, and the position of General Meade ambiguous and unfortunate. Grant repeatedly issued orders over Meade's head while the corps commanders often found themselves under the immediate command of General Headquarters instead of Army Headquarters. Even after the reorganisation of the army just before Cold Harbor, conditions were aggravated by the bringing up of another independent army corps, the XVIIIth under W.F. Smith. Smith was assigned a position in the line of battle between two of the units of Meade's army. The evil consequences of a loose and illogical organisation of this nature manifested themselves in a marked degree throughout the whole Wilderness campaign.

There was considerable confusion, miscarriage of orders, counter-orders, much personal friction and misunderstanding. Delays and difficulties also appeared in re-establishing the chain of command when casualties occurred in the higher commands (as when Sedgwick fell at Spotsylvania). Moreover, there were repeated failures to achieve unity of action between the corps, and all of these problems were traceable to the indefiniteness of the chain of responsibility. This same looseness permeated the ranks of the subordinate commanders, with the result that, at certain junctures, the confusion created bordered on the ludicrous. Often during the campaign, officers, merely by virtue of their seniority, assumed command of units not strictly within their commands at all.

Thus in the concluding phases on the second day of the battles of the Wilderness we find, on the Federal left, divisional and brigade commanders belonging to different corps exercising command over sections of the attack in which none of their own troops were engaged. At the same time their own commands were left without proper leaders. Although we are here discussing large formations, precisely the same dangers of a loose organisation of command are possible with smaller forces. The lessons are obvious and elementary. The author believes that there have been occasions in Australia during both peace manoeuvres and staff tours when a clear understanding of the chain of responsibility in forces comprising whole brigades with detachments from other brigades has not been achieved. The lesson of the evils that may result from a neglect of this consideration is one that can well be noted.

THE VALUE OF FIELD FORTIFICATIONS

In one respect, the Wilderness campaign yields a lesson of very positive value to Australian soldiers, and that is in the extensive and successful use of field fortifications. In discussing the Wilderness, Colonel Henderson has pointed to the futility and danger of premature selection and deliberate fortification of a defensive position.³ He has instanced Lee's carefully fortified front along the Rapidan and Mine Run that Grant subsequently compelled him to evacuate by simply marching past his right flank. Although throughout the whole war both belligerents were prone to expending huge efforts in fortification work, much of it proved utterly useless.

Yet the skill and adaptability of the troops in this class of work was destined to play a very important role in the campaign. There are a number of excellent photographs in the Washington archives taken of the Federal and Confederate positions near the Wilderness Tavern, the Spotsylvania Court House, Mechanicsville, New Cold Harbor and other Virginian battlegrounds. Taken during the fighting and immediately after the evacuation of the entrenchments, these photographs explain the repeated failures in one battle after another of Grant's fierce assaults on the Confederate positions.

Why was Grant's imposing army of 100 000 fighting men—appreciably better equipped, better armed, and better fed and cared for than the soldiers of the Confederacy—unable by sheer pressure of numbers to sweep away little more than half its numbers in front-to-front encounter battle? It must be remembered that the bulk of the severest fighting took place in forest country. Lee's hardy and experienced Southern bushmen used felled timber for the construction of formidable breastworks. Many of Lee's tactical successes may be ascribed to the expertness of his troops in the use, not only of the pick and shovel, but also of the axe and saw. With surprising rapidity, the Confederates in defence erected formidable timber breastworks from which it proved impossible to dislodge them by frontal assault.

At Spotsylvania, Grant determined to test the vulnerability of wooden barriers that belched forth so deathly a fire. He very nearly succeeded by a carefully organised early morning attack on a tactically weak point in the line—a sharp, salient running northwards. It was at this point that the most awful hand-to-hand fighting of the whole war took place. Yet, although the Union assault resulted in the capture of practically the whole of the South's famous 'Stonewall' division of Edward Johnson (of Ewell's Corps), it failed for two reasons. First, there were no reserves to drive home the assault after it had been checked. Second, Lee, acting again with marvellous prescience, had prepared an interior position by constructing another line of breastworks across the southern base or 'gorge' of the salient. The course of events at the battles of the North Anna and Cold Harbor was identical to that of Spotsylvania.

In the Wilderness campaign, direct assaults by Union troops, of whose courage and *élan* there could be no question, failed. With all the assistance of covering fire and the concentration of artillery fire, Union assaults were impotent against field fortifications when manned by troops of equal calibre *but only one-half in numbers*. Although Grant attempted time after time to put into practice his favourite tactics of applying the maximum of force at the earliest possible moment, there is no single instance in the campaign of a successful assault against this class of defence.

The point to remember is that this fortification work was the result not of deliberate preparation and planning, and days of toil, but of spontaneous local conception involving the labour of only a few hours, generally in darkness, and often under fire. Given the similarity with the topographical conditions in the greater part of the inhabited Australian seaboard, it is evident that the training of Australian troops in the construction of field defences using bush timber is one well worthy of the close consideration of our engineering services. The suggestion may be ventured that the nature of the field works described and prescribed by the present service manuals may not necessarily be the best for Australian conditions, nor those that should be exclusively practised.

INFANTRY TACTICS

Of the infantry tactics of the war but little can be learnt that is of any positive value. In this respect, progress in the effective ranges of the rifle and field gun has brought such a revolution that the methods of 1864 as regards battle formations can afford no guide to present-day practice. The breech-loader had not yet been generally introduced in the American armies and only the cavalry were regularly armed with that weapon. Yet, in the hands of the infantry soldier, the old muzzle-loading rifle was already a deadly weapon at 500 yards. The day of open formations had not yet dawned, and the favourite battle formation was the attack in two lines, sometimes in four, in close order, varied occasionally by line-of-column masses. The attack was launched from within what are today effective ranges, and there was an almost entire absence of preparation by deliberate fire action for the final assault.

With respect to the overall plan of the attack, Grant made little use of a general reserve. This situation gave Lee the opportunity on several critical occasions during the campaign to deliver an effective counterattack, such as the one that achieved the recapture of the Spotsylvania salient on the afternoon of 19 May. This attack was the last occasion in the war on which Lee had the opportunity of adopting offensive tactics against Grant.

Nevertheless, insofar as the work of the infantry is concerned, the campaign aptly illustrates the characteristics of that arm—in particular its capacity to move and manoeuvre in every class of country, both in daylight and in darkness. The extraordinary mobility of the Confederates is demonstrated by the fact that, although on each occasion that Grant relinquished his attacks and resumed his easterly outflanking movement, he was able to choose his own time to do so. Yet, in spite of long hours, and of days of close-range and hand-to-hand fighting, Lee was able at the shortest notice to withdraw his divisions from their defensive positions. He was able to re-form them, and to move rapidly to a flank and effectively occupy fresh positions thrown across the path of the enemy.

For example, on 19 May 1864, when the two armies were still fiercely engaged at Spotsylvania, Grant began to move to his left while keeping the Confederates busy behind their breastworks. On 21 May, having penetrated Grant's intentions, Lee ordered the Confederate Army to march south to Hanover Junction over 30 miles away. Hill's Corps was there and entrenched the position that Lee had selected to the south of the North Anna River. On 23 May, Hill was joined during the day by

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the rest of the army. The Confederate forces had completely outmanoeuvred the Northern Army, which had marched via Bowling Green and arrived at Hanover Junction late on 23 May, only to find before them the now-familiar barrier of Southern breastworks.

Both the character of the country and the spirit and temperament of the troops contributed to the result that the infantry in this campaign made much more use of shock than of fire in action. Much of the fighting was literally hand-to-hand. Yet, with the single exception of the temporary capture of the salient at Spotsylvania, in the early dawn of 12 May, by 20 000 Federal troops of the Second Corps (Hancock), there is no instance of a successful assault on a large scale throughout the whole Wilderness campaign.

THE FAILURE OF ARTILLERY

Apart from the influence of the liberal use of log breastwork, an explanation of the universal failure of the infantry assaults is undoubtedly to be found in the lack of proper fire preparation by both infantry and artillery. The necessity for close mutual cooperation between these arms in attack and defence is here forcibly illustrated. The lack of such cooperation explains much of the indecisive fighting that occurred. It may be admitted that, in the Wilderness itself, the close and often impenetrable scrub made artillery practically useless in the battles of 4–6 May. Yet this consideration does not seem sufficient justification for the extraordinary action that Grant took on marching south from Spotsylvania and ordering back to Washington nearly one-third of his available strength in artillery batteries. We might hesitate to attribute to so distinguished a soldier as Grant a failure to understand the use and value of the artillery arm. However, it remains a fact that he made little use of it, and in the detailed official reports of the battles, one finds only scanty references to the work of the guns. At any rate, there is no express mention on any occasion of a deliberate artillery preparation for the attack consonant with the teachings of the present day.

Before leaving the artillery, it is worthwhile to dwell in more detail on the diversity of its organisation already discussed. On the Federal side, in Burnside's Corps (IX), there were two batteries to each division, and also corps artillery. In the other three corps, however, there was no artillery at all under the direct orders of the divisional commanders. The latter organisation prevailed also in the Confederate Army. There was in Longstreet's Corps an independent division of fourteen batteries;

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and in Ewell's, of eighteen batteries. In A. P. Hill's Corps there were twenty batteries and five four-gun horse artillery batteries accompanying the cavalry. Such an organisation is not only inapplicable at the present time, but is one whose defects were plainly observable in several of the battles of the campaign.

With the extended frontages of modern times, it would be impossible to support infantry action with artillery, unless, at the most, each division had artillery at the direct disposal of its commander. For successful tactical handling in combined action, it is essential that such artillery should form part of the permanent composition of the division, as is now the case with the British divisions and in Australia with its brigades. To illustrate the evils that the author contends are apt to arise from the separation of the artillery arm from the divisional command, it is only necessary to cite the case of Johnson's Division at the salient.

Johnson had been allotted five batteries for its defence, and these had rendered splendid service on 11 May in repulsing the attacks by Mott's Division (II Corps). However, during the night, the corps commander withdrew the whole of these guns for duty on the left of his section of the defence. On the fateful morning of 12 May, Johnson found, at early dawn, the enemy massing at his front opposite the point of the salient, but the notice was so short that his brigades scarcely had time to man his defences. He sent urgent appeals for the return of the guns. It was then too late, however, and practically the whole division was overwhelmed and captured. The guns returned, only to be taken before they could unlimber. There is little reason to doubt that, if he had kept artillery at his own immediate disposal, Johnson would have been able to hold his ground. It was the tragic end of the now-historic 'Stonewall' Division.

THE USE OF GROUND

As already mentioned, the principal element of success in Lee's tactical dispositions in defence was his extremely skilful choice of ground. Lee's skill manifested itself notably in two directions. The first was the security of his flanks and the second was his assurance of a clear field of fire, particularly at short ranges. Of all the desiderata of a good defensive position, the necessity for a clear field of fire dominates the whole problem of the selection of the lines to be occupied. This necessity was a consideration on which Lee always laid the greatest stress.

At North Anna, Lee formed his lines roughly in the shape of an inverted V, the apex touching the North Anna at Ox Ford, and the southern terminals of the two legs resting on the Little River. Hill held the west wing, Ewell the apex, and Longstreet (and then Anderson) the east wing. Owing to the wings being thrown back so sharply, such a disposition, viewed from the north, did not suggest to Grant that General Lee meant to offer any serious resistance to his passage of the North Anna. Grant fell completely into a trap. General E. McIver Law (who was at this

time one of the brigadiers of Field's Division of Longstreet's Corps) has described Lee's defence as 'the most astonishing instance of military checkmate on record'. To quote Law again:

Grant had cut his army in two, by running it on the point of a wedge. He could not break the point, which rested on the river, and the attempt to force it out of place by striking on its sides must necessarily be made without concert of action between the two wings, neither of which could reinforce the other without crossing the river *twice*; while his opponent could readily transfer his troops, as needed, from one wing to the other, across the narrow space between them.⁴

THE USE OF CAVALRY

There remains to consider what, to the Australian student, is probably the most interesting feature of the whole campaign: the tactical employment of the mounted arm. Here we find a curiously anomalous feature. The cavalry on both sides were the most dashing, the most valorous, the most enterprising and resourceful, and the most brilliantly led of all the troops in either army. Yet cavalry was of the least tangible tactical value and cooperated least with the action of the other arms. The Wilderness campaign illustrated how the mounted arm neglected its true functions.

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The cavalry on both sides were armed with the sword and rifle. Their mobility and range of action were of the highest order. They were, in personnel, in equipment and in training, the prototype of our Australian Light Horse. Yet, throughout the war, they were organised and employed in a manner that constituted them more an excrescence or an appendage of the army than an integral part of it. During the early years of the civil war, cavalry had seldom been used as a coherent whole. The custom was to split the mounted arm up into small units: as escorts to slow-moving transport columns, as gallopers, orderlies and guides. In the Wilderness campaign the opposite extreme was indulged, and it became the obsession of the leaders to employ cavalry mainly on raiding expeditions. Doubtless these raids were brilliant exploits in horsemanship and undoubtedly they effected enormous damage. However, they contributed little to the general development of the strategic plans, and brought about a dispersion of force that directly and adversely influenced the course of the campaign.

The Federal cavalry was organised as a separate corps of three divisions under Sheridan. The Confederate Cavalry Corps was also organised in three divisions and was led by J. E. B. Stuart, until he fell at Yellow Tavern on 11 May. There were

no mounted troops with the infantry corps on either side and thus no possibility of the employment of cavalry on protective duty in the detailed sense of present-day activities. Mounted troops were only employed as independent cavalry. Beyond their occasional and rare use for strategic reconnaissance, they failed to fill any of the roles that are today considered their greatest attribute.

Cavalry raids were quite secondary, and this point must be dwelt on with some emphasis. There is an undoubted tendency among many senior officers of the Australian Light Horse to indulge in a disposition for the employment of mounted troops on independent enterprises while ignoring the relationship of their action and functions to those of the less mobile formations.

In short, during the Wilderness campaign, the mounted troops on either side proved of least utility. The cavalry did not play any serious part in the functions of extended reconnaissance, in protection on the march or in screening action. There were some exceptions. It is true that Lee was warned by his cavalry, which was watching Ely's and Germanna fords on the Rapidan, that the army of the Potomac was in motion. However, the warning came too late to bring Longstreet's Corps into the Wilderness fight in time to be decisive. It is also true that it was due to Stuart's energy and his willingness to fight on foot that Lee was able to seize the Spotsylvania position in advance of Union forces. These are, however, isolated instances of timely information resulting from cavalry reconnaissance. On the other hand, the instances of either complete failure to gain, or absence of attempts to seek, information were numerous. Premature exposure by want of screening action over intended moves was so frequent that space permits mention of only a few.

On 4 May, Union forces marched in the direction of the Wilderness Tavern and Chancellorville respectively, and bivouacked there for the night. The greater part of Lee's army lay within 3 miles of their right flank, ready to pounce on them at dawn next day. No Federal general had the slightest knowledge or suspicion of the presence of the Confederates almost within gunshot range.⁵ Where was the Federal cavalry during that march? Some of them were away to the east, on the flank farthest from the known direction of the enemy while the remainder were looking after the wagon trains in rear!

At Spotsylvania, Grant was able to mass an attack of 20 000 men, through rain and mud in some enclosed and timbered country within 2000 yards of the apex of the salient, without Lee's having the slightest information of the move. Where was Stuart's Horse? Trailing 50 miles away after Sheridan, in an attempt to head him off from the Richmond railway! On each occasion that Grant resumed his movements to the left front, the absence of a mounted screen permitted Lee to gain some knowledge of Union intentions in sufficient time to effect a counter-manoeuve. Again, Lee's dispositions at Cold Harbor were sufficiently apparent to Grant to enable the latter to bring up reinforcements from the Union forces around Richmond, the Confederate capital.

For Australian Light Horse leaders, therefore, it would prove an instructive exercise to study carefully, with a good map, the development of this campaign, and to speculate on the variations likely to have been introduced by the correct application of the principles of cavalry action as they are understood today.

One final instructive lesson of the Wilderness campaign can be drawn from the consideration that war is, after all, not an exact science. In all phases, the application of fundamental principles of war are often affected to a vital degree by the disturbing influence of accident or chance.

The turning point of the Wilderness campaign, if not of the whole war, was the moment when Longstreet fell seriously wounded while leading a flank movement around the extreme Federal left in the forenoon of 6 May. Longstreet was taking four brigades along the cuttings of an unfinished railway. He was just on the point of delivering a strong surprise attack on the extreme left and rear of Hancock's line when—like Stonewall Jackson on this very battle ground a year before—he was struck down at the crisis of the battle by his own men. The confusion created by his loss caused the Confederate assault to be postponed till the afternoon. By then it was too late. By this accident Lee forfeited his last chance of repeating his victory at Chancellorville by rolling up the Federal line and driving it back across the Rapidan. It is at least probable that, had such a result been achieved in 1864, at this critical juncture, the Confederacy might have survived.⁶

Again, during a critical point in the fighting at North Anna, Lee was stricken with a sudden illness and lay helpless in his tent for some hours, just at the time when his mastermind was indispensable to his cause. For Grant, heavy rains that commenced on 13 May, and lasted several days, paralysed his ability to manoeuvre in front of the Spotsylvania position. This situation allowed Lee to recover and reorganise after the heavy and disastrous fighting of the preceding two days.

It is hoped that enough has been said to warrant the contention with which this article opened: that the Wilderness campaign is especially deserving of close study by Australians. In it, we are able to contemplate the performance of a citizen soldiery coming from our own stock, speaking our own language, animated by our own aspirations for territorial integrity and individual freedom. It must be the hope of every patriotic Australian that, when the time of trial comes, the performance that will be yielded by our own people will be at least as earnest, as effective and as glorious. They will thereby realise the promise given by the comprehensive scheme of national preparation on which we have embarked.

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ENDNOTES

- 1 Grant wrote to Meade on 9 April: 'Lee's army will be your objective point. Wherever Lee goes, there you will go also'.
- 2 In his memoirs Grant says: 'Cold Harbor is the only battle I ever fought that I would not fight over again. I have always regretted that last assault'. In that assault he lost 10 000 men in twenty minutes.
- 3 Editor's note: This is a reference to Colonel G. F. R. Henderson's *The Science of War*, London, 1908.
- 4 In his report on the battle, Grant said: 'To make a direct attack upon either wing would cause a slaughter of our men that even success would not justify'.
- 5 Some time before Grant had voiced to one of his staff the confident belief that 'there was no more advance left in Lee's army', *The Photographic History of the Civil War*, New York, 1911.
- 6 Eggleston says: 'Loud and irresistible would have been the cry for an armistice, supported by Wall Street and all Europe'.

THE AUTHOR

Lieutenant General Sir John Monash, GCMG, KCB, (1865–1931) joined the Garrison Artillery in 1887, but it was not until he became the Officer Commanding the Victorian Section of the Australian Intelligence Corps that his militia career started to prosper. It was during this period that Monash penned this prize-winning essay. At the outbreak of World War I, Monash was given the command of the 4th Brigade of the Australian Imperial Force (AIF) in the Gallipoli campaign. In Britain, in mid-1916, he was promoted to Major General and given command of the 3rd Australian Division. Under Monash the division served on the Western Front until he was promoted to command the Australian Corps in May 1918. During this climactic period of the war, Monash won an outstanding reputation for leadership and planning, and is regarded by many observers as Australia's greatest general.

MILESTONES

IN MEMORIAM

LIEUTENANT GENERAL SIR THOMAS DALY, KBE, CB, DSO (1913–2004)

Lieutenant General Sir Thomas Daly, who died in Sydney on 5 January 2004 at the age of 90, was one of the towering figures in the history of the Australian Army. Along with General Sir John Wilton (1910–81), he was one of the most important occupants of the office of Chief of the General Staff in the postwar era. During his long and distinguished career, the regular army that he joined in the early 1930s was transformed into a standing professional force responsible for the land defence of Australia and its interests—one capable, moreover, of sustained continuous expeditionary deployment in the region. Daly himself had much to do with this transformation.

Thomas Joseph Daly was born in Ballarat on 19 March 1913. His father (also Thomas Joseph Daly) earned a Distinguished Service Order (DSO) as second in command of the 9th Light Horse Regiment during the Great War, and was a bank manager in civilian calling. The young Daly was educated at St Patrick's, Sale, and Xavier College, Melbourne. He aspired originally to a career in medicine, but entered the Royal Military College, Duntroon, in 1930 as a member of a class numbering just thirteen. Graduating into the Depression-era army in December 1933, he held the usual staff and training appointments in militia units that were the lot of young regular officers of the day, in his case serving with the 4th and 3rd Light Horse regiments. In his graduation report the Commandant, Colonel J. D. Lavarack, a future Chief of the General Staff himself, had noted Daly's capability as a horseman and all-round sportsman, and his 'tactful, modest and unassuming' manner. These characteristics were frequently commented on in later confidential reports. 'A good type', wrote the commanding officer of the 4th

Light Horse, 'possesses decision, self-reliance, and is tactful and commands respect'. Another wrote that he 'shows great strength of character. Highest integrity ... sound in judgement'. In 1938–39 he secured a highly desirable exchange posting with the British Army, serving with the 16th/5th Lancers on the North-West Frontier of India.

With the outbreak of war, he was seconded to the 2nd AIF in October 1939 and served with the 2nd/10th Battalion as adjutant. From there, he went to Wooten's 18th Brigade headquarters as brigade major, where he remained until September 1941 and for which he was mentioned in dispatches. He attended the Middle East Staff School in the first half of 1942, and then returned to Australia and the position of General Staff Officer Grade 1 of the 5th Division and service in New Guinea.

In many ways, the high point of his wartime service was command of the 2nd/10th Battalion, especially in the assault on Balikpapan in Borneo in July 1945. Battalion commands were relatively rare for RMC graduates, and indeed in 1945 Daly was the only Staff Corps officer to hold such a position. In the opinion of the official historian, Gavin Long, Daly was 'the outstanding CO of the campaign', and his DSO citation noted his 'courage, initiative and brilliant leadership'.

After a further short period of staff appointments, Daly went to the United Kingdom to attend the Staff College at Camberley and then the Joint Services Staff College at Latimer. From 1949 until his appointment as Director of Infantry in mid-1951, Daly was Director of Military Art (DMA) at RMC, where he impressed himself on the classes with his friendly interest in their development. In June 1952, he took over command of the 28th Commonwealth Infantry Brigade in Korea, the first Australian to hold the position (he was succeeded by John Wilton early the following year). The brigade was engaged in a positional war of patrols, ambushes, artillery and mortar barrages, and operated within a British Commonwealth divisional structure under overall American command. The two Australian battalions were often engaged in vicious fighting with the Chinese in the valleys below their positions, and Daly kept a close personal eye on their operations. He had first known many of the young officers commanding platoons in these actions as staff cadets during his time as DMA.

Increasingly, senior rank now brought with it the full range of senior command and staff positions in the army of the day. Daly became Director of Military Operations and Plans at a time when Australian defence thinking was shifting from an emphasis on deployment to the Middle East in the event of a general war to one that focused on the region to Australia's north. This appointment was followed by a year at the Imperial Defence College (now the Royal College of Defence Studies) in London in 1956.

On returning to Australia, Daly served for three years as General Officer Commanding Northern Command, which also exercised responsibility for the Army's affairs in Papua New Guinea. Northern Command presented several chal-

lenges, not least with the Pacific Islands Regiment (PIR), some of whose soldiers had rioted in Port Moresby in December 1957 and in which morale and discipline were at times problematic. Daly moved to replace the existing warrant officer platoon commanders with young subalterns from RMC and Portsea, improved conditions of service, and undertook a thorough overhaul of training and patrolling activities. These measures are among his most important services to the Army.

By now Daly was being considered for the highest positions in the service. The Minister for the Army, J. O. Cramer, wrote of him in 1960 as:

A young Major General of outstanding ability who will undoubtedly eventually come under consideration for the appointment of Chief of the General Staff. He has had wide and varied experience in Command and in the General Staff and should now be given experience on the Military Board and in a senior administrative appointment.

A period as Adjutant General and Second Member of the Military Board duly followed. Then, in May 1966, Daly succeeded Wilton as Chief of the General Staff (CGS) just as the army was poised to deploy a two-battalion taskforce to Phuoc Tuy province in the Republic of Vietnam.

The second half of the 1960s was a most interesting, and a most challenging, period to be professional head of the Army, and Daly exercised quiet yet firm, sustained leadership in the position for the duration of Australia's major commitment to the war in Vietnam. He visited the 1st Australian Task Force regularly, and enjoyed an easy rapport with the soldiers whom he visited. He is said to have felt the casualties keenly, especially those that suffered from the Australian mines sown in the barrier minefield and which the enemy lifted and subsequently used against Australians. Having fought in both North Africa and Korea, Daly had a well-founded understanding of, and respect for, the use of such weapons.

Daly's time as CGS is best remembered, at least outside the army, for the 'Civic Action affair', which led to the resignation of the Minister for Defence, Malcolm Fraser, and the destabilisation of the Prime Minister, John Gorton, in March 1971. The exact detail of what happened is still unclear, and Daly reflected much later that he was 'at a loss to explain the *raison d'être* for the affair'. The best explanation of events probably lies in the Byzantine internal politics of a Liberal Party increasingly bent on self-destruction. No-one seriously believed that a man of Daly's integrity and character would be caught up in such matters, and he alone, as he noted, received a fair and favourable coverage in the media commentary on the matter. Neither Gorton nor Fraser exhibited any ill-will towards Daly in subsequent years.

There were other aspects of Daly's time as CGS that warrant sustained consideration. He created the position of Vice-Chief of the General Staff; oversaw the creation of functional commands to replace the old territorial districts; and began the process of reorganisation of the army that would continue under his successors in

the wake of Vietnam. He argued for the acquisition of more troop-lifting helicopters to improve infantry mobility, and for specialised gunship helicopters for ground support roles—both legacies of the Vietnam experience.

The use of national servicemen placed the Army in conflict with some sections of Australian society. Although national servicemen were readily incorporated into the service, and served and fought ably and well in Vietnam, the political climate in which the Army found itself in this period made the job of CGS a sometimes fraught one. In 1969, Daly's term in office was extended for a further two years. By 1971, although he was still below statutory retirement age for his rank, he was, by then, as he conceded subsequently, 'tired, less than completely fit and when the time came, ready to make way for my successor'.

Retirement was a relative term for Tom Daly. He had served ex-officio on the Council of the Australian War Memorial since 1966, and remained on that governing body until 1982, becoming after 1974 its chairman. He held a variety of directorships, was involved with the Royal Agricultural Society of New South Wales, the Red Cross Society, and served a variety of charitable concerns, such as the Matthew Talbot Hostel where he regularly helped clean and feed the indigent residents.

Daly maintained his connections with the Army to which he had devoted his adult life through colonelcies of the Royal Australian Regiment, the Pacific Islands Regiment and involvement with the Infantry Centre Museum. A long and happy marriage and a family of three daughters, together with a range of recreational interests involving music and art, provided balance and sustenance in his personal life. His quiet and undemonstrative devotion to his Catholic faith was important in defining him as a man, and informed the integrity, strength of character and compassion on which so many remarked during his life. He was, without question, one of the great soldiers produced by the Army, one of its most important senior officers, and one of Australia's most distinguished servants.

Jeffrey Grey

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MAJOR GENERAL KENNETH MACKAY, CB, MBE
(1917–2004)

Kenneth Mackay served with distinction in the Australian Army for almost forty years. He entered the Royal Military College, Duntroon, as a cadet in 1935 and retired as a Major General in 1974. In a long and meritorious career, Mackay saw service in the Middle East and New Guinea in World War II; and during the Cold War, in Japan, Korea and Vietnam.

In 1938, Mackay graduated from Duntroon as a Lieutenant in the Artillery Branch of the Australian Staff Corps, and his first appointment was to the 1st Heavy Brigade at the North Head Fort in Sydney. During his time at the fort, the then Lieutenant Mackay first demonstrated the courage and moral fibre that was to distinguish the whole of his military career. Using a rope, he courageously rescued a seriously injured civilian from the base of the cliff at North Head. For his action, Mackay was awarded the Royal Humane Society's Bronze Medal.

In late 1939, the then Captain Mackay graduated from the Field Artillery School and was subsequently posted as adjutant of the 2nd/8th Field Regiment at Puckapunyal. In November 1940 he was deployed to the Middle East area of operations as a battery commander, and later served as a regimental artillery officer and artillery liaison officer with the Headquarters of the 9th Division. He ended his service in the Middle East as the Brigade Major of the 26th Australian Infantry Brigade in 1941–42 and was directly involved in the fearsome battles around El Alamein that stopped the German drive to capture Cairo and the Suez Canal.

During his service in the Middle East, Mackay also attended the United Kingdom's Commando Instructors Course in Northern Palestine and the United Kingdom's Staff College (which had been temporarily relocated to Haifa in Palestine). As a result of this experience, he helped to raise and train the 9th Division's commando unit—a remarkable achievement for a still relatively junior officer.

In early 1943, Mackay deployed with the 9th Division to New Guinea as Brigade Major of the 26th Brigade. In New Guinea, he distinguished himself with outstanding staff-work during operations against the Japanese at Lae, Sattelberg and Wareo, and was made a Member of the Order of the British Empire. In early 1944, he was posted as an operations staff officer at Army Headquarters in Melbourne before being seconded to the War Office in London. During this secondment, Mackay was part of an exclusive military team that reported directly to the Chief of the General Staff of the British Army. In July 1945, he attended the Postdam Conference as a member of Field Marshal Lord Allanbrook's personal staff.

Following the end of World War II, Mackay was appointed Secretary to the Joint Chiefs of Staff and Joint Planning Committee for the British Commonwealth Occupation Force in Japan. He was subsequently promoted to Lieutenant Colonel, and in mid-1949 became Commanding Officer of the 67th Australian Infantry Battalion, then stationed in Japan.

Under his command the 67th Battalion became the 3rd Battalion of the Royal Australian Regiment (RAR). The 3rd Battalion, or 3 RAR, has since become an integral part of today's Army, and for the rest of his life Kenneth Mackay remained deservedly proud of the unit that he fathered and of its very fine combat record in Korea, Malaya, Vietnam and East Timor.

Mackay returned to Australia in August 1949 as a staff officer in the Directorate of Military Operations and Plans at Army Headquarters. With the exception of a short stint in Korea in late 1952, he remained at Army Headquarters until he was posted as the Chief Instructor at the School of Tactics and Administration in Victoria. Between 1955 and 1962 he served in both Britain and Australia. In Britain, as a colonel, Mackay served in London as Assistant Defence Representative and then, following promotion to brigadier, he attended the Imperial Defence College. His appointments in Australia during the late 1950s and early 1960s included Director of Personnel, Maintenance, Quarters and Military Training at Army Headquarters in Melbourne, and then Director of Military Operations and Plans at the new Army Headquarters in Canberra.

When the Australian Government decided to provide ground combat troops to South Vietnam in the mid-1960s, Brigadier Mackay led the initial planning team and negotiated arrangements with the Americans for operational areas of responsibility, logistic support, and command and control. Indeed, it was on his recommendation that Australia assumed control of a separate operational area in Phuoc Tuy province—a decision that served Australia well. In 1966, when Australia's military commitment expanded from one battalion group to a joint taskforce, Mackay was promoted to Major General to command the expanded force. In his book *Too Long Tan*, Ian McNeil writes admiringly of Ken Mackay:

He [Mackay] was one of the few senior officers at the time who had a clear understanding of the development of the war and Australia's part. Besides, he had formed a close and harmonious working relationship with senior American and Vietnamese commanders and staff. With disdain for the excesses of red tape, and possessing considerable knowledge and drive, helped along by a rather roguish sense of humour, he was well equipped to lead the Australian forces into their biggest commitment since 1945.

In Vietnam, Mackay proved to be a resolute commander, standing his ground against American efforts to move Australian operations towards attrition and 'body count' tactics rather than pacification measures in Phuoc Tuy province. In 1967, on his return from Vietnam, Mackay was appointed a Companion of the Order

of Bath and took command of the 1st Division. Between 1969 and his retirement in 1974, he was Quarter Master General in Canberra and then General Officer Commanding Eastern Command. In 1973, his last appointment was as the inaugural General Officer Commanding the new Field Force Command, the precursor of today's Land Command.

To his military contemporaries, Ken Mackay was a tough, uncompromising officer who possessed an excellent sense of humour and great integrity. He was a thoroughly professional soldier who served his country long and well. Finally, with Major General Mackay's passing, we are again reminded of the thinning of the ranks of that great generation of Australian soldiers who came of age in World War II, and whose careers spanned Cold War conflicts in Malaya, Korea, Borneo and Vietnam. All of Australia owes this generation, of which Kenneth Mackay was an outstanding example, a great debt of gratitude. Their military service must always be honoured and is never to be forgotten.

Major General Ken Gillespie
Land Commander, Australia

MAJOR GENERAL TIMOTHY FREDERICK CAPE, CB, CBE, DSO
1915–2003

Tim Cape had a long and distinguished military career serving from the late 1930s through World War II and, later, holding a variety of positions in the postwar period until his retirement in 1972. Born in Vaucluse, in New South Wales, he was the youngest of three children whose family could trace its heritage to a line of British colonists dating back to 1817. Tim Cape's father was a New South Wales volunteer in the Boer War of 1899–1902 and was awarded the Distinguished Service Order (DSO) for his service in South Africa. In the mid-1930s, Tim Cape joined the Australian Army and graduated from the Royal Military College, Duntroon, in December 1937. The then Lieutenant Cape was commissioned in the Australian Staff Corps and allotted to the Artillery.

Although he retained a lifelong interest in all matters pertaining to artillery, his service with the guns was short. He served with the 1st Heavy Brigade at Georges Heights in Sydney and was one of two officers tasked with establishing the 13th Heavy Battery on the approaches to Port Moresby in 1939. Shortly after the outbreak of World War II, he raised the Anti-Tank Wing of the School of Artillery at Puckapunyal. For his work at the School of Artillery and his later New Guinea service, he was made a Member of the Order of the British Empire.

In February 1942, Tim Cape was posted to Headquarters Sparrow Force in Timor, then part of the Dutch East Indies. After the fall of the Dutch East Indies to the Japanese, he operated for several months behind Japanese lines before being ordered to return to Australia. For his services in Timor he was Mentioned in Dispatches. In October 1942, as a lieutenant colonel, Tim Cape was posted to Headquarters New Guinea Force and tasked with the responsibility of establishing an effective offensive air and air logistic support capability. He did much to overcome the chaotic nature of air operations in New Guinea and served later in Borneo in a similar capacity. For these services, he was awarded the DSO and the US Bronze Star.

After the war, he was part of the British Occupation Force in Japan before receiving an appointment to the British School of Combined Operations. Subsequently, he was posted as an instructor to the British Army Staff College at Camberley and later attended the United Kingdom Joint Services Staff College. In the 1950s, he attended the Imperial Defence College in London, thus completing an extensive military education.

In Australia, General Cape was Commandant of both the Officer Cadet School at Portsea and of the Australian Staff College. He commanded Central Command before his promotion to Major General in early 1965. In the second half of the 1960s, he held the appointments of General Officer Commanding Northern Command and Master General of the Ordnance before his retirement in 1972. At the time of his retirement, he was a Commander of the Order of the British Empire and a Companion of the Order of the Bath. In retirement, Tim Cape worked as a consultant for a number of defence-related companies. He travelled widely, was a member of many clubs, societies and associations, and served as President of the ACT Branch of the Royal United Services Institute as well as becoming its National President.

General Cape's career was shaped by his wartime service, and his interest in training and materiel matters. He was also influenced by a lengthy involvement in the higher levels of United Kingdom military education. He was involved in many of the significant organisational changes to both the Army and the Defence Department during the post-World War II era. These changes included the professionalisation of the Regular Army in the 1950s and 1960s, and the establishment of functional military commands, of the Australian Defence Force and a single ministerial department. General Cape possessed a strong sense of service, worked well with people from a wide range of backgrounds, and retained an open mind to new ideas and outlooks. Although gregarious in outlook, he could also be incisive and had a rare ability to identify the core of any issue. He played a major role in the Australian Army of his era.

Major General John Hartley (Retd)

BRIGADIER MONSIGNOR GERALD ANTHONY CUDMORE, AM

1933–2004

Monsignor Gerry Cudmore, well known to many soldiers of all or no religious faiths, died on 21 April 2004, aged 71. Monsignor Cudmore was ordained priest in 1958. After serving in a number of Melbourne parishes, he became a chaplain in the Australian Regular Army in 1963. Following appointments to the Army Apprentice School and the Officer Cadet School, he was the first Australian chaplain to serve in Vietnam with the 1st Battalion, Royal Australian Regiment, at Bien Hoa, where his pastoral care for the soldiers of all denominations became legendary. An anecdote in *The Cross of Anzac*, the history of Australia's Catholic military chaplains, recounts his use of some forthright soldiers' language vowing vengeance against those responsible for the wounding of a young soldier whom he was comforting. In something of a role reversal, the wounded Digger reproved Gerry for behaviour unworthy of a priest.

Subsequently, Monsignor Cudmore served with the 2nd Recruit Training Battalion at Puckapunyal, in the 28th Commonwealth Brigade in Malaysia and in the 6th Brigade in Australia. He also held appointments in the Army Character Training Team, at Army Office in Canberra and at Headquarters Training Command in Sydney. Monsignor Cudmore rose to become Principal Chaplain (Roman Catholic) with the rank of Brigadier in the Australian Army in 1988. With the support of the then Chief of the General Staff, Lieutenant General Laurie O'Donnell, Monsignor Cudmore arranged for the original Changi Chapel, built by prisoners of war at the infamous Japanese World War II camp in Singapore, to be rebuilt and dedicated at the Royal Military College, Duntroon. He was awarded a Chief of the General Staff Commendation in recognition of his efforts.

When he reached retiring age for his rank, Monsignor Cudmore left the Army and reverted to the Melbourne archdiocese. He was Vicar-General in Melbourne from 1993 to 1996, subsequently serving in a number of parishes in the archdiocese. He was appointed a Member of the Order of Australia in 1988. Melbourne's St Patrick's Cathedral was overflowing for his requiem mass and military funeral. A letter from His Excellency the Governor-General was read out aloud by Archbishop Hart, and the Chief of Army, who was absent overseas, was represented by Major General Peter Haddad, AO.

Michael O'Connor

PROFESSOR GUNTHER E. ROTHENBERG

(1923–2004)

Editors' Note: Professor Gunther E. Rothenberg, a distinguished international scholar of war, was a foundation member of the Australian Army Journal (AAJ) Editorial Advisory Board from February 2003 until his death in April 2004. As a tribute to Professor Rothenberg's services to the journal, the AAJ is publishing the eulogy delivered at his funeral in Canberra on 29 April 2004 by Professor Peter Dennis.

Eleanor has asked me to speak about Gunther's life. How to sum up that remarkable life in a few minutes is more difficult than I could have imagined, for there are so many lives to consider: the private life and the public lives. This is not the time to speak at length of Gunther's private life, except to say that, as a husband, father and grandfather, it was guided by love, especially for Ruth and, for the past ten years, for his beloved Eleanor.

Rather it is his public lives that I want to speak about. Few men can have had as many rich, varied and ultimately satisfying lives as Gunther. Soldier, scholar, teacher, mentor—Gunther excelled in all these spheres. He was born in Berlin in 1923, and from an early age expressed the ambition to become one day a professor of military history. What a gift of prophecy, but what twists and turns stood between him and the fulfilment of that boyhood dream. As the situation in Germany deteriorated and the position of Jews became more and more precarious, Gunther emigrated with his family to the Netherlands and thence to Palestine, where in 1940–41 he was a member of several youth groups and of the Haganah. In 1941 he joined the British Army, and served throughout the war in Egypt, Italy and Austria in the Service and Intelligence Corps, and undertook a number of missions to connect with partisan groups. His decorations by war's end included the Distinguished Conduct Medal and the Medal of Merit. He was then employed by US Intelligence as a civilian in Austria in 1948, before returning to Palestine–Israel as a Captain in the Haganah and fighting in the Israeli Defence Force in the War of Independence.

In 1949 he migrated to the United States, and for the next six years served in the US Air Force Intelligence Branch, which included service in the Korean War. At the same time he began his academic studies. These studies led in 1958 to his PhD from the University of Illinois, and the start of what was to become an illustrious career. He was a member of the faculty of the University of New Mexico for ten years before joining Purdue in 1973, where he spent the rest of his American academic career—not bad for a boy who did not complete high school.

I say his ‘American’ career, because by the mid-1980s Gunther’s horizons were widening to include Australia. Eleanor and I and others here today were privileged to have Gunther as a colleague in 1985, when he was a Visiting Fulbright Fellow in the Department of History in the Faculty of Military Studies at the Royal Military College of Australia, Duntroon. The Royal Military College was Gunther’s introduction to Australia, and he revelled in it, even if he found some aspects of Australian military behaviour puzzling. He never did come to terms with the sight of young officer cadets marching off to class in the rain carrying umbrellas. It sat uneasily with his notion of soldiers as men of action.

When he returned to Australia, now married to Eleanor, some time after Ruth’s tragic death, he found a new academic home at Monash University. Gunther made many friends at Monash and spoke warmly of them, but I think it true to say that he never felt completely at home there. The same was true when he and Eleanor moved to Canberra. ‘Peter,’ he often told me, ‘the worst mistake I ever made was to retire.’ He missed the sense of being in the thick of things, but given that he also told me at great length of his frustration with the ‘business’ of universities. I used to remind him that now he was free to pursue his scholarly interests without the burden of having to pay too much, indeed any, attention to what administrators said or thought.

Which brings me to Gunther’s achievements as a scholar of military history. Over the course of his academic career, which went well past his official retirement date, Gunther established himself as one of the world’s leading authorities on Austrian and Napoleonic military history. His books, especially *The Art of Warfare in the Age of Napoleon*, are the authoritative works in the field, and regularly appear on course reading lists around the world. He was widely consulted on a range of military matters, and continues to be cited frequently in new works. Even the French approved of his study of the Napoleonic Wars. What higher praise could there be for an historian of the Napoleonic era? At the time of his death he was putting the finishing touches to a study of the Battle of Wagram, and bemoaning the fact that he had not yet worked out what project to tackle next. By any measure, it is a sterling record.

As a teacher and mentor Gunther excelled. In lectures—whether to undergraduates, graduates, or at the many staff colleges around the world where he taught—Gunther was the consummate showman. He loved to talk, with the result that his classes were animated theatrical performances—entertaining yes, but suffused with a deep understanding of, and love for, history. He also loved his students, and for those whom he supervised as graduate students he had a special and enduring regard. They were ‘his boys’: a stern taskmaster, he guided and nurtured them in their studies and subsequent careers, and in return they held him in a mixture of awe and deep affection. This was surely demonstrated in February 2004, when

Gunther was Guest of Honour at a meeting of the Consortium on Revolutionary Europe held in High Point, North Carolina in the United States. Gunther affected to be largely indifferent to the fuss, but on his return told me, somewhat shyly, that he had loved every minute of it. For their part, it was a very public way for many of his former graduate students to show the great esteem in which they held him. One of them wrote to me on hearing of Gunther's death: 'He was tough on the outside, and yet we, "his boys", knew the gentleness and kindness within. Our standard joke was, to paraphrase Kipling, "We'd rather be kicked by him than knighted by the Queen of England"'

For all of his outward gusto, Gunther was in many ways a very private man. He was guided by a deep sense of duty, which Eleanor suggests sprang from his German, indeed Prussian, background. Then there was his strong sense of American patriotism, fuelled in part by his gratitude to the United States for having provided him with a home and unlimited opportunity. He was also guided by a quiet devotion to his Jewish faith. We do not choose the time of our death, but there is surely something symbolic in the fact that Gunther died on Israel's Day of Independence—a day for which he had fought as a soldier. How then to sum up the extraordinary public life of this soldier, scholar, teacher, mentor and friend? I can only say: 'He was a good man', and conclude: 'His duty nobly done'. May he rest in peace.

Peter Dennis

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REVIEW ESSAY

THE DEADLY COMMERCE

THREE MEMOIRS OF 20TH-CENTURY COMBAT

RUSSELL PARKIN

Ernst Jünger, *Storm of Steel*, trans. M. Hofmann, Allen Lane, The Penguin Press, London, 2003, 289pp.

Robert Leckie, *Helmet for My Pillow*, Ibooks, Simon and Schuster, New York, 2001, 324pp.

Anthony Swofford, *Jarhead: A Marine's Chronicle of the Gulf War*, Scribner, London, 2003, 260pp.

Combat memoirs written by soldiers form a unique genre in the literature of war. Much military literature concentrates on the sweep of battle. Autobiographies of generals and other senior figures, although often deeply personal, almost inevitably have a broader perspective. Only narratives of combat—the soldier's experience of war—provide us with intimate accounts of battle. They can be compared to the view obtained by looking through binoculars, being at once both detailed and circumscribed. For the great military theorist, Carl von Clausewitz, combat was the very essence of warfare. In order to underline this point, he compared combat to cash payments in commerce, since both actions are necessary for their respective enterprises to proceed. The three works

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reviewed in this essay were selected as much for their chronological spread within the century just past as for their literary merit. Together they provide snapshots of the deadly commerce of industrialised warfare between 1914 and 1991.

Ernst Jünger's *In Stahlgewittern* (*Storm of Steel*) was first published in 1920 but did not appear in its first English translation until 1929. The late 1920s and early 1930s were also years in which many British veterans were releasing their war memoirs. In the main, these British works portrayed World War I in the same tragic light favoured by later writers such as Alan Clark, who helped to popularise the idea that British Tommies had been 'lions led by donkeys'. It is difficult to imagine a greater contrast to this customary view of the war than *Storm of Steel*. The animating spirit of Jünger's book seems to echo the philosopher Friedrich Nietzsche's belief—*it is the good war that hallows any cause*.

In the course of an eventful and longer-than-usual life (1895–1998), Jünger was a controversial and mercurial character. During the 1930s and 1940s, he opposed Hitler and even wrote an allegorical novel attacking Nazi ideas. He eventually came to reject the bellicosity that marks *Storm of Steel* as a work apart from more typical World War I memoirs. However, those shifts all lay in the future. In 1913, the idealistic Jünger had run away to Algeria with visions of joining the French Foreign Legion, in an attempt to live the dream of many young men of his generation. The following year he joined the German Army on 1 August, and from late 1914 he served in the trenches until he was wounded in late 1918. Along the way the seventeen-year-old recruit became a decorated junior officer, the youngest lieutenant ever to receive the *pour le Mérite*.

Storm of Steel celebrates the experience of total war. The book is based on Jünger's wartime diaries. The reader retains a rough sense of chronology, but it is Jünger's ability as a writer—as a perceptive observer of both himself and others—that makes *Storm of Steel* such a powerful work. As depicted by Jünger, the microcosm of the trenches is a world with many similarities to the heroic warrior society of Homer's *Iliad*. As in Homeric society, the structured nature of military life is such that a man's place in the ranks determines both his authority and his duties. Moreover, there is a very clear understanding of what these duties are and

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what actions fail to meet the proper performance of duty. A man and his actions are identical. Thus Jünger's epitaph for a fellow junior officer—the short, overweight and ungainly Eisen—is ‘... brave puny men are always to be preferred to strong cowards, as was shown over and over ...’.

Death is a certainty. Jünger gives another colleague the Homeric-sounding sobriquet, ‘Paulicke, whose days were also numbered.’ Random, powerful and impersonal forces constantly reinforce the fragility of life in the trenches. Jünger describes the unique sounds made by various calibres of British and German artillery with all the detail and nuance that an ornithologist might use to describe different birdsongs, but he is also aware that this knowledge cannot save him from death. Returning wounded from a raid on the British trenches, Jünger recalls his sense of relief at being alive, but also the toll that the experience has taken on his nerves. Lying sleepless on his pallet in a dugout, he notes: ‘I had a sensation of a sort of supreme awakesness—as if I had a little electric bell going off somewhere in my body.’ A few sentences later he says: ‘These short expeditions, where a man takes his life in his hands, were a good means of testing our mettle and interrupting the monotony of trench life. There is nothing worse for a soldier than boredom.’

Jünger exults in the war. He gives himself over to it totally, not expecting to survive it, but relishing the experience nonetheless. This existentialism makes *Storm of Steel* a challenging book for modern readers. While not indifferent to the suffering that surrounds him, Jünger has developed a strength of body and mind that makes him the type of man Clausewitz described as ‘a proper instrument of war.’

Helmet for My Pillow is Robert Leckie's memoir of his time as a United States Marine during World War II in the Pacific. Leckie had attempted to enlist on 8 December 1941, but a requirement that he be circumcised delayed his enlistment until early January 1942. From this awkward beginning, he has gone on to become one of America's best known writers of popular military history, with over thirty books to his credit.

The talent that has made Leckie such a popular historian is evident in this narrative of his wartime experiences. From boot camp on Parris Island to battle with the First Marine Division on Guadalcanal, New Britain and Peliliu, Leckie's memoirs evoke the life of a marine infantryman. Unlike Jünger, who makes little reference to life outside the trenches, Leckie provides his readers with a detailed account of a debauched interlude in wartime Melbourne filled with frenetic indulgence in booze and sex, punctuated by time in the brig.

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By this stage of the war, the young Leckie had been decorated for his role as a machine gunner in a night action at the Tenaru River on Guadalcanal. The Marines had landed without opposition but were soon engaged in heavy combat. With little experience of jungle fighting, Leckie records the stresses placed on a man in the jungle at night: 'I could not see, but I dared

not close my eyes lest the darkness crawl beneath my eyelids and suffocate me. I could only hear. My ears became my being and I could hear specks of life that crawled beneath my clothing ... I could hear the darkness gathering against me and the silences that lay between the moving things.' When the sun rose on the Tenaru River the next morning, more than nine hundred dead Japanese littered the jungle.

Far more than Jünger's infrequent and sometimes heavy attempts at humour, *Helmet for My Pillow* is enlivened by Leckie's gift for irreverent observation and the apt epithet, which illustrates the close companionship of men at war. Officers are known by names such as Lieutenant Big Picture or Major Major-Share, while comrades rejoice in pseudonyms such as White-Man (a bigot), The Scholar (an avid reader) and The Chuckler (perpetually good humoured). In common with Jünger, Leckie is highly self-aware. Briefly admitted to a hospital ward for psychological casualties, he confronts his own fear of madness. The insight that this pause affords him is the understanding that it is not the relentless reality of death, the enemy, horrific wounds or the jungle that brings men to insanity in war. Rather, for some, it is the psychological pressure from within themselves that engenders a despair so bottomless that they become ghosts 'walking the ward with silent lips and blank eyes.'

Like Jünger, Leckie probably only survived the war because he was badly wounded. *Helmet for My Pillow* was not published until over a decade after the war had ended. As such, the book is a meditation by the mature Leckie on his rite of passage.

He is not without a sense of survivor's guilt that Jünger could never express; Leckie questions too what it was that he ultimately fought for, especially since civilians 'heavy with the girth of affluence' could never understand what motivated a combat veteran. His answer was simple and stoic: 'For myself, a memory and the strength of ordeal sustained; for my son, a priceless heritage; for my country, sacrifice.'

... *Helmet for My Pillow* is enlivened by Leckie's gift for irreverent observation and the apt epithet, which illustrates the close companionship of men at war.

Helmet for My Pillow ... is a meditation by the mature Leckie on his rite of passage.

Anthony Swofford's *Jarhead* is a war memoir from the same lineage as *Storm of Steel* and *Helmet for My Pillow*. However, unlike Jünger and Leckie, Swofford, perhaps mirroring his times, is more self-indulgent in the telling of his story. Rather than the straight narrative of the classic war memoir, *Jarhead* uses flashbacks and jumps into the future. These techniques give the narrative tempo but also mean that the book occasionally reads like a film script. Almost predictably, the story traces Swofford's loss of idealism and the steady growth of a deep cynicism resulting from his experiences in boot camp, at war and in a rootless civilian existence after he is discharged.

When Swofford joins the Marines in peacetime, the reason he gives is: 'to impose domestic structure upon my life, to find a home'. The reader has already been introduced to Swofford's disintegrating family. The author's father served in Vietnam, and his inability to settle into postwar life is destroying his family. Despite this difficulty, and the uneasy relationship that Swofford has with his father, he has the vague idea 'that manhood had to do with war, and war with manhood, and to no longer be just a son, I needed someday to fight'. In contrast to Jünger's and Leckie's, Swofford's motivation for becoming a soldier is ambiguous.

After boot camp, Swofford becomes a member of a highly trained Surveillance and Target Acquisition – Scout-Sniper Platoon in the 2nd Battalion, 7th Marine Division. These are the men that Swofford shows us as they react 'to the difficulties of life, war, and service in the US Marines.' Their war is the 1991 Gulf War, and to prepare themselves for combat the platoon rent all the war movies that they can find. They also purchase 'a hell of a lot of beer'. Explaining the logic behind this drunken film festival, Swofford says: 'We concentrate on Vietnam films because it's the most recent war and the successes and failures of that war helped to write our training manuals.' The absurdity of preparing for a war in the desert by watching films about Vietnam hardly seems to register with the members of Swofford's platoon.

Once in the Saudi desert, the platoon moves progressively from one camp to the next, always drawing closer to the Kuwaiti border. At one of these staging camps, Swofford contemplates suicide but is talked out of it by his friend Troy. The men of the platoon are forced to play football in the desert while wearing their gas masks and protective chemical–biological suits because reporters are visiting

... 'For myself, a memory and the strength of ordeal sustained; for my son, a priceless heritage; for my country, sacrifice.'

In contrast to Jünger's and Leckie's, Swofford's motivation for becoming a soldier is ambiguous.

their base. During the war, the only dead Iraqis they see have been killed by the concussion of a blast from a bomb called a Daisy Cutter—a smaller version of the Massive Ordnance Air Blast bomb used in the US invasion of Iraq in 2003. Swofford describes the Iraqi corpses in their bunker as ‘hunched over, hands covering their ears, as though they had been waiting in dread ... dried, discoloured blood gathers around their eyes and noses and mouths’. Even when the war ends, the men of the Surveillance and Target Acquisition – Scout-Sniper Platoon are left out in the desert, forgotten by their headquarters.

These incidents contribute to the overwhelming feelings of irrationality and nihilism that dominate Swofford’s memoir. The mood of *Jarhead* has little in common with Jünger’s existential approach to war in the trenches or Leckie’s stoicism. Where Jünger gives himself totally to the war and lives in the extreme of each moment, Swofford is continually discontented and his approach to almost everything he does is hesitant. Leckie accepts the consequences of both fate and his own actions with equanimity. By comparison, when Swofford addresses his reader directly at the end of the book, he rages bitterly: ‘I have gone to war and now can issue my complaint. I can sit on my porch and complain all day. And you must listen ... Indolence and cowardice do not drive me—despair drives me.’ This is the same despair that Leckie confronted and overcame in the psychiatric ward of the US Navy hospital. After his discharge, for a brief time, Swofford became the ghost of a man that Leckie described. His most bitter protest, one that is ultimately impotent, is reserved for war itself: ‘This will never end. Sorry.’ Fortunately for Swofford, the writing of his memoir seems to have become his personal salvation.

The despair that manifests itself in the conclusion to Swofford’s memoir is rooted in a shift in the understanding of the nature and use of violence in Western culture. British academic, Christopher Coker, believes that Western nations have adopted an instrumental view of war. In the past, wars were all-embracing contests. The first great work of Western literature, *The Iliad*, records a war in which the bravery of individual warriors is tested precisely because the survival of their entire society is at stake. World War I and World War II held a similar risk for the liberal democracies. However, during the second half of the 20th century, the use of violence, usually by technological means, became just another instrument of government policy.

Between 1900 and 1970, the existence of compulsory military service schemes in most Western nations ensured that almost all adult males had some experience in the armed forces. However, social and demographic trends during the

The mood of *Jarhead* has little in common with Jünger’s existential approach to war in the trenches or Leckie’s stoicism.

last four decades of the 20th century have significantly altered attitudes to warfare and military service. The result is that, in many Western armed forces, fewer and fewer personnel are directly engaged in combat. In some countries, such as Australia, women now constitute around 15 per cent of the total strength of the armed services. Females also tend to fulfil vital technical roles in the fields of intelligence, communications and logistics. Moreover, the all-volunteer armed forces of most liberal democracies make up such a small percentage of a nation's total population that most people—including politicians, academics and other opinion makers—have no real understanding, let alone experience, of military life. Nations can now even be involved in limited conflicts, such as Kosovo, without disrupting the everyday existence of the majority of their citizens. In the 21st century, defence is in danger of becoming simply another highly specialised area of the state bureaucracy. Writing in the 1880s, Nietzsche anticipated the impact of these trends on the role of man in war, 'I see many soldiers: would that I saw many warriors! "Uniform" one calls what they wear: would that what it conceals were not uniform!'

At the end of a century of industrialised warfare, combat remained a deadly transaction, but something fundamental had changed. By the 1990s, the exultant existentialism of Jünger and even Leckie's stoic endurance have been replaced by the forlorn image of soldiers who must refer to films in order to glimpse even an imprecise representation of war. At the same time, technological precision has enabled weapons to become many times more lethal. The Daisy Cutter bomb, which falls silently from an aircraft and kills with the certainty of a concussive overpressure of 1000 pounds per square inch, has replaced the no less deadly, but more random, barrage of artillery shells described by Jünger. Narratives of combat such as *Storm of Steel*, *Helmet for My Pillow* and *Jarhead* not only act as a barometer of changes in warfare, but serve as a reminder that war is a tragic, emotional and, above all, human experience, not just a technological and political technique.

At the end of a century of industrialised warfare, combat remained a deadly transaction, but something fundamental had changed.

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BOOK REVIEW

Major General J. B. A. Bailey, *Field Artillery and Firepower*, Naval Institute Press, Annapolis, MD, 2004, 633pp.

Reviewed by Michael Evans, Head of the Land Warfare Studies Centre and coeditor of the *AAJ*.

When this book was first published in 1989 by the then Major Jonathan Bailey of the Royal Artillery, it rapidly became known as the best single source on field artillery in the English language. Bailey's brilliant study did for field artillery what Richard Simpkin's work did for armour in the latter's classic 1979 study, *Tank Warfare*. Fifteen years on, Bailey, now a British major general, has produced a second edition that has been updated to explain the use of artillery firepower in the information age. For artillerists in the Australian Army, Bailey's book is essential reading.

Non-artillerists, however, should not be put off by the expert technical detail of General Bailey's sweeping study. This is the kind of book that, because of its subject matter, involves the author in a wide-ranging survey of modern warfare. As a result, used intelligently by the non-specialist, Bailey's work is capable of yielding a treasure trove of insights of great value to every military professional and to serious students of military operations. Of particular interest to uniformed practitioners, and to those concerned with military theory, will be General Bailey's observations on the future of war in parts one and four of the book.

In 1989, Bailey observed in the first edition of *Field Artillery and Firepower* that 'the significance of the deep battle will soon be comparable with that of the close battle of forty or seventy years ago; and artillery will be judged in future primarily by its performance in this engagement, not in close support'. The veracity of this observation has grown over the past decade and a half. Before 1914, armed conflict was essentially a two-dimensional linear encounter. What mattered was the resolution of the close battle in pitched combat. World War I changed this situation in that close battle became siege-like and characterised by bloody stalemate. In 1917–18, the advent of a military revolution based on accurate indirect artillery

fire made progress possible by enabling the simultaneous engagement of targets throughout the two-dimensional area of the battlefield by way of the third dimension: the deep battle.

During the Cold War era, the deep battle was seen as the facilitator of the decisive close battle, but in the post-Cold War period, the deep battle increasingly came to be seen as the potentially decisive one. For Bailey, this reality too is changing as critical targets are now to be found throughout the volume of all three dimensions of the battlespace. He notes:

Just as indirect fire dominated warfare of the twentieth century, which ended with the predominance of the deep battle over the close, so the early 21st century will see the development of new systems to engage targets directly 'above' in the third dimension, and with many sources of fire simultaneously throughout the battlespace.

As a result, perhaps the main difficulty facing Western armies today is the need to balance resources and weapons systems for both close and deep battle, as well as retaining adequate combined-arms capability. The author predicts an increased role for artillery in the delivery of joint effects, re-emphasising his 1989 view that indirect-fire systems based on rapidly developing technologies are likely to become the most important on the battlefield. Moreover, surface-to-surface artillery will be a critical component of an ever more complex joint system of fires.

Bailey undertakes an excellent analysis of the significance of the emergence of the battlespace. He notes that, while in the Cold War the battlefield was rigidly structured—with NATO adopting a linear defence for close, deep and rear battle—after the end of the Cold War, linear deployments became less relevant. Using the terms *close*, *deep* and *rear* in ways that referred to specific, quantifiable space became unsatisfactory. In the 1990s, the idea of the battlefield was replaced by that of the battlespace, incorporating the third dimension of munitions, manned and unmanned aircraft and the electromagnetic spectrum.

The notion of volumetric depth came to be seen as the principal means of overwhelming an opponent by using multiple types of attack or 'multidimensional simultaneity'. Using indirect fire, a successfully executed deep battle shapes the close battle and helps obviate the need for a costly encounter between manoeuvre forces. For this reason, long-range precision attack systems have become popular in advanced armies. Attack helicopters, aircraft and rockets, and in the future unmanned aerial vehicles (UAVs) have the potential to shape the battlespace in a way that saves lives when the close encounter occurs.

Reflecting on contemporary military theory, Bailey observes that the operational aim is no longer to fight sequential battles against predictably advancing echelons of a Soviet-style enemy, but to be able to engage targets throughout the battlespace simultaneously. The objectives are to use multidimensional fires in order to maximise

shock and disruption, and to leverage accumulated pressures against the will of the enemy commander. Bailey believes that such systems as ISTAR (intelligence, surveillance, target acquisition and reconnaissance), GPS (global positioning systems) and UAVs, alongside networked combined-arms teams of manned and robotic ground systems, will change the way in which armies will deliver the effects of fire.

The new advent of precision air-ground RMA-style technologies will, Bailey believes, reshape battlespace geometry as radically as indirect fire did in the early 20th century. The adoption of precise systems on land and in the air promises to transform the way in which land warfare is conceived. Bailey observes:

The new technologies of precision will ... expand the land component's battlespace ... into the third dimension, making the 'above' as vital as 'close', 'deep', and 'rear'. High-payoff moving targets will increasingly be located in three dimensions and require precise engagement by responsive fire systems.

The author notes that, in the Second Gulf War of 2003, air interdiction, close air support, artillery fire and ground manoeuvre were all integrated, while the role of individual soldiers has become of increased value in calling for fire. The management of time has also become a key issue in warfighting. Indeed, the factor of time is increasingly assuming the status of the fourth dimension of the battlespace. Mastery of the battlespace by precision fire and manoeuvre must face the inevitable contraction of vital time. As Bailey puts it,

seizing and holding the initiative is to time as seizing and holding vital ground is to maneuver. Pegging out the boundaries of this battlespace and turning the attrition of time on an opponent is an accomplishment of strategic command and operational art, but a daunting task.

The premium on time places a requirement for the application of massed effects from all weapons systems and for decisive outcomes at all levels of war in order to weaken an opponent's will. Command skills are likely to lie not so much in massing fires, but in controlling ISTAR resources and bringing a mass of precise effects to bear against enemy targets in an efficient manner. Warfighting is likely to fuse manoeuvre with fire, while digitisation permits seamless engagement of targets. The electromagnetic character of the battlespace will place a premium on bandwidth. The requirement for bandwidth for communication and information systems and for 'sensors to shooters' is likely to be as vital to operational success as a steady supply of fuel and ammunition.

The application of military force in the future will also be joint service in character. Separate land, maritime and air components may continue as the providers of capabilities, but commanders will increasingly be joint commanders of specifically packaged forces with appropriate headquarters. As such they will need speedy access

to a full spectrum of effects supplied by all systems, whether hand-held or from satellites. Indeed, Bailey believes that the trend towards joint warfare is likely to increase. In joint operations, a combination of precision weapons, information networks and robotics will continue to expand the battlespace, altering the relationships between the arms and services. 'Joint activities', predicts the author, 'will become ever more integrated in the coming decades, to the extent that the term *joint*, which entails cooperation between separate entities, may come to seem an underestimation of the fundamental new relationships.'

After finishing Bailey's book, one realises the staggering complexity of the modern operational battlespace, with its plethora of electromagnetic and aerial assets. Only the close study of military operations can provide a necessary level of understanding of contemporary warfare. War may, as French Prime Minister, Georges Clemenceau, once famously argued, be too important to be left to generals, but equally, its technical complexity is fast outstripping the grasp of most politicians. If ever there was an intellectual challenge for the West's strategic studies community, it is that of reforming its curricula to embrace not only policy issues, but also the detailed study of military operations. Unless this vital educational reform is accomplished, the policy makers of tomorrow will be intellectually incapable of comprehending, still less advising on, the anatomy of modern military conflict.

BOOK REVIEW

Wayne Michael Hall, *Stray Voltage: War in the Information Age*, Naval Institute Press, Annapolis, MD, 2003, 219pp.

Reviewed by Michael Evans, Head of the Land Warfare Studies Centre and coeditor of the *AAJ*.

In this interesting and stimulating study, author Wayne Michael Hall—a retired American brigadier general who directed the US Army’s Intelligence XXI study—argues that, because of the ascent of the digital age, the face of battle is rapidly changing. Increasingly, the future of war lies in a transformation from conflict involving narrow, kinetic warfare of attrition to the broader, systemic competition of ‘knowledge war’ based on digital nuance and mastery of information operations. Hall defines the phenomenon of knowledge war as:

an intense competition for valuable information and knowledge that both sides need for making better decisions faster than their adversary. The goal in this type of conflict is... decision dominance, which leads to an overall advantage ... and results in a triumph of will by one side or the other.

According to the author, while conventional war is not yet anachronistic, asymmetric warfare represents the wave of the future. Brigadier General Hall argues that the US military must prepare for two types of armed conflict: kinetic, conventional, force-on-force warfare, and shadowy, nuance-laden, sometimes digital and largely invisible asymmetric warfare. Increasingly, the kinetic and the cyber will merge. Future military operations will involve urban warfare and swarming alongside automation, digital manoeuvring and the use of electronic software. While the tools of kinetic, force-on-force conflict will continue, Hall believes that information operations will eventually dominate the character of 21st-century conflict. He writes:

The pendulum is swinging from the kinetic to an emphasis on more nonkinetic forms of conflict... the asymmetric tool of information operations will supplant the heavy reliance on traditional, kinetic, and atomistic perspectives of conflict in the twentieth century. Military services must prepare for future conflicts and the inevitable transformation of war having a more invisible, intangible, cerebral nature.

Future asymmetric information operations will be borderless and devoid of sanctuaries or homeland safety. Defending infrastructure will become as important as fighting for geographical terrain. As the 'tyranny of distance' dissipates, decision-making will become more important, rendering future war a struggle in which social, political, military, economic, financial and informational systems are woven together to the point that none can experience perturbation without affecting the others. Asymmetric information operations will involve fibre-optics, databases, software codes and satellite frequencies. Eventually, asymmetric enemies of the West will develop 'cyberbots'—software programs that can collect intelligence, attack computer servers and deceive at light speed. In these conditions, 'manoeuvre of knowledge' (collaboration) and the manipulation of psyches (both individual and aggregate) will become vital in future war.

Waging successful knowledge war will require mastery of four types of information: *scanning*, *problem-solving*, *learning* and *advantaging*. Future 'cyberstrategists' will have to become experts in such areas as knowledge management and perception management. They will need advanced information warfare doctrine and an understanding of 'aggregation theory' in order to study politico-military interactions and to be able to deliver effects-based operations. An understanding of aggregation, integration and of the 'man-machine symbiosis' will be essential in waging successful knowledge warfare.

In the US context, the author outlines four pathways to knowledge warfare. These pathways are the creation of Knowledge Advantage Centres; the development of a joint asymmetric opposing force (OPFOR); the setting up of a Joint Information Operations Proving Ground; and developing an Internet replicator for training, experimentation and doctrine development. Knowledge Advantage Centres are envisaged as part of a national system of collaborative networks of civilian-military computing aimed at integrating information. In terms of homeland security, Knowledge Advantage Centres would operate at the operational and tactical levels of war and at national, state and local level, and would include chemical, biological and nuclear warfare specialists.

The second pathway involves creating a joint asymmetric OPFOR. A standing, capable and representational joint asymmetric OPFOR using foreign languages and global threat scenarios would test commanders and their subordinates, and is regarded as vital to realistic training in the future. The third pathway is the design

of a Joint Information Operations Proving Ground for realistic training for the art of battle command, knowledge management and effects-based operations. Brigadier General Hall argues that, because the terrain of cyberspace is digital—based on fibre-optic cable, hard-disk drives and databases—it represents an arena of conflict that cannot be replicated in the physical world. A Joint Information Operations Proving Ground would prepare for digital conflict by simulating the conditions of cyberspace and virtual reality.

Finally, the author recommends the creation of an Internet replicator in order to simulate a realistic ‘red team’ opponent. An Internet replicator would train military forces in the art of defending infrastructure from weapons of mass effect, kinetic or otherwise. Hall proposes that an Internet replicator should be part of every training course for future joint warfare—developing cyberbots and counter-deception strategies. While a replicator would be costly and hard to keep up to date, such an initiative is important and could become the responsibility of US Joint Forces Command or North American Command.

Hall concludes his study by identifying the main obstacles to a mastery of knowledge warfare. He claims that these obstacles lie in the realm of education. Because the cyber-warrior will need different skills from the traditional kinetic warrior, the current industrial-age American military system must be reformed. The US military system’s present weaknesses include rigid processes, a hierarchical leadership structure and a tendency to equate rank with intellect—all of which work to inhibit developing 21st-century knowledge warriors.

In contrast to today’s kinetic warriors, tomorrow’s cyber-warriors must possess intuitive minds and be comfortable with intellectual creativity. Future cyber-strategists must be persons of ‘Aristotelian whole’—at once masters of technology and philosophers of the Hegelian dialectic. As Hall puts it:

Knowledge war is different than traditional, attrition-based warfare because it requires far greater intellectual skills, a broader understanding of the social, political, economic, financial, informational and military spheres of human intercourse, and the existence of a far greater symbiotic relationship between man and machine.

BOOK REVIEW

John Lewis Gaddis, *Surprise, Security and the American Experience*, Harvard University Press, Cambridge, MA, 2004, 150pp.

Reviewed by Russell Parkin, Senior Research Fellow at the Land Warfare Studies Centre and coeditor of the AAJ.

At the end of the Cold War, the American scholar, Walter Russell Meade, wrote a book entitled *Special Providence: American Foreign Policy and How it Changed the World*. A key thesis of Meade's book was based on the identification of four traditions in American foreign policy. The five short essays contained in historian John Lewis Gaddis's *Surprise, Security and the American Experience* seek to provide a similar context for the Bush Administration's post-11 September strategy of pre-emption by putting it into an historical perspective. Gaddis is one of the most important American scholars of the Cold War period. In these essays he turns his talents to demonstrating that the key ideas of the Bush security policy—pre-emption, unilateralism and hegemony—echo significant themes in the history of American grand strategy.

After the British burnt Washington during the War of 1812, US Secretary of State, John Quincy Adams, established these same three principles in order to ensure the security of the young American republic. Pre-emption called for rapid responses to attacks on the United States and its national interests; unilateralism ensured that the United States would not be encumbered by alliances that would restrict its ability to act in accordance with its interests; and hegemony guaranteed that, within its sphere of influence, the United States would be able to act freely to defend its interests. Previous presidents, such as James Polk during the Mexican War and William McKinley in the Spanish-American War, stretched the limits of pre-emption. Woodrow Wilson's internationalism foundered on the unilateralism of congress, but the enormously popular Franklin D. Roosevelt was able to transform US security policy significantly by forging close alliances during World War II and fashioning multilateral postwar developments, such as the United Nations, to expand US hegemony to its current worldwide status.

Through this analysis, Gaddis provides his readers with a balanced assessment of the United States' response to 11 September. As he points out, 'September 11, 2001 was not the first time a surprise attack shattered assumptions about national security and reshaped American grand strategy. We've been there before, and have responded each time by dramatically expanding our security responsibilities.' Gaddis avoids making any judgments about the likely outcomes of the Bush grand strategy; indeed, looking forward, he raises more questions than he answers. This is a thought-provoking study by a major scholar in the field. Perhaps its greatest value is that it shows how the experiences of the past reverberate in the present and maintain their ability to influence future events profoundly.

BOOK REVIEW

Michael Evans, Russell Parkin and Alan Ryan (eds), *Future Armies, Future Challenges: Land Warfare in the Information Age*, Allen & Unwin, Sydney, 2004, paperback, 370pp.

Reviewed by Professor Jeffrey Grey, University of New South Wales at the Australian Defence Force Academy.

There is an art to editing conference proceedings, which too often when published are less than the sum of their parts. They often date quickly, and it seems strange that, in the era of the Internet, commercial publishers continue to bother with them. This volume is a refutation of that observation, not least because of the care and skill of the editors, who have ensured that the chapters were current as could be to the time of publication, and who clearly have guided the contributors to that end. The volume contains the proceedings of the 2001 Chief of Army Land Warfare Conference, and could not be more timely. It draws on writers from Australia, Britain, France and the United States, and divides neatly into three, connected sections. These deal with the changing nature of conflict, likely future challenges and recent operational lessons.

There is much here to interest readers of the *Australian Army Journal*, the chapters by Ralph Peters on the West's future foes and Roger Spiller on operations in urban areas being especially interesting. Many will probably turn most readily to the chapters that address specifically Australian concerns, and here again there is much to consider. The contributions by Hugh Smith, Alan Ryan and Michael Evans stand out from a strong field.

The first looks at the Issues and problems currently facing the Australian Defence Force (ADF), and notes the very different cultural environment in which it must operate today compared with that which faced earlier generations of Australians. Put simply, Australia is a different place than it was forty years ago, but in many respects the ADF continues to reflect that earlier era of Australia and notes the need to reinforce notions of professionalism, not least through a greater emphasis on higher education for the officer corps, and by implication the need for the ADF to

take professional military education as seriously as it takes training. At present this is not the case. The chapter also includes an excellent analysis of the former Ready Reserve (RRes) scheme, abolished in 1996 with too little thought and understanding of its potential in an era of demographic and economic change, and of consecutive, multiple and simultaneous ADF deployments.

Alan Ryan's chapter on coalition operations draws on recent ADF experience in Cambodia and East Timor, and is likewise concerned with cultural issues and their implications for the success or otherwise of operating in a multinational military environment. These challenges are much more acute for armies than for air or naval forces because of the dominance of the human factor over the platform in the land environment. In the conclusion to the book, which he also wrote, Ryan notes succinctly on this theme that 'high explosive, however smartly delivered, is a poor tool for resolving those cases of conflict that reside in the human heart'. The continuing requirement for sufficient numbers of highly trained and educated, and properly equipped, ground forces within the ADF is a point that cannot be made often enough in the face of a strategic argument that has long since passed into the realm of theology.

A short summary will not do justice to Michael Evans's chapter on the changes in the security environment that have taken place since the early 1990s, resulting in what he terms 'a globalised yet deeply fragmented world'. For my money Evans is the most interesting, and certainly the most erudite writer on defence matters currently publishing in this country. His prose has a force and an elegance largely lacking in the political scientists and defence commentators elsewhere. Evans's writings are generally a model for Hugh Smith's broader point about the need to encourage greater intellectual rigour in defence debates in Australia, both those in public and, even more so, those conducted within Defence itself.

The book is a valuable and timely contribution to the public debate of defence issues. It is essential reading for any policy maker seeking to contribute to the formulation of Australian defence policy and strategy. *Future Armies, Future Challenges* is also essential reading for anyone genuinely interested in the intellectual and professional foundations for configuring and sustaining the Australian Army.

BOOK REVIEW

David Martin Jones (ed.), *Globalisation and the New Terror: The Asia Pacific Dimension*, Edward Elgar, Cheltenham, UK, 2004, xv + 316pp.

Reviewed by Michael Evans, Head of the Land Warfare Studies Centre and coeditor of the *AAJ*.

The study of terrorism is a field that often lends itself to sensationalism and instant books based on breathless narrative and journalistic impression. None of these features characterises *Globalisation and the New Terror*. On the contrary, the latter book is one of a number of considered studies to emerge in the wake of the tragedy of 11 September 2001. These studies include Walter Laqueur's *No End to War: Terrorism in the Twenty-First Century*, Paul Berman's meditation on Islamic fascism, *Terror and Liberalism*—both published last year—and Lee Harris's *Civilization and its Enemies* (2004).

Composed of essays from a 2002 conference sponsored by the University of Tasmania, the Commonwealth Attorney-General's Office and the Standing Advisory Committee on Commonwealth/State Cooperation for Protection Against Violence, *Globalisation and Terror* explores the anatomy of millennial New Terrorism. Collectively the seventeen essays in this timely and informative book highlight the rise of mass-casualty terrorism as part of what US Secretary of State, Madeleine Albright, once called 'the war of the future'. In the 20th century, most terrorist groups sought 'the oxygen of publicity'. They wanted millions watching their propaganda by deed; they did not want, nor did they possess the means, to kill thousands. Moreover, many 20th-century terrorist groups—from the Croatian Ustasha of the 1930s to the German Red Army Faction of the 1970s to the Basque ETA of the 1980s—were secular in their aims and ideology.

In the wake of the end of the Cold War, all of these dynamics have changed. In the early 21st century, terrorism has become more religious and millenarian in its character. Twentieth-century counter-terrorism concentrated on prosecution and punishment; today in the new millennium we must focus on prevention,

containment and response. Moreover, at the beginning of the 21st century, over half of the FBI's list of most dangerous groups are overtly religious and employ the strategy of suicide bombing. The activities of such groups, which range from al-Qa'ida to the Chechens, are assisted by the spread of global information technology and the interconnected character of modern society. As David Martin Jones and Mike Smith note in their introduction, a worldwide terrorist network such as al-Qa'ida functions as 'a de-territorialised franchising agency for jihadist activity on a global basis—a Kentucky Fried Chicken of Global Terror'.

The range of the book is extensive. Australian security analyst, Grant Wardlaw, explores the character of anti-globalisation protest. The leading terrorist specialist, Rohan Gunaratna, examines the networked and de-territorialised threat of al-Qa'ida and warns that defeating such a movement will require multi-agency, multi-dimensional responses by democratic states. The ANU's Clive Williams provides a thumbnail sketch of the ideology of Islamic extremism, particularly the Wahabbist variation. Moving from theory to practice, other essays examine the weaponry and asymmetric strategy of modern terrorism. In his contribution, Angus Muir analyses the evolution of the use of the bomb in terrorist tactics, a methodology that has given the world the suicide cadre. Gavin Cameron and Francois Haut assess the Chemical, Biological, Radiological and Nuclear (CBRN) threat while the essays of Kevin O'Brien and Michele Zanini explore the nature of information-age terrorism, focusing on 'netwars' and cyber-terrorism.

Part III of the book will be of particular interest to Australian scholars and security practitioners since it concentrates on the implications of global terrorism for the Asia-Pacific. In this section it is the infrastructure of regional terror that is brought into the academic spotlight. Professor James Cotton analyses South-East Asia as the 'second front' in the global campaign against terrorism; Andrew Tan scrutinises armed Muslim separatism in regional trouble-spots such as Aceh, Mindanao and Pattani. Former Australian Federal Police officer, John MacFarlane, explores the nexus between organised crime and terrorism, focusing on such groups as Abu Sayaf that straddle a frontier between terrorism and criminality. The focus on the relationship between terrorism and crime is continued by the RAND analyst, Peter Chalk, who provides a useful assessment of the heroin trade as a manifestation of both transnational crime and the rise of the phenomenon of narco-terrorism in South-East Asia.

The book's final section highlights the problem of devising suitable legal responses by Western countries to global terrorism. ASIO chief, Dennis Richardson, provides a useful overview of the way in which Australia's intelligence agencies have braced to meet the new challenge. Finally, former UN Ambassador, Richard Butler, presents the case for a counter-terrorist strategy based on improved global relations, counter-proliferation and an appreciation of the use of information technologies.

For this reviewer, Part I of this book, which concentrates on ideology and the problem of theorising about the New Terror, represents the most interesting aspects of *Globalisation and the New Terror*. In the West, there is arguably too much concentration on the instrumental character of mass-casualty terrorism, when our real need is to understand the existentialist Islamist ideology that motivates young men to fly jetliners into skyscrapers, killing thousands of innocents. Here the essays by Paul Schulte, Rohan Gunaratna and Clive Williams provide some useful insights. In particular, British analyst, Schulte, points out that in some respects the War on Terror represents a struggle between an affluent, post-heroic and ageing West and an angry, poor, young and belligerent South and East.

The subtext of these essays suggests that, if we seek to eradicate Islamo-fascism's suicide soldiers, we need to study the works of the Egyptian, Sayyid Qutb, the key theologian of relentless global jihad. Qutb, who was executed by Nasser in 1966, believed that the West's tradition of freedom and rationality derived from classical Greece was the mortal enemy of Islam based on faith and eternal truth, and must be resisted by permanent jihad. It is Qutb's ideology that fuels what Schulte calls 'megalomaniac hyper-terrorism', based on religious fanaticism, internationalism and modern network-centricity.

On one level, al-Qa'ida emerges as a protest against modernity, a global Mahdist movement prepared to kill its enemies anywhere and everywhere. Defeating such a ruthless movement requires a sophisticated response, ranging from dissuasion through deterrence and detection to defence. For the West to triumph in what will be a long twilight struggle, we will need national resilience, careful risk management, political resolve and above all judgment and skill in the application of force. The sad truth that is revealed by the essays in this important study is that our interlinked cosmopolitan societies make poor fortresses against global, mass-casualty terrorism. As Schulte notes, in order to defend the heritage of Athens, symbolised by our cities and urban civilisation, we may have to build modern versions of the famous Long Walls. We may also have to accept that defending our modern Athens may mean that increasingly we have to adopt the martial values of Sparta.

BOOK REVIEW

Tom Frame, *Living by the Sword? The Ethics of Armed Intervention*, UNSW Press, Sydney, 2004, 278pp.

Reviewed by Christian Enemark, Strategic and Defence Studies Centre, Australian National University.

In the Garden of Gethsemane, Jesus admonished his disciple Peter: ‘All who live by the sword will die by the sword’. For centuries, theologians have debated what Jesus really meant by this statement in order to determine the moral status of those who engage in armed conflict. Tom Frame’s *Living by the Sword?*, written in the aftermath of the 2003 invasion of Iraq, is a timely work that rigorously surveys the theological, ethical and legal dimensions of war.

The book is primarily a reflection on the relationship between armed conflict and Christianity, although the non-Christian reader should not feel excluded. The author deliberately appeals to reason as well as faith in his discussions of war and ethics, and he acknowledges from the outset that the Church does not come to the subject with a clear conscience or with clean hands. Frame is Anglican Bishop to the Australian Defence Force, but he also writes from the perspective of a scholar and a former naval officer. He is equally at ease with philosophy, law and politics as he is with theology. His book provides a survey of religious and secular writings on war and warriors from the time of Jesus to the 20th century and the creation of modern international law.

In an introduction that is part autobiographical, Frame describes some of the lifetime experiences that have contributed to his attitude to war: from childhood memories of Vietnam War protests to his time in the Royal Australian Navy (RAN). By the time he resigned from the RAN in late 1992 to pursue ordination, he felt drawn strongly to pacifism—the view that using armed force is morally illegitimate and practically ineffective. Nonetheless, despite his pacifist convictions, Frame was soon propelled towards a belief that armed intervention is sometimes justified. The humanitarian crises in Cambodia, Rwanda and Somalia were particular factors that wrenched him away from a doctrine of strict pacifism.

Frame prefers to speak of ‘armed intervention’ rather than ‘war’, and his first point of reference is the story in the Gospels of the Good Samaritan, who was prepared to exert every effort to aid a stricken man. In an international system built on the principle of state sovereignty, however, a heavy onus of moral proof will always be on the intervening state. Only gross violations of human rights, including ‘ethnic cleansing’ and genocide, justify armed intervention. Lesser transgressions—such as military coups, election rigging and political disenfranchisement—do not justify intervention by military force.

Frame identifies three principal Christian positions taken on armed conflict and military service since the time of Jesus: pacifism, just war and militarism. He dismisses the third as ethically unviable. The militarist view is that of the strong necessarily triumphing over the weak. It finds religious embodiment in the crusade: the notion that God has given His servants the physical means to destroy His enemies. For Frame, the only two positions open to a Christian are pacifism and just war. In providing a detailed exposition of each position, he nevertheless questions whether either can be consistently applied, given the complexity of modern life.

Frame himself approaches the ethics of armed conflict from within the just-war tradition. St Augustine, a fourth-century bishop, wrote that a just war must meet certain criteria. Of these criteria, the most important are that war is a last resort; that the cause for war is just; and that the means employed in pursuit of that cause are necessary, discriminate and proportionate. Frame classifies Iraq’s invasion of Kuwait in August 1990 as unjust because it was ‘an act of unprovoked aggression committed entirely for self-serving purposes’. By contrast, Australia’s 1999 intervention in East Timor scored well against the criteria for a just war. It was a last-resort measure, deploying limited means, and intended to alleviate the suffering of the East Timorese.

Frame once supported the 2003 invasion of Iraq as a just war but he has since had second thoughts. He now argues that, without the discovery of Iraqi weapons of mass destruction or links with al-Qa’ida, the just cause for invasion has collapsed. Moreover, the war was not a last resort since there was still time for containment, sanctions and inspections, and the military means brought to bear imposed a disproportionate cost in terms of lives lost and social disorder.

Frame’s discussion of the ethics of armed intervention and military service is particularly interesting when he places it in the Australian context. He provides, for example, a detailed and fascinating analysis of the Australian experience of conscription and the related issue of conscientious objection. In discussing Australia’s experiences of war, Frame notes that Australia has a tendency to exaggerate threats to its own national security and regional stability. Such an approach has often distorted assessments of whether going to war was the right course of action. Frame concludes boldly that ‘Australia has willingly and unquestioningly participated in unjust wars’, but it would be interesting to know more about his thoughts on this point.

Indeed, the only fair criticism of Frame's book might be that he does not pursue some important issues as far as he could. First, Frame gives nuclear war only passing consideration, on the grounds that it is less likely today than it was during the Cold War. However, in the post-Cold War world, the threat of nuclear attack is still a factor in strategic calculations, and ethical restraints are as important as ever. Second, the author discusses militarism only briefly as the unacceptable alternative to pacifism and just war. It would also be interesting to read his ethical critique of militarism today, especially against the background of accusations that America is pursuing a neo-conservative 'crusade' in the Middle East.

Living by the Sword? is well researched, and the author's arguments are persuasive and well reasoned. Frame is firm in his commitment to certain ethical positions, but he conscientiously canvasses opposing points of view. His book is valuable because it compels the reader to engage with the notion of justice and how it is manifested in the crucible of war.

LETTERS AND COMMENTARY

DEAR EDITORS

While reading Lieutenant Colonel David Kilcullen's interesting article 'Combined Arms and the Close Battle in Complex Terrain' in the December 2003 edition of the *AAJ*, I noticed a point that needs amplification.

Lieutenant Colonel Kilcullen states, quite correctly, that British artillery pieces never entered Basra, although mortars were employed. He is right, but it should be noted that Basra lies along a waterway that is never more than about 7 km wide. Unlike infantry mortars, field guns were not required in the Basra urban area to deliver mobile firepower. The Autumn 2003 issue of the *Journal of the Royal Artillery* reports that the whole of Basra was a Restricted Fire Area. Every fire mission had to be cleared by the British 7th Armoured Brigade fire support command centre (although it remains unclear whether this restriction was applied to the use of medium mortars).

The *Journal of the Royal Artillery* also reports that the AS90 proved to be incredibly accurate, destroying bunkers and buildings with opening rounds at converge—that is, the rounds were not adjusting. The accuracy achieved has been accredited to survey, meteorology, to 1:15 000 scale maps and to MV radar. An indicator of AS90 firepower is that a round of fire from a battery delivers 90 kg of RDX/TNT and about three times that weight of metal. Three rounds of FFE (fire for effect) can be delivered in the space of 10 seconds by AS90 and by similar modern guns that both the US and Israeli militaries currently lack. Such delivery is far quicker and more assured than munitions from 'Tac Air' or from the use of attack helicopters. In short, artillery firepower can dominate in urban areas with an acceptable risk of collateral damage. Such a capability is likely to increase in the future with the likely introduction of precision munitions with specialised effects.

Nigel Evans
Castle Hill, NSW

TO THE EDITORS

I am writing to express my concern about the edited version of my article published in the December 2003 *Australian Army Journal*. My argument was that, while there was a partial divergence between the armies of Canada and Australia during the Cold War, there has been a substantial reconvergence in the post–Cold War era. For example, both countries have contributed remarkably similar forces to a range of missions together, including Namibia, Cambodia, Mozambique, Rwanda, Somalia, East Timor, Sierra Leone and Afghanistan.

I thought that my argument for reconvergence between the Canadian and Australian armies was too diluted in the published article. Today, both Australia and Canada face similar organisational, financial, equipment and procedural challenges as junior partners in US-led coalition operations in the Middle East (in Iraq and Afghanistan respectively) while their navies and air forces still work alongside one another in the same region. Furthermore, conceivably both countries could have committed forces alongside each other in Kuwait and Iraq in 1990 and again in 2003, if their respective policies had only slightly varied from actual outcomes.

The point I was trying to make was that we should seriously rethink the nature of our military-to-military relationship with the Canadians because there are so many similarities that present cooperative synergies for force structure development and prospective coalition operations. After all, both Canada and Australia remain equidistant to the north-eastern Asian trouble-spots. Both states remain seriously engaged in the Middle East and both nations have been most effective in battle when they have worked together—at Amiens in August 1918 and in Korea at the Battle of Kapyong in April 1951. While geographically distant from one another, Canada and Australia are ‘strategic cousins’, although not quite siblings. Today, more than ever, and with the significance of NATO in decline for Canada, Canadians are looking to Australia in general and to the Australian Defence Force in particular to serve as a model and partner in order to reinvigorate their own military forces.

Lieutenant Colonel John Blaxland
Canberra, ACT

THE EDITORS’ REPLY

The content of each edition of the *AAJ* is considered and approved by the Editorial Advisory Board in consultation with the Editors. During the editing process, every effort is made to cooperate with individual contributors in order to ensure that their expectations match the requirements of the journal. The *AAJ* reserves the right to edit submissions in order to meet space limitations and to conform to the journal’s style, format and international standards of publication.

TO THE EDITORS

I was much taken with Major Robert Worswick's excellent article, 'New Strategy for New Times: The Failings of Defence of Australia', published in the December 2003 issue of the *AAJ*. Excluding the political elements of the Defence of Australia (DOA) credo, I could never understand the Defence establishment's infatuation with the doctrine. As Major Worswick points out, DOA involved us in committing almost the totality of our military resources to dealing with our least likely strategic problem.

More importantly, no-one with any knowledge of Australia's strategic history could have believed in DOA as a credible security strategy. In every war and crisis, Australian forces have deployed away from home because it has always been the case that our interests rather than our territory have been at stake. It was our persistent failure over a century or more to define, or even discuss in public, those interests that led us down the dead end of DOA doctrine. Of course, DOA has always had its protagonists. Indeed, the Army's enthusiasm for DOA long predated Paul Dibb in the 1980s and had an important underpinning in the 1920 Senior Officers' Conference.

The doctrine of DOA was given new life by the loss of South Vietnam in the 1970s, and as it was formalised during the 1980s, its principles came close to disrupting the ANZUS alliance. From my personal knowledge, I am aware that the Reagan Administration in 1986 was in two minds about DOA, given what the Americans at the time considered to be its apparent abandonment of alliance obligations. The State Department tolerated DOA; the Pentagon, on the other hand, argued that the alliance and DOA could not comfortably coexist. In the event, the AUSMIN Conference of August 1986 in Washington saw the visiting Australian ministers commit themselves—probably under some pressure—to maintaining all Australian obligations under ANZUS. The only real puzzle in the dead end of DOA is why so many Australian policy-makers took the better part of two decades to look upon the world as it is, rather than as they would like it to be.

Michael O'Connor
Victoria

TO THE EDITORS

In the December issue of the 2003 *AAJ*, Lieutenant Colonel David Kilcullen presented an interesting and valuable essay on infantry combat in complex terrain as fought by a company down to section level. The article highlights the Australian Army's need for an improved combined-arms capability.

There are, however, several issues raised in the article that are open to differing interpretations. The difference between manoeuvre and movement is one of these issues. Manoeuvre involves the positioning of forces by a commander in order that they can effectively conduct a battle, campaign or war. In battle, we sometimes conduct fire in movement in order to allow us to manoeuvre subsequently. Similarly, we sometimes manoeuvre in order to be able to conduct fire in movement. The important point to note here is that it is the forces in contact that conduct fire in movement while the forces not in contact carry out manoeuvre.

Lieutenant Colonel Kilcullen states that, when fighting in complex terrain, points rather than lines seem to be of more tactical importance. He also argues that ‘in the close fight, soldiers tend to operate in small semi-autonomous teams that flock or swarm’. Yet, it appears to me that, at the section level, close battle is nearly always point-suppressive and that, mathematically speaking, a line is nothing more than a number of connected points. The article appears to suggest that, under point or nodal attack, manoeuvre supports fire, with soldiers manoeuvring in order to generate effective fire. Is it not perhaps more accurate to state that troops in contact always move to a position where they can generate the most effective fire? After all, movement and fire have a reciprocal relationship.

Finally, in his hypothetical infantry company attack on a village defended by a platoon, Lieutenant Colonel Kilcullen suggests that the tactical sequence should be one of investment [cordon off at a distance], followed by a break-in, infiltration, assault and exploitation. I would have thought that, given this situation, investment, in this sense, is manoeuvre, while break-in, infiltration, firefight and assault are all part of fire and movement?

Brigadier Brian Cooper (Retd)
Qld

THE AUTHOR REPLIES

For a whole generation of Australian Army officers, the ideas of manoeuvre, movement, speed and fluidity have positive connotations. Conversely, ‘firepower’, ‘attrition’ and ‘suppression’ have negative connotations. Army officers often see attrition as the evil twin of manoeuvre. Under this paradigm, a good commander is one that applies fire to enable manoeuvre (out of contact) or movement (in contact).

In complex terrain, however, manoeuvre often supports fire. We manoeuvre (out of contact) to commence combat under the most favourable circumstances—hence the relevance of the investment described in the hypothetical company attack in my article. We move (in contact) in order to position ourselves better for the successful delivery of fires. As precision weapons and situational awareness improve, combat

in complex terrain is increasingly about the application of highly accurate firepower that is delivered from relatively static positions. For instance, in the battle of Basra, there were no riflemen at all in the British section organisation, yet every soldier carried what would (in Australian doctrine) be considered a ‘fire support’ weapon. The fighting by the British in Basra, using small semi-autonomous teams is rated by many observers as being among the most successful actions of the Iraq War.

Brigadier Cooper’s comment about points and lines perhaps reflects an era in the 1960s and early 1970s when combat experience was widespread in the Australian Army. Today, actual combat experience (as distinct from operational experience) is extremely rare. The point made by Brigadier Cooper in his letter that ‘troops in contact always move to a position where they can generate the most effective fire’ is a reflection of how matters should be, and perhaps were, during and after the Vietnam War. In contemporary conditions, inexperienced troops in contact, unless they are trained otherwise, tend to move in straight lines, maintaining alignment and applying linear control measures. The data on the performance of units in the field at various Combat Training Centres supports this conclusion.

My argument is that manoeuvre primarily happens around the flanks of the close combat battle. In the close fight itself, movement—and limited nonlinear movement at that—supports fire, and it is the precise application of direct fire that wins an encounter. Contemporary operations increasingly occur in complex, urbanised environments and our tactical commanders must grasp this reality and learn to apply the appropriate tactics.

Lieutenant Colonel David Kilcullen
 Army Headquarters
 Canberra

TO THE EDITORS

Congratulations to the *AAJ* (December 2003 issue) for publishing Michael Evans’s excellent review essay on Richard Cohen’s fascinating book, *By the Sword*. There is one aspect of both book and review, however, that requires clarification. Both Cohen’s book and, by extension, Evans’s review attribute the destruction of the Roman infantry at the battle of Adrianople in 378 AD to Visigothic cavalry using the stirrup, which enabled mounted troops to wield long swords with previously unknown efficiency. From a historical perspective, this assumption is open to question.

First, at the time of Adrianople, the cavalry stirrup was not a new invention. On the contrary, the device had been used by the Sarmatians and Alans for some four centuries before the battle of Adrianople, and was, in fact, well known to the Romans through their long frontier struggles against these nomadic horsemen.

Indeed, 8000 stirrup-equipped Sarmatian heavy cavalry were used by the Roman army as *auxilia* in 175 AD. Furthermore, documentary evidence suggests that Sarmatian cavalry were stationed in Egypt and Britain probably until the early 5th century.

The Romans appear to have made a deliberate choice not to use the stirrup in their approach to warfare. Evidence suggests that the later Roman military found the Celtic horned saddle (adopted from another barbarian enemy) to be adequate for their cavalry and mounted infantry operations. The effectiveness of the four-horned saddle in cavalry operations has only been realised by modern scholars during the past two decades following the discovery of bronze and leather saddle remains at archaeological sites in Britain, Germany and the Netherlands.

Moreover, Adrianople was not simply a clash between Roman short sword and barbarian long sword. The Roman Army destroyed at Adrianople was no longer generally employing the short, thrusting blade introduced into the Roman military during the Republican period as the *gladius hispaniensis* (Spanish short sword). Archaeological evidence suggests that, after about 150 AD, the longer *spatha*, a Celtic slashing sword originally employed by the Roman cavalry, began gradually to replace the thrusting *gladius*. By the time of Adrianople, the employment of physically larger Gallo-Roman and Germanic troops had led to the use of longer and heavier swords throughout the Roman Army.

The outcome of the battle of Adrianople is not so much a case of the triumph of stirrup and long sword as a case of poor Roman generalship. The Emperor, Valens, foolishly allowed the Roman legions to be defeated in detail. His pre-battle reconnaissance was poor, failing to locate a large enemy cavalry force; he selected a poor site for the battle and did not consolidate his forces before hostilities commenced. Finally, Valens allowed his infantry to be hemmed in by the enemy, thus preventing the Roman infantry from deploying in formation to defend themselves against the Visigothic cavalry. These basic tactical errors allowed the mounted Visigoths to attack Valens's left flank before it had fully extended and after the Roman cavalry on the right flank had been routed. Moreover, had Valens waited for his ally, Gratian, to arrive with his Gallic reinforcements, the Visigoths would have been outnumbered and perhaps outfought. Victory may have gone the other way and the stirrup would not have been 'invented' at the battle of Adrianople.

Lieutenant Commander Glenn Kerr

Sea Power Centre

Royal Australian Navy

AWARDS

We are pleased to announce that Dr Michael Evans, coeditor of the *Australian Army Journal* and Head of the Land Warfare Studies Centre, has won the Hugh G. Nott Award for the best article published in the United States *Naval War College Review* for 2003. The *Naval War College Review* is one of the premier publications in the United States in the area of military strategy. The prize for the best article is awarded annually by the Naval War College Foundation in memory of Captain Hugh G. Nott, US Navy, who made major contributions to the academic and research life of the Naval War College over a period of ten years.

Dr Evans's article, 'From Kadesh to Kandahar: Military Theory and the Future of War', was originally written as a paper for the 2002 Chief of Army Exercise. The article examines the transformation of military conflict since the end of the Cold War, focusing on the fragmentation of the international system, the diffusion of modes of conflict and the formulation of military theory. The article analyses contemporary ideas about warfare, the role of networks and the relationship between state-based conflict and societal security. Dr Evans also examines the growing void in clear distinctions between conventional and unconventional warfare, and makes a tentative analysis of battlespace conditions in 2015. The article is currently used in national security studies courses throughout the United States.

In his letter to Dr Evans, the President of the US Naval War College, Rear Admiral R. A. Route states:

It is my pleasure to inform you that your article in the Summer 2003 issue 'From Kadesh to Kandahar: Military Theory and the Future of War' has been selected as the winner of the Hugh G. Nott Prize for the 2003 publishing year. The balance and analytical power of your article has cast valuable light on events since it was published. Our selection committee was unanimous in its choice as this year's winner.

Dr Evans is the first winner of this prize in this country, and it is an honour for the Australian Army and for the Land Warfare Studies Centre that an Australian has won it.

Russell Parkin

Senior Research Fellow, Land Warfare Studies Centre

NOTES FOR CONTRIBUTORS

The editors of the *Australian Army Journal* welcome submissions from any source. Two prime criteria for publication are an article's standard of written English expression and its relevance to the Australian profession of arms. The journal will accept letters, feature articles, review essays, e-mails and contributions to the *Point Blank* and *Insights* sections. As a general guide on length, letters should not exceed 500 words; articles and review essays should be between 3000 and 6000 words, and contributions to the *Insights* section should be no more than 1500 words. The *Insights* section provides authors with the opportunity to write brief, specific essays relating to their own experiences of service. Readers should note that articles written in service essay format are discouraged, since they are not generally suitable for publication.

Each manuscript should be sent by e-mail to <army.journal@defence.gov.au>, or sent printed in duplicate together with a disk to the editors. Articles should be written in Microsoft Word, be one-and-a-half spaced, use 12-point font in Times New Roman and have a 2.5 cm margin on all sides. Submissions should include the author's full name and title; current posting, position or institutional affiliation; full address and contact information (preferably including an e-mail address); and a brief, one-paragraph biographical description.

The *Australian Army Journal* reserves the right to edit contributions in order to meet space limitations and to conform to the journal's style and format.

GENERAL STYLE

All sources cited as evidence should be fully and accurately referenced in endnotes (not footnotes). Books cited should contain the author's name, the title, the publisher, the place of publication, the year and the page reference. This issue of the journal contains examples of the appropriate style for referencing.

When using quotations, the punctuation, capitalisation and spelling of the source document should be followed. Single quotation marks should be used, with double quotation marks only for quotations within quotations. Quotations of thirty words or more should be indented as a separate block of text without quotation marks. Quotations should be cited in support of an argument, not as authoritative statements.

NOTES FOR CONTRIBUTORS

Numbers should be spelt out up to ninety-nine, except in the case of percentages, where arabic numerals should be used (and *per cent* should always be spelt out). All manuscripts should be paginated, and the use of abbreviations, acronyms and jargon kept to a minimum.

BIOGRAPHIES

Authors submitting articles for inclusion in the journal should also attach a current biography. This should be a brief, concise paragraph, whose length should not exceed eight lines. The biography is to include the contributor's full name and title, a brief summary of current or previous service history (if applicable) and details of educational qualifications. Contributors outside the services should identify the institution they represent. Any other information considered relevant—for example, source documentation for those articles reprinted from another publication—should also be included.