

Land Warfare Studies Centre

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**Professional Mastery:
The Human Dimension of Warfighting Capability
for the Army-After-Next**

by

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and
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Lieutenant Colonel Greg de Somer graduated from the Officer Cadet School, Portsea, in 1984 and was commissioned into the Royal Australian Infantry Corps. His subsequent military career has involved a wide range of regimental, staff and instructional appointments, and extensive experience (three postings) in special forces. His most recent regimental posting was Officer Commanding 3 SAS Squadron, The Special Air Service Regiment in 1993–94. In 1996–97 he was a tactics instructor and team leader at Tactics Wing at the Land Warfare Centre, Canungra. In 1998 he was the Chief of Army Visiting Fellow at the Asia–Australia Institute, University of New South Wales. Lieutenant Colonel de Somer is currently posted to the Army's 'think tank', the Land Warfare Studies Centre, as a Senior Research Fellow.

His overseas service includes a posting in 1991–92 to the United Kingdom at the Directorate of Special Forces and SAS Group.

Lieutenant Colonel de Somer holds a Bachelor of Economics (1980) and a Bachelor of Laws (1982), both from the University of Sydney; a Practical Legal Training Certificate from the New South Wales College of Law (1983); a Graduate Diploma of Defence

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His Masters sub-thesis, 'China's Approach to Nuclear Arms Control in the Post-Cold War Era', attracted significant professional and academic interest. Lieutenant Colonel de Somer has been a regular contributor to the *Australian Defence Force Journal*.

Major David John Schmidtchen joined the Australian Army as a military psychologist in 1989, after completing a Bachelor of Science (Honours) at the University of Newcastle, New South Wales.

He was initially employed in military selection, assessment and clinical counselling in support of diverse and isolated military populations in western Queensland and the Northern Territory. He completed a Graduate Diploma in Human Resource Management at the University of Southern Queensland in 1994.

On promotion to Major in 1995 he was appointed as the research officer at Headquarters Training Command where he was responsible for the evaluation of Army-wide training and education programs. He represented the Army on the Technical Co-operation Program (Training Technology), in which he was the focus officer for international collaborative research conducted into the preparation and training for peace operations. He was also an adviser to an international research project in the Human Resources panel of the same program.

In 1996, Major Schmidtchen was awarded a Defence Fellowship to conduct a research project examining the human resource development issues associated with preparing Australian Defence

Force (ADF) personnel for peace operations. The Defence Fellowship forms the basis of a Doctor of Philosophy that was awarded by Macquarie University in 1998.

He was appointed as the Senior Psychologist at 1 Psychology Unit, Randwick, New South Wales, in 1997. In this role Major Schmidtchen was responsible for developing and implementing policy on the provision of psychological support, developing and training field psychologists, and debriefing personnel returning from operational duty overseas.

In 1998, Major Schmidtchen was posted to the Centre for Command Studies, Australian Army Command and Staff College. He supervised a leadership doctrine writing project team and conducted research into the current state of Army leadership. He lectured at the college and provided academic guidance to students on leadership and human-resource development subjects. In 1999 he joined the Officer Professional Effectiveness Review for the Army (Project OPERA) as the research officer.

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ABSTRACT

The Australian Army recognises that organisations that excel in the future will be those that discover how to tap people's commitment and capacity to learn at all levels. The aim of this paper is to discuss the concept of professional mastery and its application to the Army-After-Next and to leadership development for the Australian Army.

The paper describes professional mastery by developing an integrated model of the concepts underlying the intellectual and moral components of warfighting capability. The paper provides a framework for understanding the dynamic relationship between the individual and the organisation, and how these combine as a system to deliver the human dimension of warfighting capability. The conclusions drawn in the paper attempt to bridge the gap between enhancing individual performance and building effective organisations.

The focus of professional mastery is people. The aim is to sharpen their professional judgment through challenge and to increase the mastery of the military art through experience. Professional mastery also seeks to build high-performance organisations at all levels, that is, well-led organisations that are continually and dynamically adjusting to the demands of the external environment. One of the positions advocated in this paper is that the principles of leadership do not change, only the conditions in which they are applied. It is also a contention that leadership lessons learnt from historical analysis will continue to be a hallmark for future leadership and professional mastery.

The topic is timely and relevant to the Australian Army. The following themes reflect the structure of the paper: *professional mastery is the human dimension of warfighting capability; professional mastery will be the single most important prerequisite for operational success in the Army-After-Next; and leadership is the key to professional mastery.*

The paper is intended to be complementary to the principles of the Army Training System and the Australian Army Leadership Model, which support the development of command, leadership and management principles.

Professional Mastery: The Human Dimension of Warfighting Capability for the Army-After-Next

In the end, technology is no more than an enabler—helpful in extending coherent, intelligent concepts of operations, but useless in forces without training or intellectual preparation.¹

Major General Robert H. Scales, Jr.

INTRODUCTION

In 1999, six years after Peter Senge's book, *The Fifth Discipline*, popularised the learning-organisation concept, there is still considerable discussion about exactly what 'learning-organisation' means.² This discussion is especially true for the Australian Army. The Army recognises that organisations that excel in the future will be those that discover how to tap people's commitment and capacity to learn at all levels.

This paper describes professional mastery by developing an integrated model of the key concepts underlying the intellectual and moral components of warfighting capability. It provides a framework for understanding the dynamic relationship between the individual and the organisation and how these combine as a system to deliver warfighting capability. It attempts to bridge

¹ Provided in a discussion with the author by Major General Robert H. Scales, Commandant U.S. Army War College, Carlisle Barracks, Pennsylvania, 27 April 1999, at the US Army Army-After-Next Spring Wargame, 25–30 April 1999.

² Peter M. Senge, *The Fifth Discipline: The Art & Practice of the Learning Organization*, Random House Australia, Sydney, 1990. Essentially, Senge's book lies somewhere between a serious research-based review and a motivational tool for popular organisation and management consumption.

the gap between enhancing individual performance and building effective organisations.³

This topic is timely and relevant to the Australian Army. This should become apparent from the following themes that form the structure for this paper:

- *Professional mastery is the human dimension of warfighting capability.*
- *Professional mastery is the single most important prerequisite for operational success in the Army-After-Next.*
- *Leadership is the key to professional mastery.*

Professional Mastery is not a new concept.⁴ Section Commanders have frequently related to the adage: *success equals preparation meeting opportunity*. The most critical ingredient for success is the human element—how well personnel adapt to challenges and their environment. Professional mastery is a systems view of the Army that offers an integrated understanding of how the individual and the organisation interact to deliver the human dimension of warfighting. It recognises the impact of human competence in the achievement of success.

³ The term ‘organisations’ in this paper refers to units, formations, staff directories, and other formal agencies that make up the Army.

⁴ Unfortunately the terms ‘mastery’ and ‘professional mastery’ are not defined under the Army Training System.

Professional mastery is defined in this paper as:

The ability to perform given competencies, the awareness of why they are being performed, the flexibility to perform them in a range of circumstances, and the self-confidence to apply them in conditions of risk and ambiguity.

It has often been said, particularly over the last few years, that the pace and complexity of change in the Army has never been greater. Similar statements have been made over the centuries. However, there is now a major difference in these scenarios: the Information Age and the impact of technology. The future battlefield will have developed capabilities, that is, increased lethality through advanced precision and discrimination; an increased ability to mass effects on the battlefield from forces in dispersed formations; and an enhanced ability to detect enemy forces while making it difficult for our own forces to be detected.

Leaders will be operating in environments that are increasingly complex, fast-paced and more lethal, and that exhibit greater ambiguity than ever before. Decisions at every level will tend to have greater consequences than they have previously. Tactical-level decisions may have operational or strategic consequences. Concurrently, a global media and audience stands ready to critique each operation. These factors and conditions, combined with the increased tempo of operations, place a greater demand on leaders. It must be realised, however, that even with improved Information Age technologies, uncertainty in operations will continue to plague leaders. The fog, friction, chance and uncertainty that Clausewitz described will continue for the foreseeable future.⁵

⁵ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret, Princeton University Press, Princeton, 1976. For a clear discussion of why Clausewitz will remain as relevant in the next

Technology will assist decision makers in gathering information and providing situational understanding, but given the environment and the nature of conflict, land force operations (both warfighting and military support operations) will not be clean and precise, and decision making will not be rendered foolproof.⁶ Decision makers, operating in complex environments that place great demands on them, even with the best information available, will still have to apply their best judgment to make an appropriate, timely decision. The adage *no amount of technology can reduce the human dimension* warrants attention and reflection.

As in the past, the future of the military profession rests on a balance between organisational stability and adaptation to rapid technological change.⁷ Future leaders must be prepared to solve or, perhaps more accurately, to confront a series of dilemmas. However, there is much that can be done now to make the Army more receptive to the opportunities offered by technologies already at hand or just over the horizon. Further research is required into factors that include societal, demographic, educational, cultural, strategic and technological considerations, human resource strategies and the impact that they will all have on professional mastery.

It will be no surprise to any parent who has watched their school-age children ‘surf the net’ that Information Age technology has jolted their culture, promoting access to ideas and immediacy to

century as has been in this century, see Alan Beyerchen, ‘Clausewitz, Non-Linearity, and the Unpredictability of War’, *International Security*, Winter 1992/1993.

⁶ Martin Van Creveld, *Command in War*, Harvard University Press, Cambridge, 1985, p. 264.

⁷ Morris Janowitz, *The Professional Soldier*, The Free Press, a division of Macmillan, Inc., New York, 1971, p. 418.

events, leading to mastery of resources. Parents are also often astounded by their children's facility with high technology. These children will be the senior leaders in the Army-After-Next of 2025. It is possible to speculate that these future leaders will not only communicate differently, but will actually think differently from their predecessors. This is because conceptual behaviour itself is evolving during the Information Age. The complexities of life in the Information Age are producing corresponding changes in the complexity of the human mind.⁸ As technology transforms the culture, it also shifts expectations and perceptions. The steady worldwide rise in intelligence test performance in technologically advanced countries provides the evidence that a threshold may have been crossed.⁹

This paper is intended to be complementary to the Army Training System¹⁰ and the Australian Army Leadership Model,¹¹ which support the development of command, leadership and management principles. The position advocated throughout this paper is that the principles of leadership do not change, only the conditions in which they are applied.¹² It is a contention of this paper that leadership lessons gleaned from historical analysis

⁸ Paul T. Harig, 'The Digital General: Reflections on Leadership in the Post-Information Age', *Parameters*, Autumn 1996, p. 134.

⁹ James Flynn, a psychologist, first demonstrated that IQ has been rising ever since testing began. The average gain is about three IQ points per decade. The most plausible explanation is based on cultural differences between successive generations.

¹⁰ Headquarters Training Command, *The Handbook of the Army Training System*, Manual of Land Warfare 3.4.2, 1997.

¹¹ Doctrine Development Wing, *The Australian Army Leadership Model and Training Notes*, Command & Staff College, Fort Queenscliff, 8 December 1998.

¹² Bernard M. Bass, *Leadership, Psychology and Organisational Behaviour*, Harper, New York, 1960.

will continue to be a hallmark for future leadership and professional mastery. It is also contended that professional mastery will be the single most important prerequisite for operational success. Given this pre-eminent importance, the concept and elements of professional mastery need to be clearly enunciated so that the Army can understand them.

This paper represents a further step in the process of developing a conceptual vision for the Australian Army in the 2025 timeframe. The aim of the paper is to develop the concept of professional mastery so that it can be applied to the Army-After-Next and leadership development for the Australian Army. Professional mastery is difficult to define; in fact, its origins, history and deprivations are confusing. This paper will attempt to alleviate some of that confusion and provide a basis for development in further studies.

An initial framework, consisting of the nature of the military profession and the changing nature of conflict, provides a backdrop to the paper. The paper then describes professional mastery by developing an integrated model of the key concepts underlying the intellectual and moral components of warfighting capability. The paper postulates that professional mastery is a very important prerequisite for operational success in the future Army, referred to as the Army-After-Next. The paper examines the concepts of the Army-After-Next that are relevant to the Australian Army. Lastly, the paper provides a snapshot of specific aspects of leadership development relevant to the Army-After-Next and professional mastery.

The Military as a Profession

Military scholars view *The Soldier and the State* by Samuel P. Huntington as a classic examination of the military as a profession.¹³ Huntington argued that modern military ‘officership’ is a profession in an analogous sense to medicine and law. The distinguishing characteristics of a profession as a special type of vocation are its expertise, responsibility and corporate nature. The command, operation and control of a human organisation whose primary function is the application of violence distinguish the profession. The military profession establishes, certifies and maintains standards of competence and appropriate conduct for its members. These standards are not limited to technical matters, but apply to ethical behaviour as well. It is the sense of duty and mission that elevates the military endeavour to the status of a profession.¹⁴

It is reasonably apparent to most observers that the military profession requires a high degree of expertise with specialised knowledge and skill.¹⁵ This expertise, acquired only by prolonged education and experience, is the basis of measuring objective standards of professional competence. Professional knowledge is essential for the achievement and manifestation of professional competence. Professional education consists of two

¹³ Samuel P. Huntington, *The Soldier and the State*, Harvard University Press, Cambridge Massachusetts, 1957.

¹⁴ James H. Toner, *True Faith and Allegiance: The Burden of Military Ethics*, University of Kentucky Press, Lexington, Kentucky, 1995, pp. 120–1.

¹⁵ These variables on military professionalism are borrowed from Amos Perlmutter, *The Military and Politics in Modern Times*, Yale University Press, New York, 1977, p. 2. See also Peter Blau and Richard Scott, *Formal Organizations*, Chandler, San Francisco, 1962, pp. 60–3.

components: the first, imparting a broad, liberal, cultural foundation; and the second, imparting the specialised skills and knowledge of the profession. The test of this professional ability is the application of technical knowledge in a human context. Also, because warfare is not frequently practised, practitioners must rely on the laboratory of past experiences to gain vicarious experience in war.

The principal responsibility of the officer is to the nation. The discharge of this responsibility requires mastery of the specialised skills and knowledge inherent to the profession. Mastery of these specialised skills entails acceptance of the responsibility. The capacity to fight and win is achieved by developing and sustaining the professional mastery of military personnel. This concept, as will be discussed later in the paper, is based on the understanding that the Army will always need people who can respond positively to change, especially when confronted with the challenge of novel problems and ambiguous contexts, which will be discussed later in the paper.

Members of the military profession share a common sense of unity and consciousness as a distinct group with a unique social responsibility. The collective sense has its origins in the discipline, commitment and training necessary for professional competence. Within the profession, levels of competence have traditionally been distinguished by a hierarchy of rank, whereas duties have been distinguished by a hierarchy of appointments. Rank inheres in the individual and reflects their professional achievement measured in terms of experience, seniority, education and ability.¹⁶

¹⁶ The rank structure of the Army (and by extension the other Services) is taken as the mechanism by which the Army is commanded. It should not be mistaken with the means of fulfilling

This paper postulates that professional mastery is a state that changes as a result of personnel responding to their environment. Professional mastery, as will be explained, is developed through the challenge of confronting novel problems or contexts, such as the changing nature of conflict.

The Changing Nature of Conflict and the Revolution in Military Affairs

During the 20th century the world has experienced the full spectrum of conflict. When the Cold War ended, the global situation became more fluid, complex and unpredictable. In the 1990s, regional wars—and especially religious and ethnic wars—have become more prevalent. Over the same period, convulsions in economic performance in many countries, and the ongoing development but uneven spread of technology further complicated the regional and global strategic situations.¹⁷

These developments suggest that conflict in the 21st century will be wide ranging. As well as experiencing a continuation of the present patterns of armed conflict, the world could witness a tendency towards greater use of asymmetric and indirect forms of warfare. These forms of warfare include terrorism, economic warfare, information warfare and environmental warfare.¹⁸

officers' career expectations. It is separate from, but related to, the career structure of the Army, which is understood to be the manner in which officers and soldiers progress through the various ranks.

¹⁷ See Lawrence Freedman, *The Revolution in Strategic Affairs*, Adelphi Paper 318, Oxford University Press for the IISS, Oxford, 1998.

¹⁸ See David Tucker, 'Fighting Barbarians', *Parameters*, vol. 28, no. 2, Summer 1998, p. 70. See also Charles J. Dunlap Jr, '21st Century Land Warfare: Four Dangerous Myths', *Parameters*, vol. 27, no. 3, Autumn 1997.

These examples all represent a shift away from the conventional, force-on-force pattern of warfare, and towards one in which civilian populations are more directly involved or targeted. These emergent forms of warfare are also ones in which traditional distinctions between military and civilian, and between combatant and noncombatant, become increasingly blurred. Related to these emergent forms of warfare, the global trend towards greater urbanisation suggests that armed conflict will also increasingly be conducted in urban environments.

Greater globalisation of political and economic interactions will tend to make future conflict more multi-party and multi-dimensional than in the past. Nevertheless, state-on-state conflict is likely to continue to be the most common form of international conflict.

Several factors will continue to transform the means, modes, environmental dimensions and purposes of war in ways that are almost impossible to predict. In particular, technological developments are continually enhancing the speed, range, stealth, precision and lethality of operations across the whole spectrum of weapons platforms and systems, and across the spectrum of conflict.

Future warfare will become both politically and militarily more complex to manage. Military-related technological developments will also have profound effects on the cost, tempo and duration of conflict; on command and control; and on the political–military interface in war. Far from allowing ‘bloodless’ or ‘surgical’ combat, the application of advanced technologies in war will result in more, rather than less, chaos, destruction, suffering and death.

However, the fundamental causes of conflict remain enduring. They are largely based on emotion—fear, greed, hatred and ambition—coupled with political, economic, religious, ethnic, nationalistic and environmental interests. Future conflicts will most likely occur along the same geopolitical and cultural fault lines that have separated civilisations for millennia.¹⁹ The fundamental character of war will also remain unchanged.

The prevailing view from Australia's strategic guidance, and confirmed by regional developments since the release of *Australia's Strategic Policy 1997*, is that the future security environment will be characterised by uncertainty and will therefore become more complex, ambiguous and unpredictable.²⁰ Modern warfare has now become so complex, and the international political and economic environment so fluid, that the Australian Army has no choice but to develop and maintain a wide range of military capabilities and professional warfighting skills, independently of any identifiable threat.

Only by unremitting effort in developing and maintaining professional capabilities and skills will the Army be ready to meet the heavy demands, unforeseeable at present, that might one day be placed upon it. It will only be by developing and maintaining relevant capabilities and skills that the Army will be able to offer the Government a range of military options for dealing with future defence contingencies.

¹⁹ For greater detail see Samuel P. Huntington, 'The Clash of Civilisations', *Foreign Affairs*, Summer 1993, p. 25.

²⁰ Paul Dibb, *The Remarking of Asia's Geopolitics*, Working Paper no. 324, Strategic and Defence Studies Centre, Canberra, April 1998.

The increasing pace of technological change offers the opportunity for dramatic increases in battlefield transparency, information handling, range, precision and agility. The key technological trends include those underpinning the Revolution in Military Affairs.²¹ The Revolution in Military Affairs is characterised by the opportunities available through advances in information collection and handling, miniaturisation of components, longer reach and greater precision in intelligence and munitions, and to a lesser extent robotics and non-lethal weapons. The potential range of technologies is vast. The Army-After-Next is likely to be light, mentally and physically agile, mobile, fast, effective, with increased strategic reach, and interoperable with allies.

The Australian Army is a creation of the Industrial Age. The Revolution in Military Affairs can be regarded as nothing more than the manifestation in military terms of the larger revolution that is sweeping mankind—the advent of the Information Age.²²

²¹ It is not the purpose of this section to deal with the extensive and profound tenets of the theory. The concept has been developed in military history since the 1950s–1970s with the development of precision munitions and off-board sensors. The United States developed concepts evolved by the Soviet military in the 1970s Military Technical Revolution (MTR). Its genesis is the hypothesis advanced by Marshal of the Soviet Union Nikolai Ogarkov that the new generation of precision weapons, coupled with new sensor and information architectures, created a reconnaissance–strike complex capable of generating discontinuous change in warfare, a revolution in military affairs.

²² For further analysis on the developing concept of the Revolution in Military Affairs, see Eliot Cohen, ‘A Revolution in Warfare’, *Foreign Affairs*, vol. 76, no. 2, March–April 1996, pp. 37–54. See also Colin S. Gray, *The American Revolution in Military Affairs:*

It is vital that the Army understands the challenges of the Revolution in Military Affairs and that it achieves mastery of warfare in the Information Age. In all the challenges of the Information Age, the impact of new technologies will have a human aspect. As the Chief of Army stated in an address to the National Press Club, Canberra, in April 1999:

Conflict and war are uniquely human activities; and the decisive battleground is still the human mind. Romantic notions of humans being replaced by ‘smart’ weapons are just that; at the end of the day, it is the quality of our people and our leadership that will decide the issue.

And that is why, in addition to technology—and maybe of even greater importance—is our need to invest in the other basic component of the knowledge edge; and that is the development of the Army’s intellectual capital.²³

The application of technology by itself does not constitute a Revolution in Military Affairs. New weapon systems and technologies have sometimes caused military leaders and theorists to make errors in judgment, misreading the significance of new technologies and ultimately producing disappointing results.²⁴ There is a need to balance not exaggerating the significance of technological innovations—including the

An Interim Assessment, Strategic and Combat Studies Institute, Occasional Paper no. 28, Camberley, 1997.

²³ Lieutenant General F. J. Hickling, Chief of Army’s Address to the National Press Club, Canberra, 14 April 1999.

²⁴ For an overview of a previously failed technology-driven Revolution in Military Affairs, see A. J. Bacevich, *The Pentomic Era; The U.S. Army between Korea and Vietnam*, National Defense University Press, Washington, 1986. See also Norman F. Dixon, *On the Psychology of Military Incompetence*, Futura Publications, London, 1976.

potential extraordinary, near-term advantages and capabilities afforded—with the risks and vulnerabilities exposed.²⁵ Although the exploitation of information technologies will markedly improve combat capabilities for the Australian Army, it will not be a substitute for good judgment.²⁶ It should not be assumed that forces using high-technology, precision, stand-off weapon systems would meet all the demands across the conflict spectrum.²⁷ The view that technology will allow absolute knowledge and predictability is one that dismisses not only history, but science as well. Technology is only an enabler. It is only one of many influences on the conduct and outcome of military operations.

Summary Judgments

Future warfare is likely to remain diverse and complex. The enduring features of war in combination with the likely trends in the international system and the continuing advances in technology will characterise future warfare. The major influences on future conflict will require land forces to be knowledgeable, modular, versatile, adaptable, sustainable, and tailored to specific operational demands. Future operations will take place within a multi-dimensional battlespace that incorporates the physical, temporal and mental dimensions.²⁸

²⁵ Robert H. Scales, 'Preparing for War in the 21st Century', *Parameters*, Autumn, 1997, pp. 4–14.

²⁶ Lawrence Freedman, 'The Changing Forms of Military Conflict', *Survival*, vol. 40, no. 4, Winter 1998–99, p. 52.

²⁷ For a sceptical look at the current fascination, see Michael Dornheim, 'Bombs Still Beat Bytes', *Aviation Week and Space Technology*, 19 January 1998, p. 60.

²⁸ This is drawn from Future Land Warfare Branch, Army Headquarters, Future Land Warfare Handbook, draft version as at 23 July 1999, p. 14. The physical dimension incorporates the land,

Forces operating within the multi-dimensional battlespace are likely to be highly integrated; characterised by their tactical agility, mission modularity and adaptability; and capable of applying high-velocity, precise and increasingly long-range lethality. The development of these capabilities must be constrained by their relevance to affordability, deployability, interoperability, sustainability, and Australia's strategic circumstances. The Army's process of continuous modernisation envisages that future land forces of the Army-After-Next will utilise advances in technology and professional mastery to exploit the multi-dimensional battlespace.

The concepts of professional mastery and the Army-After-Next need to be further defined, investigated and discussed as part of the iterative process to identify guidelines for the future. This investigation is crucial to support the contention made in the forthcoming Future Land Warfare Handbook that professional mastery will remain the single most important prerequisite for operational success in the Army-After-Next.

sea, and aerospace environments within the medium of the electromagnetic spectrum. The temporal dimension is defined by the impact of time on the conduct of operations. The mental dimension is defined by the psychological impact on the conduct of operations.

PROFESSIONAL MASTERY

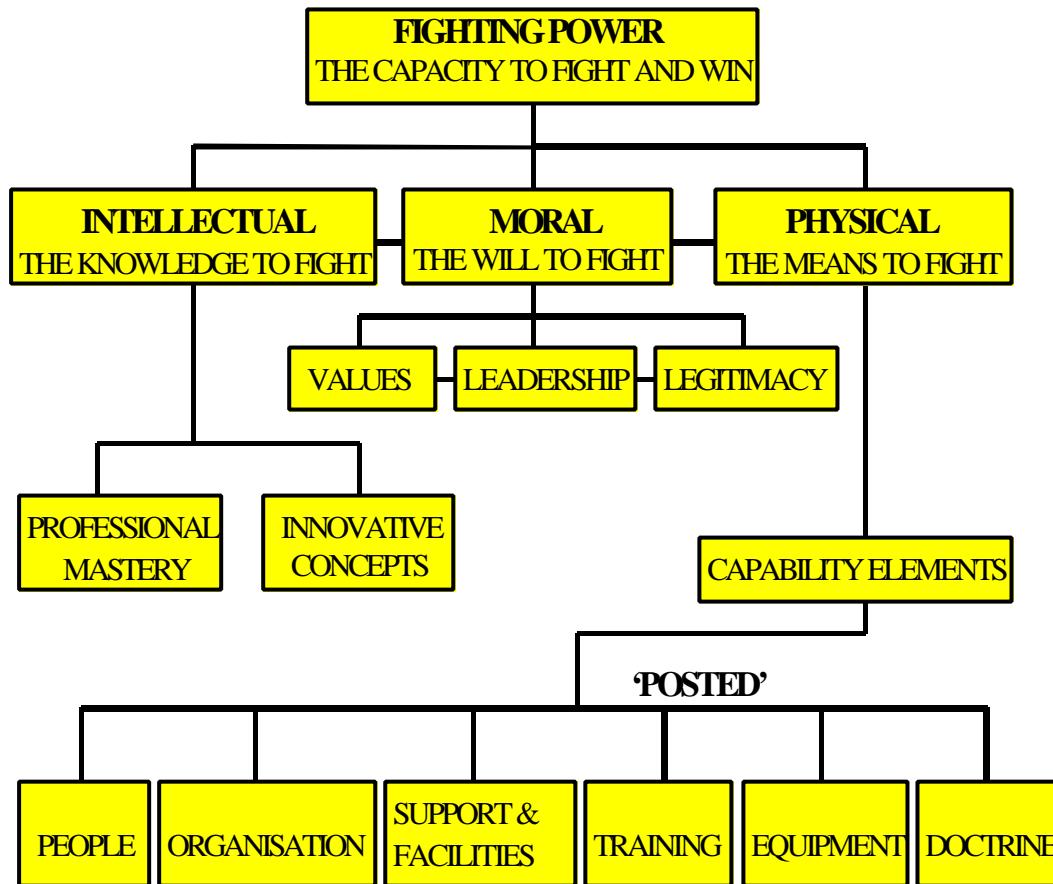
Wars are essentially moral conflicts where victory is the corollary of the collapse of the enemy's will. 'Fighting power' is the term used to describe the Army's capacity to fight and win.²⁹ Land forces generate fighting power through the combination of three components. The intellectual component provides the knowledge to fight; the moral component provides the will to fight; and the physical component provides the means to fight. These three components are interdependent.

The components of fighting power as described in *The Fundamentals of Land Warfare*³⁰ are represented in Figure 1. The impression given throughout *The Fundamentals of Land Warfare* is that these three components should be understood in isolation and that, once combined, they produce fighting power. This is an artificial divide that hinders a more complete and accurate understanding of the relationships between the concepts.³¹

²⁹ Australian Army, Land Warfare Doctrine 1, *The Fundamentals of Land Warfare*, Combined Arms Training and Development Centre, Sydney, 1999.

³⁰ *Ibid.*

³¹ It must be borne in mind, however, that *The Fundamentals of Land Warfare* is a 'work in progress' aimed at encouraging analysis and debate prior to a refined edition being published in 2001. The intention of Army Headquarters is that the manual will be regularly reviewed and updated in order to ensure that Army remains abreast of current trends, issues and challenges.



**Figure 1: The Fundamentals of Land Warfare—
The Components of Fighting Power (POSTED)³²**

The definition of professional mastery is developed from the one proposed in the broadest of terms in *The Fundamentals of Land Warfare*. Professional Mastery was defined in that publication as:

the level of competence displayed by individuals, combat teams, headquarters, formations and units. In war, the Army's professional mastery is measured by its performance in battle.

³² The physical component of fighting power consists of the six capability elements referred to by the acronym POSTED; however, this physical component of capability includes a human dimension.

In peacetime, the Army's professional mastery is judged by how well it is prepared for the next conflict. This means that professional mastery in a peacetime Army combines high skill levels with the continuous pursuit of improvement. Professional mastery is the single most important prerequisite for operational success. It provides the basis for a learning organisation in which professional competence and confidence are essential.³³

This definition provided a significant starting point for informed discussion, development and refinement of the concept of professional mastery.

The development of this concept concentrates on the *human dimension of warfighting capability*. In professional mastery, leadership is the key environmental prerequisite. The moral component (values, leadership and legitimacy) embodies those individual and organisational characteristics that are fundamental to success. Together, the intellectual and moral components of fighting power are the *human dimension of warfighting capability*, which involves the knowledge and the will to fight and win. It also involves people. It is about how people, individually and collectively, utilise their *non-physical* resources to contribute to winning in warfighting. Investing in the human dimension of warfighting should provide the Army with a concept-led approach to fighting power, where innovative concepts guide the development and application of military capabilities to seize and retain the initiative in every undertaking.

Professional mastery is the focus for developing and delivering the intellectual component of capability, which underpins the application and management of the physical component of capability, identified by the acronym POSTED. A revised model of fighting power is depicted in Figure 2.

³³ *The Fundamentals of Land Warfare*, p. 5-3.

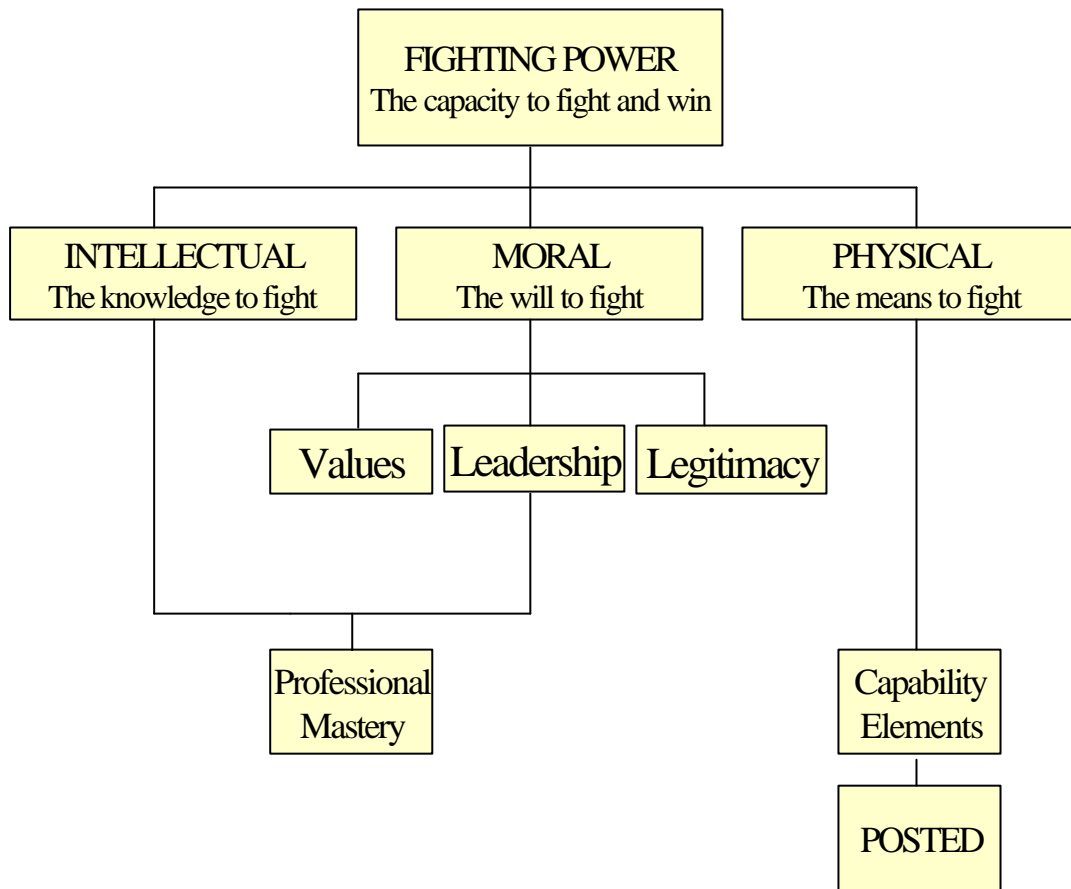


Figure 2: A Revised Model of Fighting Power

Leadership is the key to professional mastery. Leaders at all levels who understand the dynamics that govern individual and organisational performance will be able to build more effective combat teams. The combat teams that will win are those that can innovate rapidly in response to change and operate confidently when confronted with new challenges and unfamiliar problems. Successful leadership is essential to seizing and maintaining the operational initiative.

Responding to Challenge Through Creativity and Innovation

Creativity and innovation are the essence of competitive advantage and winning in warfighting.³⁴ If the Army is to be a learning organisation, it must recognise the need for innovation and the contribution it makes to improving organisational performance, that is, warfighting capability.³⁵ The challenge for the Army is to provide an environment where innovation can flourish. This does not mean that rewarding all innovative behaviour is appropriate and does not assume that innovative behaviour is always consistent with desired organisational outcomes. Innovations must be appropriate and relevant.

The start of the innovation process is the detection of a performance gap, that is, a mismatch between actual and potential performance. Identification of a performance gap may occur from the proactive observation of an individual, but it is more likely to be stimulated by internal process, equipment failure or external pressure. The majority of innovative and creative activities begin as unplanned acts in response to the challenge of a problem. The key to effective performance is the ability to identify a problem and the motivation to generate a solution. This requires people to be able to stretch their competence and knowledge and learn from their experience.

³⁴ Innovation is the product of applying intellect to problem solving. There are two broad types of innovation: innovation that modifies an existing process or product, and innovation that creates an entirely new process or product. Both make an important contribution to the performance of organisations.

³⁵ In this discussion of the Army as a learning organisation, the focus is on the organisational climate—the climate and structure that support individual self-development and collective learning.

Innovation can be small and incremental, where learning arises from the application of existing techniques. It can also result from combining existing ideas or technologies in creative ways, or through the development of entirely new ideas or technology. Understanding the nature of innovation and rewarding innovative behaviour are critical to the development of individuals and the organisation.

Innovation requires people that are capable of effectively and efficiently combining their personal resources, as well as those of the team and the organisation, to solve problems. Such a combination is achieved through the discipline of professional mastery and organisational learning.

Professional Mastery

The Australian Army has always valued people that are adaptable and flexible, that is, those that are able to deal with unfamiliar problems and ambiguity. However, adaptability and inflexibility are inherently limited because they involve re-configuring current knowledge and processes to solve new problems. Professional mastery is a much broader concept that is based on the understanding that the Army will always need to produce people that can respond positively to change, especially when confronted with novel problems, challenges and ambiguous contexts. It encompasses both individual and organisational learning.

Professional mastery involves:

- understanding that individual and collective performance are interdependent and that the relationship is mediated by the environment that leaders create;

- understanding and developing the human dimension of warfighting capability and appreciating that these elements are disproportionately important to success in warfighting;
- configuring the organisation so that all the Army's people realise their potential.

The capacity to fight and win is achieved by developing and sustaining professional mastery. The focus of professional mastery is on people. The aim is to sharpen their professional judgment through challenge and to increase the mastery of the military art through experience. However, there is also an organisational element to professional mastery. It seeks to build high-performance organisations at all levels, that is, well-led organisations, continually and dynamically adjusting to the demands of the external environment. Essentially, the Army needs leaders that continually align strategy, goals and internal operations to maximise organisational performance.

Professional mastery includes the cultivation of skills and knowledge³⁶ to take effective action in response to changing circumstances. The concept also includes developing judgment that is based on appropriate individual and organisational experience and values. A person that exhibits professional mastery could then be described as one that:

- understands and acquires the necessary knowledge as the basis for sensible action;

³⁶ The Army Training System defines knowledge as the mental skills involved in the such processes as judgment, thinking and understanding; and the information base of factual and theoretical material that is accessed, manipulated and used cognitively in the application of mental and physical skills.

- has a proper sense of values against which to judge right and wrong;
- understands the practice of their profession in a wide range of difficult circumstances;
- is able to employ their skills and knowledge for creativity;
- understands the importance and value of working with others; and
- has the ability to manage their own life, to cope with the prevailing environment, to profit from experience to reach sensible decisions and act on them.

Professional mastery involves attention to detail, a commitment to excellence, and a readily discernible difference from that which is ordinary. Mastery might suggest acquiring dominance over people or skills. Mastery can also mean a special level of proficiency. People with a high level of mastery are consistently able to realise the results that are of most importance to them. Professional mastery can be viewed as the discipline of personal growth and learning, of continually clarifying and deepening a personal vision, of focusing energies, of developing patience, and of seeing reality objectively.

People with a high level of professional mastery share several basic characteristics. First, they have a special sense of purpose, they see 'current reality' as an opportunity, not a constraint. Second, such people have learnt how to perceive and work with change and the management of uncertainty rather than resist those forces. Third, they are deeply inquisitive, and seek to

achieve a clear understanding of events. Fourth, they feel that they are part of a larger creative process, which they can influence but cannot unilaterally control. Fifth, they are more committed; they take more initiative and have a broader sense of responsibility. For all these reasons, a vast number of organisations espouse a commitment to fostering personal growth among their personnel because they believe that it will be in the best interests of the organisation.

An organisation's commitment to, and capacity for, learning can be no greater than that of its members.³⁷ Surprisingly, few organisations encourage the growth of their people in this manner. This lack of encouragement results in vast untapped resources, unfulfilled career expectations and unrealised potential capabilities. The connection between personal learning and organisational learning—that is, the reciprocal commitment between individuals and the organisation, often referred to as the psychological contract—requires further investigation.

The above general descriptions demonstrate that professional mastery relates to the confidence to take action in the unfamiliar conditions of a changing environment and depends on achieving the right mix between the key areas of knowledge, personal values, and competence. Professional mastery is concerned with developing a relational framework that describes how individual and collective performance is interdependent. Professional

³⁷ It is not the intention of this paper to discuss the different types and methods of learning. This is not to diminish the importance that concepts such as single and double-loop learning are important features, amongst others, of any organisational learning theory. The current discussion is concerned more with the application of professional mastery to the concept of the Army-After-Next and leadership development.

mastery involves understanding the interdependence between the intellectual and moral elements of fighting power and is dependent upon leaders at all levels.

The State of Professional Mastery

Professional mastery is a *state* that changes as a result of people responding to their environment. The catalyst for change is novel³⁸ problems and challenging contexts. Routines and drills are, by definition, within the bounds of the existing state of professional mastery. Consequently, professional mastery is developed through the challenge of confronting novel problems or contexts.

Novel problems and changing, complex, ambiguous and uncertain environments may render a once-competent person, not competent. The desired criteria should be the ability to adapt to change successfully rather than a set of specific job-related criteria. The focus on performance rather than knowledge is not enough to equip the future workforce with the capacity to be effective in an environment with unforeseen, situation-specific problems. In this environment, the individual may have limited or incomplete reference to prior environmental or procedural experience and must have the ability, knowledge and understanding to develop new models for problem solving.

³⁸ 'Novel' is defined as 'of a new kind or nature that is strange and hitherto unknown'. This argument that professional mastery is a state that changes as a result of people responding to their environment recognises that the reaction of some people to unpleasant circumstances may be to avoid the issue. This does not assume that problem-based learning will always result in positive lessons.

Changes in the state of professional mastery will not always be positive. The level of professional mastery in a particular area may be reduced as a result of a negative experience such that the next time a similar problem is encountered the person or group may not have the self-confidence to address it or, alternatively, they may choose to avoid it.

To develop innovative concepts and solutions in response to challenges, people must have *potential*, *drive* and *opportunity*.

Potential. This quality is derived from a person's *competence* and *knowledge*. The Army has always valued the development of competence and knowledge through education, training and experience. Various attributes, such as imagination and creativity, also contribute to potential.

Drive. The drive to tackle the task (and how much effort is put into completing it) is significantly determined by people's values. Individuals come to the Army with an existing value set for determining what is worthwhile, desirable, true, right and wrong. They are attracted to the Army because there is some basic alignment between their personal values and the values-image³⁹ projected by the Army. This alignment is manifested in the individual's commitment to duty and an understanding of the implications of this commitment.

Opportunity. The values-image defines the type of behaviour that is respected and rewarded, the nature of the work

³⁹ Through recruiting and the information media the Army projects an image of what it stands for to the public. Every piece of information and image is incorporated into the Australian public's impression of the Army. This impression is referred to in this section as the 'values-image'.

environment as well as the organisation's enduring purpose. The *performance environment* sets the conditions that guide the way people and the organisation interact with the wider world. Such an environment provides the *opportunity* for the potential and drive of the individual to be realised.

When combined, potential, drive and opportunity constitute the current state of professional mastery. The challenges of novel problems and environments are the catalysts for moving from one level of mastery to another. The state of professional mastery is depicted in Figure 3.

THE ELEMENTS OF PROFESSIONAL MASTERY

Individual Contribution to Professional Mastery

People are the intellectual component of warfighting capability within the Army. They generate the innovative concepts and solutions to challenges. People seize and retain the initiative that provides competitive advantage on the battlefield. If the organisation provides opportunity through leadership, its people provide the potential and drive to realise it.

Competence, knowledge and individual values are the three elements that the individual brings to the performance environment. Again, the relationship between the elements is both interdependent and dynamic. A change in one element has the potential to impact on the others.

Competence. This element is the foundation of professional mastery. It is a basic assumption that Training Command units deliver to the organisation people that are competent to perform in the workplace. Competence is defined as having achieved the

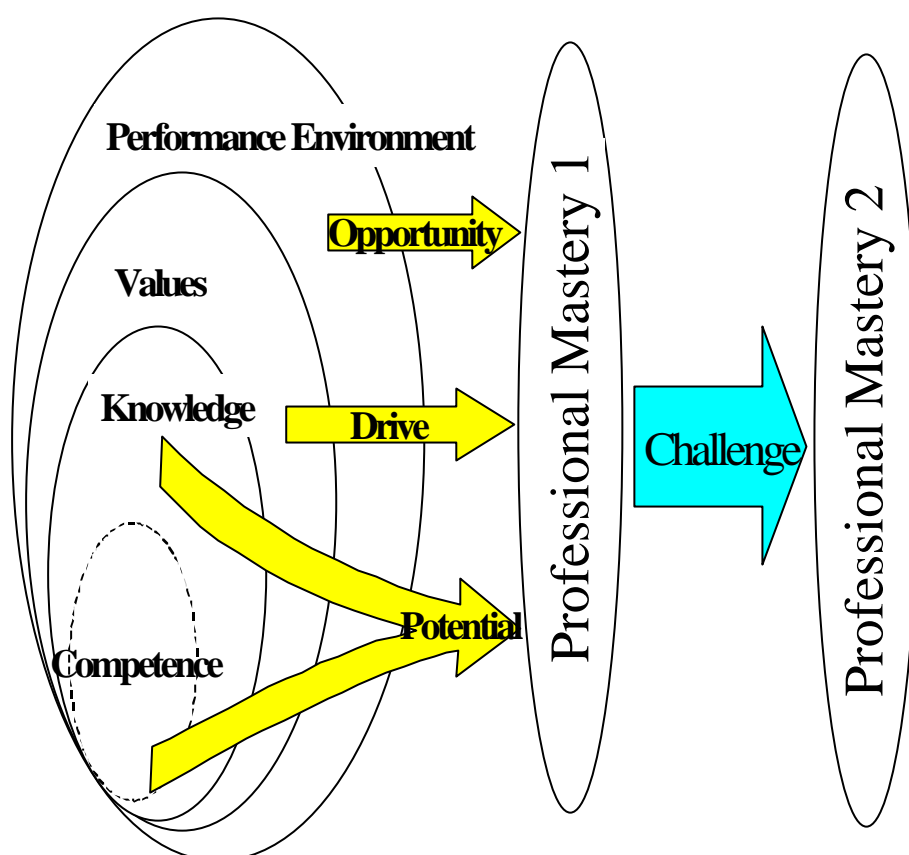


Figure 3: The State of Professional Mastery

requisite knowledge, skills and attitudes to perform the job in the workplace.⁴⁰ Competence is an outcome-focused approach to individual training⁴¹ that is based on how the task is performed

⁴⁰ The Army Training System defined competency as the ability to perform activities within an occupation, function or role, to the standard required in that employment. The concept of competency focuses on what is expected of a person in the workplace rather than on a learning process. It embodies the ability to transfer and apply skills and knowledge to new situations and environments. 'Attitude' is the term used to describe learning outcomes in areas of group interests, values and emotion. Skills may be intellectual, manual, motor, perceptual or social in nature.

⁴¹ Individual training is defined by the Army Training System as the training of individuals to achieve personal competencies.

now. In developing competence, the aim is to provide a consistent and reliable method by which individuals can be judged on task performance. This occurs through the development of competency standards that are based on the analysis of current practice.⁴² It is a basic assumption that the people in the organisation are competent.

Competence alone is insufficient to prepare people to be able to respond effectively to, less tangible elements of performance in the workplace such as novel problems and the demands of a changing environment. Final performance involves more than competence.

Knowledge. To be effective, people must have more than the knowledge to perform the task alone. It is important to have a broader understanding of the term ‘knowledge’. In professional mastery knowledge encompasses not only the knowledge required to perform a skill, but also the knowledge of people and situations, concepts and processes, and the knowledge and understanding to justify action. Knowledge generated from experience contributes to increased proficiency and mastery,⁴³ and builds on competence.

⁴² A competency standard is defined in the Army Training System as ‘the description of a well-defined skill associated with a particular job, trade or profession’. The skill is typically identified through analysis of what occurs in the workplace.

⁴³ ‘Mastery’ is defined as having gained, through experience and practice, a full command and understanding of a subject so that the practitioner is not only able to practice the trade but can train others. Mastery involves developing and exploiting tacit knowledge whereas competence is concerned with ensuring the consistency and quality of explicit knowledge.

Values. This element provides the *drive* to perform. Values define an individual's basic standards. They are the basis for crucial decisions, life directions and personal tastes. Importantly, mutual trust is based on adherence to a recognised value system. The interaction between the performance environment and people's values generates the norms of behaviour in areas such as decision making, superior–subordinate relationships, standards of quality as well as learning and innovation. Congruence between individual values and the organisation's enduring purpose and espoused values will lead to higher productivity and individual satisfaction.

The Australian Army emphasises 'shared values'—the values that make an individual reach beyond self. The Army's values contribute to the building of cohesive organisations that, in turn, become the source of strength and solidarity for their members in difficult and turbulent times. Leaders must immerse their soldiers in the Army's ethos, values and traditions, ensuring that both superiors and subordinates show respect and tolerance of others and unswerving commitment to doing what is morally and legally right.

People bring to the performance environment the skills to perform the task, their existing knowledge as well as the ability to create new knowledge and the values that will ultimately determine how tasks will be approached, how much effort will be expended and what standard will be applied. Leadership in the organisation determines the culture, climate and structure of the organisation, and provides the opportunity for people to apply their potential and drive. Combined, these elements deliver the human dimension of warfighting capability.

Organisational Contribution to Professional Mastery

Culture, structure and *climate* are the three organisational elements that leaders use to influence the performance environment. The combination of these three elements provides the opportunity for people to make the best use of their potential and drive in making a contribution to organisational performance. These elements must be aligned so that they mutually reinforce the desired outcome of intellectual effort. It should be noted that these elements operate at all levels of the organisation. At each level, leadership is the key influence for determining the outcome of the dynamic relationship between these three elements.

Culture. This element expresses the enduring values and purpose of the organisation and constitutes the shared basis for organisational understanding and action. It provides *meaning*, or a way for individuals to interpret the world that is consistent with their individual values. The Australian Army has a strong internal culture. Similarly, each corps has a particular culture, as do units. At each level, the culture of the organisation provides people with an enduring sense of identity, belonging and purpose. Culture is the most difficult organisational element to change. Significant cultural change requires considerable and consistent effort over time and across all levels of the organisation.

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.⁴⁴ Australia's strategic culture is an uncertain blend of geographical and historical affinities combined with newer political, technological and global characteristics. Notions of an Australian way of warfare are probably best seen as a subset of strategic culture. This is because perceptions that there is an Australian way of warfare refer to the particular military practices of the nation's armed forces. These practices are a reflection of the social ideas of a broader strategic culture. Approaches to analysing an Australian way of warfare range from the ANZAC Digger legend to more recent attempts to develop an Australian way of warfighting at the operational level of war in the Australian Defence Force.

Structure. Organisational structure is the arrangement and interrelationship of parts that make up the organisation. How the pieces of the organisation fit together, in part determines how it functions and is a key element of the performance environment. Changing the interrelationship between elements of the organisation impacts on how it performs. Structural change is a frequently used tool of organisational change; however, it is often more difficult than it first appears. People are professionally and emotionally tied to the existing structure and seek to defend it.

Organisations such as the Australian Army must continue to recognise individual talents and appoint these personnel to positions that best utilise their talents and potential. The structure that is ultimately required to maximise organisational performance should be the arrangement and inter-relationship of

⁴⁴ This definition is the one devised by the British political scientist Ken Booth, 'The Concept of Strategic Culture Affirmed', in *Strategic Power: USA/USSR*, ed. Carl Jacobsen, Macmillan, London, 1990, p. 121.

the parts, and the placement of people within the structure to make best use of their talents to produce innovative solutions in an environment of change.

The Army is a large, diverse and complex organisation, the component parts of which are internally highly reactive and mutually reliant. The structure and interaction of the Army's components are guided by that organisation's doctrine. The current Army structure is the product of doctrine that resulted from the political, strategic and resource imperatives of the 1980s and early 1990s. This structure is evolving through a process of continuous improvement and modernisation.

Climate. Organisational climate is the 'how' of culture. This element defines ways of 'thinking' and 'doing'. Leadership practices, policy decisions and doctrine shape the organisational climate. These practices serve as a guide or model for individual action. Climate is a key 'lever' through which the leadership of the organisation can rapidly and effectively influence the performance environment. Leaders provide the opportunity for people to apply and develop their professional mastery. Directive control complements the development of learning organisations.

A positive organisational climate is essential if the people are to perform to their potential. Organisational climate is a driver of behaviour: people adapt their behaviour to conform to the environment in which they are placed. Leaders must provide resources that demonstrate a commitment to long-term learning by individuals and the organisation.

The actions and decisions of leaders have a profound influence on organisational climate and consequently on the development of professional mastery. To generate a positive organisational

climate, commanders must clearly articulate an end-state that defines desired outcomes and appropriate measures of success, and provide the resources and authority necessary to enable action.

LEADERS PROVIDE MEANING AND CONTEXT

Performance Environment

A positive performance environment is essential if the people within the organisation are to exercise their full potential and drive. The performance environment is a driver of behaviour within an organisation.

The actions and decisions of leaders have a profound influence on the shape of the performance environment, and consequently on the level of individual and organisational contribution to professional mastery. Leaders shape the environment that realises the individual potential. To generate a positive performance environment, commanders must clearly articulate an end-state that defines desired outcomes and appropriate measures of success, and provide the resources and authority necessary to enable action. Figure 4 depicts the performance environment mediated by both organisational and individual factors.

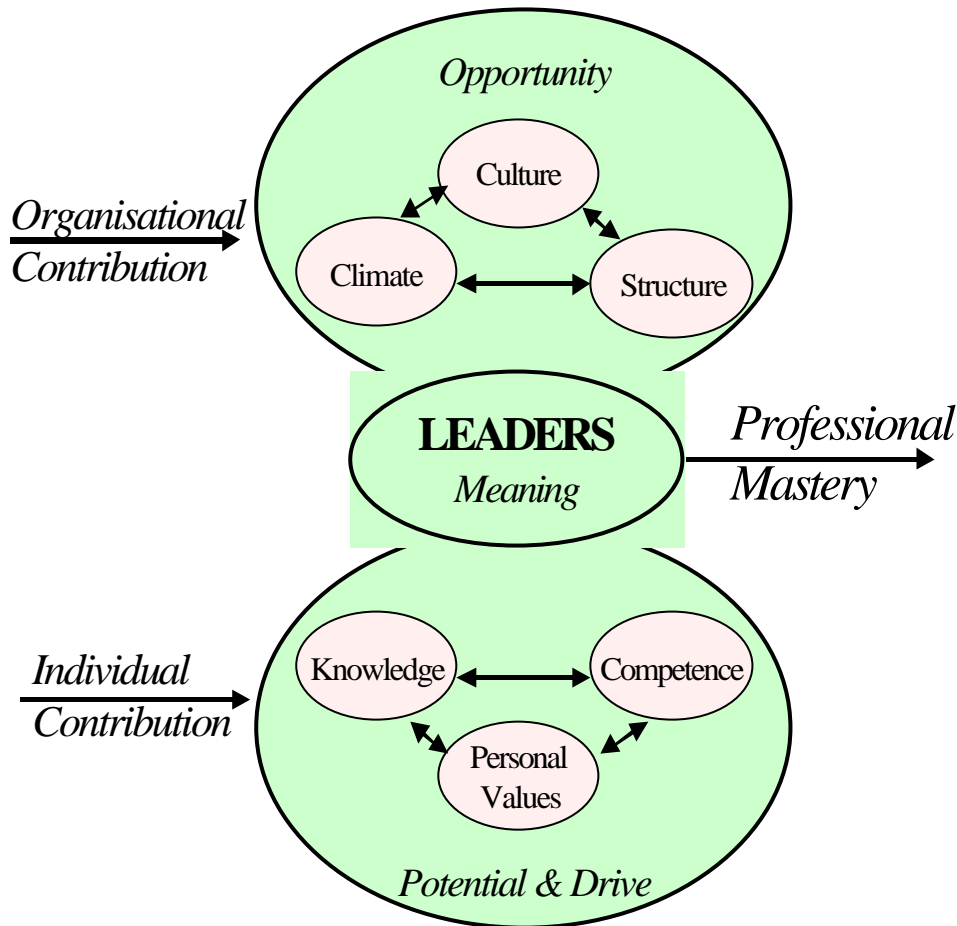


Figure 4: The Performance Environment

It is important to acknowledge that many commanders at all levels operate on the leading edge of knowledge and doctrine with the resources available to them to achieve excellent results.

Organisational Learning Through Professional Mastery

In essence, professional mastery is about individual and organisational learning. Movement from the current state of professional mastery to a new state involves a change in the elements at both individual and organisational levels. Figure 5 depicts how the challenge of a novel problem results in learning.

The catalyst of a novel problem focuses the elements of professional mastery. In response to the problem, individuals apply their competence and knowledge through critical and conceptual thinking to develop innovative concepts and solutions.⁴⁵ A course of action is developed and implemented that ultimately results in an outcome. The whole process of problem recognition and thinking as well as feedback from action and outcome involves the creation of knowledge.

Organisational learning is reflected in changes to the organisational climate, which may in turn influence culture and structure. Organisational learning is translated into changes in leadership practices but is most likely to be reflected in changes in policy decisions or doctrine.

At the individual level, learning will be reflected in increased knowledge, which may be displayed as increased task proficiency. While the learning that takes place in a team setting resides with the individual, it is often reflected in improved collective performance. That is, the collective knowledge and performance of the team improves as a result of the experience.

⁴⁵ *Critical thinking* involves making analytical evaluations or assessments of existing problems or situations. *Conceptual thinking* involves conceiving a notion, idea or plan out of observations, experience or facts.

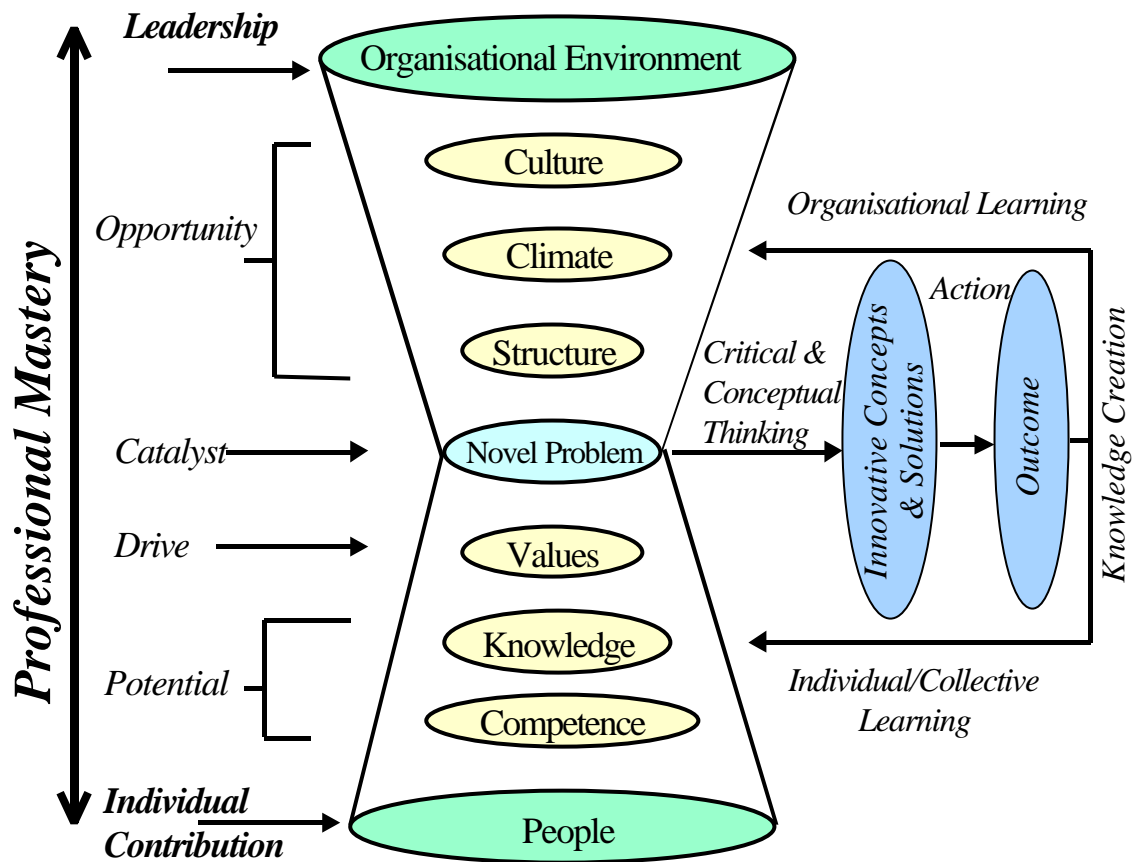


Figure 5: Learning Through Professional Mastery

Resistance to Professional Mastery?

From what has already been presented so far on professional mastery, it must come as somewhat of a surprise that there exist pockets of resistance to the concept. There are various reasons given for resistance to encouraging mastery. It would appear that some even find it difficult to discuss its main premises. Reactions to the concept of mastery range from 'It is soft'; 'Why do we need to talk about this stuff?'; 'Isn't it obvious?' to 'Don't we already know it?'. A more challenging form of resistance is cynicism.

It must be borne in mind, however, that embarking on a path of professional mastery is a matter of individual choice. Despite organisational encouragement and the promotion of a positive performance environment, no-one can be forced to develop mastery. It would be counterproductive for an organisation to be too aggressive in promoting mastery. Organisations are more effective if they foster a climate in which the principles of mastery are practiced continually. This will reinforce the idea that the organisation truly values personal growth in a supportive environment. It will also provide 'on the job training' that is vital to mastery. The pursuit of a state of professional mastery should become a continual and ongoing process as personnel respond to their environment.

Many of the practices most conducive to developing mastery are embedded in the disciplines for creating learning organisations. These practices include developing a more systemic strategic view; learning how to reflect tacit assumptions; expressing a vision and listening to others' vision, and joint inquiry into different people's perspectives of current reality. The most powerful method to encourage professional mastery by subordinates is for the Army's leaders at all levels to be serious in being the model, by setting the example. These leaders must appreciate that the command climate that they create has a profound influence on the dynamics of professional mastery.

Professional Mastery and the Application of Military Power

The effective and sustained application of military power rests on the coherent development of military capability across four key functions, which are force generation, deployment and recovery, combat operations, and sustainability. These key functions are applicable to the whole of the Australian Defence Force and are exercised in any scale or type of operation. If a substantial imbalance exists between the capacities to perform these functions, a usable capability may exist, but not for long. To be credible, a force must be able to meet the core requirements of these four key functions.

Force generation is the process of providing suitably trained and equipped forces and their means of deployment, sustainment and recovery to meet all current and potential future tasks, within designated warning times. Once generated, a force must be capable of being deployed and supported. It may need to be redeployed to meet operational objectives. Once it has achieved its purpose it must be recovered. Combat capability is the ability of a force that has been generated, deployed and sustained to undertake its mission. Sustainment is the process of enabling a force to maintain the necessary combat capability to achieve its objectives.

The four key functions are underpinned by professional mastery, which will remain the single most important prerequisite for operational success. Within the context of the four key functions, professional mastery is the state of individuals, combat teams, headquarters, units and formations to operate effectively in new operational environments that extend them beyond the circumstances experienced or anticipated in training.

Summary Judgments

Wars are fought and won by people. Commanders generate the Army's fighting power by harnessing the potential and drive of their people to develop innovative ways of applying physical capability against an adversary or adverse situation in order to seize and retain the initiative.

The focus of professional mastery is the Army's people. The Army's aim is to sharpen people's professional judgment through challenge and experience. Collectively, professional mastery seeks to build high-performing organisations at all levels.

The Australian Army has a strong organisational culture derived from its traditions and experience. It invests in professional mastery through education and training, and by providing professional experiences for its personnel.

Leadership is the key to professional mastery. Commanders must utilise the Army's investment in people and physical capabilities by creating a command climate that provides opportunities to tap the drive and potential of their people. A significant challenge for the Army is to nurture an environment that encourages innovation and professional mastery by all personnel. The leadership of the Army, at various levels, must understand the dynamics of professional mastery and the profound influence they have on the operational effectiveness of their units and organisations through the command climate that they create.

AUSTRALIA'S ARMY-AFTER-NEXT CONCEPT⁴⁶

The development of an Army-After-Next concept for the Australian Army is based on the adoption of the concept-led and capability-based philosophy required for continuous improvement through modernisation, and the conduct of both warfighting and military support operations. The Army's concept-led approach is concentrated on the Army-in-Being, the Enhanced Combat Force and the Army-After-Next. This approach is designed to optimise current capability by planning realistically for the future. Essentially, the Enhanced Combat Force concept incorporates essential new technologies into structures that are still dominated by legacy organisations and equipment. The Enhanced Combat Force is projected to approximately 2015 and the Army-After-Next to approximately 2025. The Army-After-Next concept concentrates on examining capabilities that are most likely to enhance future land warfare.⁴⁷

The Army will need to restructure the Army-in-Being to meet the range of security challenges prevailing at the time of the Enhanced Combat Force and the Army-After-Next. Implementing such a transformation will require a delicate balance. The Army must accept that it is not possible to know the full extent and nature of future challenges, emerging threats, or even the pace of change in technology.

The type of conflict in which the Australian Army may be involved in the future requires flexible, but nonetheless capable,

⁴⁶ For a full explanation of the Army-After-Next as it is relevant to the Australian Army, see Lieutenant Colonel Greg de Somer, *The Implications of the United States Army's Army-After-Next Concepts for the Australian Army*, Working Paper no. 104, Land Warfare Studies Centre, Canberra, 1999.

⁴⁷ Australian Army, Land Warfare Doctrine 1, *op. cit.*, p. 1-7.

systems to respond appropriately.⁴⁸ The Army must be prepared to contribute to a whole-of-government approach in order to deal with a broad range of non-traditional threats. Therefore, the Army must be sufficiently flexible, and versatile, to provide a range of capabilities across the threat spectrum.

The Australian Army has begun work to guide the integration of the range of technologies, referred to as C4ISR, into the Army's structure.⁴⁹ The Army is investigating how new technologies will shape capability after obsolescence becomes evident in major equipment projects. This obsolescence affords the opportunity to harness technological advances. However, the long lead-times inherent in procurement and decision making highlight that the development of a conceptual vision for the future is a current priority. The need for a new type of force to confront the strategic environment of 2025, combined with system wear-out of the Army-in-Being, provides the intellectual rationale for the Army-After-Next.

The conceptual basis for the Army-After-Next is based on the perceived requirement for superior operational and decision-making capabilities, strategic mobility and battlefield awareness. The concept is to achieve formerly unattainable levels of mobility, system reliability, and precision in target engagement. To achieve this concept vision would mean satisfying three technological imperatives: improved information management, improved deployment speed and reduced logistical footprint. Driven by technology, the Army-After-Next will be shaped by

⁴⁸ Admiral C. A. Barrie, 'Change, People and Australia's Defence Capability for the New Century', *Australian Defence Force Journal*, no. 134, January/February 1999, pp. 1–10.

⁴⁹ C4ISR systems are command, control, communications, computing, intelligence, surveillance and reconnaissance systems.

advanced weapon systems not yet developed, as well as the integration of warfighting and logistical doctrine yet to be fully appreciated.

The Army-After-Next is expected to be smaller, faster, more mobile and more lethal, as well as being heavily armed with advanced information technologies. The Army-After-Next force will need to be light, agile, effective and interoperable. The culture of that force will also be flexible, informed, proactive, innovative, responsive and integrated. The achievement of these characteristics will present enormous challenges to the Australian Army, as well to any potential coalition partner.

It is already possible to discern some core characteristics of the Army-after-Next. Modularity will enable discrete building-blocks of combat and sustainment power to be combined to meet the specific requirements of any given contingency scenario. Autonomy will be a fundamental characteristic for Army-After-Next units trained and organised to execute high-tempo, decentralised operations, strengthened by an improved capability for self-sustainment.

Undeniably, the future operational environment portends radical changes for the Army of the future. Personnel of the era will be confronted with executing operational concepts of unprecedented scope, complexity and sophistication. Technological developments will significantly alter the way the future Army organises, trains, moves, fights, sustains and operates across the spectrum of conflict. Personnel will need to be more technologically sophisticated, with a fundamental level of proficiency upon initial entry. The future battlespace will require leaders to possess the ability to accept change readily and be adaptive to, and proficient in, the use of a wide range of information technologies. The growing sophistication and rising

technical complexity will drive the Army towards greater specialisation. This trend towards specialisation will demand greater precision and efficiency in personnel recruitment, advanced training processes, continuous education, and management.

However, resource constraints and the numerous capabilities required across the spectrum of conflict will most likely prevent the entire Army from achieving Army-After-Next optimum design. The Army will probably be a hybrid of designs that have evolved from about one-third each of Army-in-Being, Enhanced Combat Force and Army-After-Next. One of the consequences of the Revolution in Military Affairs, coupled with resource imperatives for the Army, may be a structural change with tiered capabilities. An upper tier may consist of a small number of technically advanced units, while the bulk of the force will still consist of more-or-less conventional, industrial-age formations.⁵⁰

Forecasts for the Army-After-Next highlight a dilemma confronting the Australian Army. The Army must have sufficient high technology and cultural flexibility to integrate into a United States-led force. This future integration will require a command support system that is capable of becoming part of an operational and tactical seamless data-exchange. At the same time the Australian Army must have the ability to work with regional armies possessing a wide range of technological standards, all well below the capabilities of the United States Army. Effective interoperability will depend on a common purpose, doctrine and

⁵⁰ See the arguments advanced by Thomas Adams, 'Radical Destabilizing Effects of New Technologies', *Parameters*, Autumn 1998, pp. 99–111.

technological compatibility as well as personal relationships based on well-developed cross-cultural skills.⁵¹

By the time of the Army-After-Next, the need for Australia to fight as part of a coalition will prevail as an urgent political and military necessity. If anything, the need for military coalitions will be greater than in the past, because coalition warfare will be the only way to achieve enduring, strategic solutions.⁵² Interoperability with allies and coalition partners will become even more challenging, particularly, as the level of capability dependence on technology increases, with emphasis being on information and command systems rather than equipment. Cultural awareness of coalition partners and doctrinal convergence will maximise collaboration to enhance interoperability.

The Australian Army needs to be mindful of Australia's unique strategic circumstances and particular requirements when developing concepts for the Army-After-Next. A concept that would be relevant for the Australian Army is for an integrated, digitised force, postured for warfighting in a multinational alliance or coalition context, adaptable to other tasks and threats (both symmetric and asymmetric) to afford the maximum utility throughout the spectrum of conflict. The Army must contribute to the joint capabilities required of a modern maritime strategy.

⁵¹ Robert H. Scales, 'Trust, Not Technology, Sustains Coalitions', *Parameters*, Winter 1998, pp. 4–10.

⁵² Robert H. Scales, *Future Warfare*, US Army War College, Carlisle Barracks, Pennsylvania, 1999, p. 205.

LEADERSHIP DEVELOPMENT FOR THE ARMY-AFTER-NEXT

The Army-in-Being has been shaped and is commanded by officers of the 'Baby-boom Generation'.⁵³ The baby boomers will continue to have a major influence on the development of the Army. They are designing the Enhanced Combat Force and developing the Army-After-Next. However, both the Enhanced Combat Force and the Army-After-Next will be commanded by the 'Options Generation'.⁵⁴ If the Army is to understand and make best use of Australia's upcoming generation, then it is important to understand that their perceptions of the world will be very different from their baby-boomer parents. As the Army derives its combat capability from its people, it is critical that those designing the Enhanced Combat Force and the Army-After-Next recognise that the strengths and weaknesses of future generations are likely to be very different from their own.

The Army's human-resource strategy must be an integral part of its capability development strategy. To shape the Enhanced Combat Force and Army-After-Next effectively, it is necessary to understand the cognitive, behavioural and social dynamics of

⁵³ Those that were born between 1947 and 1960. The time periods allocated to generations are 'elastic'. This is particularly true when referring to more recent generations. The time frames should not be treated as absolutes.

⁵⁴ Australian sociologist Hugh Mackay argues that for this generation, 'everything is changing, everything is relative', therefore they keep their options open. He refers to them as the Options Generation. In this paper the term 'Options Generation' refers to those Australians born between 1960 and 1980. This term encompasses those referred to in the popular press as Generation X. Hugh Mackay, *Generations: Baby boomers and their parents*, Macmillan, Sydney, 1997.

the relationship between the individual and the organisation, and how they combine to deliver combat capability. There appear to be several leadership development issues that will require extensive research. These issues include:

- Will Army-After-Next leaders be performing different tasks from those performed by today's Army-in-Being leaders?
- With the advent of the Army-After-Next, does the Army's command leadership and management model and Army Training System need to change with regard to technical expertise, interpersonal skills, conceptual interpretation, and execution?
- What is the Army-After-Next career development model? Will there be a shift in emphasis from the current career development model? When, and on what scale, does the system need to change?

Leadership Characteristics for the Army-After-Next: Specific Attributes and Traits?

For the Army-After-Next there really is little mystery about the requisite leadership competencies and characteristics. While desirable skills and qualities may vary, the basic ingredients for success as a leader have changed little over time. However, the method for routinely inculcating, supporting and sustaining the desired leadership traits has yet to be determined. The link between concept and practice is the crux of the matter. Progress in human systems design has been outpaced by technological developments. At the same time, societal expectations are evolving in all sectors of Australian society.

Even given the sophisticated and technically demanding leadership environment of the future, moral firmament will still be more important than the technical requirements or traits of leadership. Heroclitus suggested millennia ago that a man's character is his fate, and the destiny of the led is bound to the leader. In his book on military leadership, *Mask of Command*, John Keegan argues that it is now time for 'post-heroic' leadership.⁵⁵ By this he does not mean to attack the virtue of courage. Rather, Keegan believes that what is needed today are military leaders who only act after clear analytical thought. For Keegan, the premium is on rational reflection, the ability to correlate ends and means, and on willingness to make decisions that are commensurate with the values being defended.⁵⁶

There are numerous studies that list the essential characteristics for future leaders. These characteristics have typically included an ability to deal with cognitive complexity, tolerance of ambiguity, intellectual flexibility, a meaningful level of self-awareness, and an enhanced understanding of the relationships among organisational subsystems that collectively construct the prevailing 'climate'.

A list of the specific attributes and traits that would be required of officers in the Army-After-Next would include flexibility, adaptability, communication skills, political astuteness, the ability to conceptualise, skills in dealing with officials from different governmental cultures, diplomacy, and skills in

⁵⁵ John Keegan, *The Mask of Command*, Penguin, New York, 1987.

⁵⁶ Joel H. Rosenthal, 'Today's Officer Corps: A Repository of Virtue in an Anarchic World', *Naval College Review*, vol. L, no. 4, Autumn 1997, p. 6.

resource management.⁵⁷ This list is by no means exhaustive. Other attributes relevant to the era of the Army-After-Next include:

- *Simultaneous awareness of the strategic and operational situation.* The officer will need to be competent in Army, joint and combined matters in an environment where the speed, complexity and ambiguity of operations have accelerated, and where the three levels of conflict (strategic, operational and tactical) can appear to be virtually compressed.
- *The ability to manage and respond to change.* Strategic leaders of the future must embrace change and adapt proactively. Leaders in the Information Age will need to be able to operate in both low and high-technology environments, and against both symmetric and asymmetric threats.
- *The ability to exhibit leadership within a learning organisation.* The Army must instil in its leaders a determination to innovate, to trust subordinates to exercise initiative, to capitalise on flux and uncertainty, to support risk taking but to tolerate and learn when it goes awry, and to operate as one integrated team.
- *The ability to command, lead and manage within an environment of information overload.* The officer best adapted for the Information Age will be the one with a retentive but

⁵⁷ Richard A. Chilcoat, 'The "Fourth" Army War College: Preparing Strategic Leaders for the Next Century', *Parameters*, US Army War College Quarterly, Winter 1995–96, pp. 3–17.

discriminating mind, capable of separating the essential from that which is interesting.

- *The ability to exercise the appropriate degree of control.* Leaders must possess the ability to exercise the appropriate degree of control in the circumstances when subordinates possess common situation awareness.
- *Possessing psychological and physical stamina.* The future operating environment, with the technical potential for continuous operations, will impose a high premium on psychological and physical stamina.
- *Computer-literate and proficient.* The commander and staff of the future may have to confront the flow of information with little filtering by assistants. Requisite skills with the computer, or its successor, will therefore be essential.

The basic cognitive and emotional demands of the future battlefield have been long established. However, strong conclusions about required traits and qualities have not produced meaningful and integrated policies designed to facilitate the development of the heralded attributes. There has also been relatively scant attention devoted to the discussion of human issues. Leadership and human dynamic issues are typically unrefined, unexplained and undeveloped. For example, it is possible to discern a relatively cavalier coverage of human dynamics as being typical of the brochures that describe the Revolution in Military Affairs.

Despite the tremendous advances in technology, organisations and doctrine, command remains very personal. Paul Harig, in an interesting article in *Parameters*, argues that in the end all great

commanders are the same:⁵⁸ they adapt the technology of their times in a highly personal, reflective space where machines can extend, but never supplant, the human dimension of their leadership. There will still be a human dimension to leadership.⁵⁹ The most successful commanders will be those that possess a few basic traits: courage, intellect and a cultivated sense of intuition.⁶⁰ Harig raises the interesting question of whether high technology might have a corrosive effect on the performance of future commanders, in a similar way that management might have corrupted leadership to produce the ‘zero-defects mentality’. From this perspective, it is debatable whether technology’s ultimate effect on future leaders could extend much beyond providing an enhanced array of options.

History is replete with examples of commanders influencing the outcome of combat with their personal courage and leadership. The Information Age has not changed the requirement for personal leadership and judgment even though the operating environment will be more complex and challenging than those experienced previously.⁶¹ Information Age technologies do, however, offer tremendous potential to improve the provision of information to support decision making. Leaders will still have to motivate soldiers to overcome their fears and confusion brought on by conflict. The human aspects of decision making and leadership are relevant now and for the foreseeable future.

⁵⁸ Paul T. Harig, ‘The Digital General: Reflections on Leadership in the Post-Information Age’, *Parameters*, Autumn 1996, pp. 133–140.

⁵⁹ This point is made by Garry Wills, *Certain Trumpets: The Call of Leaders*, Simon & Shuster, 1994.

⁶⁰ Paul T. Harig, *op. cit.*, p. 133.

⁶¹ Christopher Bellamy, *The Evolution of Modern Land Warfare*, Routledge, New York, 1990, p. 52.

The conduct of knowledge-based operations in the Army-After-Next will accelerate operating tempos and decision-making rates. This stressful environment will require a leader, one that is technically capable in the tasks of digital decision-making, but retains the reliance on, and understanding of, how to maximise the unit's human potential. The role of the commander in the Army-After-Next will most likely not change, nor will the need for initiative, creativity and originality in thinking. However, the information flow and the stress on commanders are likely to increase. These must be controlled so that the commander can stand back for personal assessment and concentrate on his main effort, based on greater foresight and clarity of purpose.

A worst-case scenario for the Army-After-Next is an officer corps mesmerised by high technology with the ability to apply powerful analytical tools for tremendous advantages in precision, manoeuvre, speed and effect at the operational level. This scenario could also reflect a generation of officers that are insecure without their computer models and decision-making systems and therefore find it more difficult to shift from the operational to the strategic level.

The Army will require commanders and staffs to possess cognitive skills to develop their subordinates into teams. To do this, they will need the cognitive skills required to function effectively as team players. The increased combination of knowledge and speed as characteristics of the future will further the demand for decisive transformational leadership. This demand will include aspects such as highly coordinated communications, acute diagnostic abilities and a build-up of intuition based on education and practical experiences. Nevertheless a balance will still be required in the future

between a purely rational approach to problem solving and intuition.⁶²

The Army-After-Next will require cohesive units and mature leadership. Cohesiveness encompasses both horizontal bonding among peers and vertical bonding of superiors and subordinates based on the development of trust and interdependence. The main factors of transformational leadership—inspirational leadership, intellectual stimulation and individualised consideration—are essential to such cohesiveness.⁶³ Transactional leadership factors such as contingent reward, active management by exception and passive leadership will still be required for unit cohesiveness.

The Army must retain the ability to adapt to asymmetric threats that circumvent capabilities or attack perceived vulnerabilities, as well as the conduct of operations in complex terrain. That is to say, the priorities for the Australian Army need to reflect the growing recognition of emergent security challenges that are complex, nonlinear and asymmetrical.⁶⁴ The Army must retain the ability to adapt to the enemy that does not present itself for high-technology destruction or fights a protracted campaign.

⁶² Bernard M. Bass, 'Leading in the Army After Next', *Military Review*, March–April 1998, p. 50.

⁶³ Inspirational leaders promote identification and internalisation of cohesive values. Intellectually stimulating leaders encourage more efficient use of resources and contributions of solutions to problems, thereby increasing individual feelings of confidence and self-worth. Individually considerate leaders increase subordinates' sense of self-worth. Bernard M. Bass, *ibid.*, p. 48.

⁶⁴ The term 'nonlinearity' refers to distributed operations throughout the battlespace. Nonlinearity results from technological advances, enabling forces to manoeuvre, acquire and engage targets throughout the battlespace.

Consequently, the capability and mental outlook necessary to conduct aggressive close combat will remain fundamental to land force operations. In view of the greater dispersion on the future battlespace of the Army-After-Next, and the complexities of future conflict, a premium will be placed on personnel that are physically and mentally robust. A premium will also be placed on personnel that are more self-reliant, better educated, mature and adaptable.

The Australian Army attaches great importance to the role of leadership in ensuring that the Army is an effective fighting force. Leadership is a key force-multiplier, enabling the Army to deal effectively with unexpected, ambiguous and complex situations. Leadership is an important part of the development of overall knowledge, is vital for the maintenance of morale, encourages initiative, and is fundamental to professional mastery.

The Australian Army aims to achieve effective leadership and communication through a variety of means, which include clear and well-understood lines of authority in the interests of efficiency, clarity, and accountability. Another method is by encouraging a command culture of delegation of authority, and of flexibility and initiative in the exercise of command authority. For effective leadership there must be a strong, continuous, 'whole-of-career' investment in leadership. The Army must continue to invest in its professional mastery through education and training and by providing professional experiences for all of its people.

Senior leadership within the Army must understand the dynamics of professional mastery and the profound influence that they have through the command culture they cultivate. The ability of the Army's personnel to cope with the prevailing

challenges and demands of the Army-After-Next will be determined largely by the collective values and abilities of the senior leadership.⁶⁵ The senior leaders will set and exemplify standards and create policies and climates.

The respective responsibilities of officers, noncommissioned officers and soldiers are also likely to evolve in the Army-After-Next. The demands of Information Age warfare will affect superior–subordinate relations in terms of leadership in ways as yet unseen. These relations will become increasingly fluid rather than fixed in a person or appointment. In fact, a greater contribution to fighting power will be expected of all personnel, regardless of rank. Consequently, there is a critical need to review now the recruiting, selection, training, education and career structure for both soldiers and officers. This review is needed to identify the gaps between current systems and future requirements in order to ensure that the Army-After-Next is staffed by personnel with the appropriate qualities.

In the future, the reduced density of forces and increased lethality of weapons will place greater responsibility in the hands of a smaller group. Together with doctrine and realistic training, force structures must foster the trust and confidence needed for the creation of a resilient and cohesive force, particularly in the joint and multinational coalition environment.

A characteristic of the Army-After-Next will be a shortening of the available time for decisions. This reduced decision-cycle will increase the difficulties of ensuring that the ethics and morality of decisions are maintained. Due to the probable speed

⁶⁵ This theme is drawn from T. O. Jacobs, *Strategic Leadership and Decision Making*, Industrial College of the Armed Forces, National Defense University Press, Washington D.C., 1997.

of operations in the future battlespace, it will be essential for information processing and response skills to include ethical aspects. Ensuring an ethical command climate requires commitment to the Army's ethos, values and leadership.

Societal Pressures

The requirement to engender and foster fighting spirit, in particular through realistic training, will remain fundamental to the profession of arms; however, societal pressures on this core ethos will increase. The imperative to take account of broader social and legal trends will remain, as will be the necessity to obey national and international law. Legislative initiatives in employment rights, data protection, freedom of information and equal opportunities reflect such societal trends. At the same time, the operationally driven ethos of the Army will continue to demand that the individual places the common goal ahead of personal needs.

What is important is to examine the societal environment that will influence the development of the future officer or soldier. The central aspect will be to identify and build on the positive influences (for example, focused education and greater social awareness) and to reduce the impact of the negative influences. If the Army is to understand and make the best use of Australia's upcoming generation, then it is important to understand that their perceptions of the world will be very different from their baby-boomer parents.

Similarly, it will be necessary to determine the new skills and aptitudes demanded in the future battlespace in order to put in place, at an early stage, coherent selection, education and training regimes. Such regimes will deliver well-motivated, self-reliant and skilled personnel, matched by appropriate and

relevant remuneration and career development initiatives, including support after leaving the Army. This imperative for education and training regimes becomes complicated when the average ‘life span’ of a technical degree—for example, engineering—is even now less than two years.

The current social environment equips the Options Generation with some skills that are ready-made for warfighting on the future battlefield. For example, their world view acknowledges the need to adapt to change constantly, and their leisure time is spent developing skills in advanced information processing and nonlinear tactical and strategic thinking. They are task-focused, use time efficiently and are independent. Equally, their world view will present the Army with a number of challenges. For example, they are better educated and expect to be continuously challenged in their work. They distrust institutional promises; accordingly they offer commitment in situation-specific terms and constantly evaluate that commitment. A psychological contract on ‘short-term pain for long-term gain’ is no longer viable.⁶⁶

Competition for high-quality people is becoming increasingly stiff. At the same time, social mores (the acceptability of short-term employment relationships) and organisational change (the attendant anxiety of instability and restructuring) conspire to undermine long-term commitment to any organisation, including the Army. A reasonably healthy employment market for officers that leave the service, the lack of an identifiable threat to Australia, the raised expectations for a ‘decent family life’, and

⁶⁶ For a more complete explanation of the ‘psychological contract’, see David Schmidtchen, ‘Rethinking the psychological contract between Army and its people’, *Australian Defence Force Journal*, July–August, 1999, pp. 5–8.

less tolerance among capable young people for poor leadership represent additional challenges to both the current and future leadership of the Army.

The combination of an increasingly competitive market for quality young people and the high-knowledge demands of the future battlefield indicate that the Army's human resource priority will be to attract and retain quality people. The Army Reserve is a critical resource in achieving this objective, but it must be relevant, responsive to strategic circumstance, professional and flexible enough to capitalise on emergent work-force trends.

Social trends in Australian society show that the formative experiences of the officers and soldiers that will populate the Enhanced Combat Force and the Army-After-Next are markedly different from those of the current senior leaders. However, it is the latter that are building and shaping the force of the future. As the Army's combat capability is drawn from its people, it is critical that those shaping the Enhanced Combat Force and the Army-After-Next recognise that the strengths and weaknesses of future generations are likely to be very different from their own.

The social instability in work, organisation, family and Australian society presents the Army with a number of challenges and opportunities. To make the most of this environment the Army must be professional, externally relevant and internally flexible. It is not enough to make these representations in flashy recruiting campaigns. If the Army fails to fulfil the expectations it creates, it will not retain the commitment of the Options Generation. Without the commitment of its people the Army loses the innovation, creativity and imagination that are willingly given by a motivated, satisfied and committed soldier.

It will be vital to develop a predictive model of societal change and trends in order to identify those features that will influence the development of future Army personnel. The requirement for such a model underpins the need for an effective program of personnel-related research and evaluation. Specific objectives might include:

- Examining the nature of the relationship between those that lead and those that follow. Will the broad division of responsibility between officer, noncommissioned officer and soldier be as relevant in the circumstances of the Army-After-Next as it is today? To what extent might the ratio of leader to subordinate change to reflect the demands of doctrine, and an increasingly dispersed and digitised battlespace? What implications might this have for selection and training?
- Determining the extent to which societal trends and emergent legislation might impact on the culture, ethos and values of the Army in order to preserve that which continues to promote the cohesion of military groups.
- Examining the extent to which the Australian Defence Force reflects wider society.

Research Initiatives

In order to derive those features that will influence the development of future Army personnel, research is required into the effects of new technologies. It will be necessary to examine the impact on the individual of future concepts and technology in order to identify new aptitudes and skills necessary and, subsequently, to develop appropriate and complementary education and training initiatives. Specific objectives might include:

- an examination of whether there is likely to be a gap between the technological skills demanded in the future battlespace, the ability of the Australian education system to deliver men and women with the necessary skills, and the ability of the Australian Army to recruit them, in order to develop timely initiatives;
- the development of training practices to improve the delivery of personnel inculcated with Army's doctrine, culture, ethos and values;
- research into retention and continuous education initiatives; and
- reconciliation of the development and inculcation of doctrine with the accelerating pace of technological change in order to achieve situational awareness.

The Australian Army can draw on the results of research undertaken on behalf of the United States Army that has examined many aspects of leadership pertaining to the Army-After-Next.⁶⁷ Aspects of the United States Army's research include professionalism and teamwork, tele-leadership, tele-medicine, cultural pluralism, flattened organisations, and loosely coupled structures. The research also supports the position that the principles of leadership do not change, only the conditions in which they are applied. The United States Army's research also supports the conclusion that there should be recognition for a generalised theory of leadership that transcends contingencies.

⁶⁷ Discussion between the author and various staff at the US Army's Army-After-next Spring Wargame, 25–30 April 1999. These discussions were with staff concerned with the Army-After-Next Imperatives that focus on Quality People and Leader Development.

Aspects such as respect, loyalty, identification, competence, self-control, inspiration and personal example will remain essential requirements for leadership in the Army-After-Next.

Systemic Adjustments to Support Leadership Development⁶⁸

The Army needs to develop more effective ways to measure and comment on leadership. The need to retain high-quality personnel in the future will reduce the acceptance level of errors in the officer career development and management process. The current evaluation and development report has been a crude instrument for commenting usefully on individual strengths and weaknesses. When compared to progressive sectors of business and industry, the Army has relatively less structured instrumented feedback from peers and subordinates.

Leadership development can be improved by a combination of conceptual training, development feedback, a formal ‘mentoring’ program, environmental support for continuous learning, a performance appraisal system that attends to both development and selection, and a system for promotion based on multiple sources of input to support decisions. There is also increasing recognition that a transformational leadership is more effective than a transactional or management-by-exception style.⁶⁹ Transformational leadership includes such characteristics as articulating a motivational vision, providing intellectual

⁶⁸ The title of this heading is drawn from the article by Walter Ulmer, ‘Military Leadership into the 21st Century: Another “Bridge Too Far?”’, *Parameters*, Spring 1998, p. 15.

⁶⁹ Bernard M. Bass, ‘Theory of transactional to transformational leadership; Learning to share the vision’, *Organizational Dynamics*, vol. 18, 1990, pp. 19–31. See also Bernard M. Bass, ‘Theory of transformational leadership’, *Leadership Quarterly*, vol. 6, no. 4, 1995, pp. 463–78.

challenge, inspiring teamwork, considering subordinates as individuals, being receptive to ideas, demonstrating moral courage and setting the example of subordinating self to mission.

An objective of future training will be the need to demonstrate to future commanders and staff the tendency of being subjected to, and of suffering from, information overload. This unique form of combat stress of ‘paralysis through analysis’ will need to become a focus of training regimes. These considerations should be incorporated into the more traditional battlefield simulations. Accumulating masses of data through information technology can quickly lead to over-centralised decision-making.

There is an increasing concern that systematic decision-making is eclipsing the intuition of commanders. The concern is that over-reliance on structured systems might stunt the development of intuition and severely limit a decision maker’s options in unfamiliar scenarios. Systems that can scan a complex situation in infinite detail and analyse it with great precision can provide a decision maker with so much capability that he becomes addicted to the information and is paralysed by it. The concern is that it is not only possible to experience ‘paralysis by analysis’, but to neglect the intuitive skills that give commanders an important advantage in ambiguous situations. Intuition is largely a product of experience with a broad base of situations. Intuition allows a commander to focus rapidly on possible options when time for systematic analysis is unavailable. Systematic analysis may also be unsuited to politically or culturally sensitive military support operations such as peacekeeping.

In an environment where military tasking is becoming increasingly customised, sensitive to change and technologically sophisticated, the key to success will be effectively capturing the

knowledge of a skilled workforce. The implications for education and training are that new thinking is required to emphasise flexibility, responsiveness, quality and the ability to organise in new ways. New thinking, in turn, requires cultural change in education and training, not simply different types of training. Individuals will require more skills to do the job, but they will also require the knowledge and understanding to adjust to changing circumstances.

There needs to be an adjustment in the educational system from what to learn to how to learn. A focus on ‘thinking skills’ and cultivation of a ‘skeptical mindset’ will not distract from mastery of essential technical skills.⁷⁰

CONCLUSION

The Australian Army can expect significant changes in its characteristics given the future battlespace; the result of the Revolution in Military Affairs; geopolitical, socioeconomic and demographic trends; and emerging asymmetrical threats. Australia’s Army-After-Next requires robust, well-equipped and sustainable land-force capabilities that will be enhanced by the innovative application of emergent technologies. Such application will enhance land force capabilities. The Army-After-Next must be an affordable, optimised force, which is maximised for warfighting in an increasingly integrated and coalition environment.

While it is not possible to predict where or when the next war will occur, or what form it will take, there are some things for

⁷⁰ This theme is drawn from *Professional Military Education: An Asset for Peace and Progress*, Panel Report, Centre for Strategic and International Studies, Washington D.C., March 1997.

which the Australian Army can prepare. Obviously, the Army can prepare the physical condition and training of officers and soldiers. Equally important, the Army must prepare the minds of the next generation of leaders to handle the challenges of the future battlefield. The mental challenge will be more important than all the technological sophistication that the Army can bring to bear. Most important in that intellectual preparation must be a recognition of what will not change: the fundamental nature of war—the fact that fog, friction, ambiguity and uncertainty will dominate the battlefields of the future just as they have those of the past. Warfighting is a contest of human wills. ‘War is not waged against an abstract enemy’, Clausewitz points out, ‘but against a real one’.⁷¹

To meet the expanding challenges of the unprecedented and accelerating change associated with the technologies of the Information Age, the Australian Army must develop leaders that understand history’s implications and can apply these lessons to the future Army. Future leaders must be skilled in operational art, and be able to adjust rapidly to temporal and spatial battlespace variations. They must also master the complexity and use of advanced technology. A commitment to professional mastery and leadership development will ensure that the Australian Army’s enduring legacy of competent, capable, innovative and highly skilled personnel will not only continue but will be enhanced.

The Army of the future will need to attract personnel predisposed to joint operations, flexible and innovative and without inter-Service prejudice and suspicion, while retaining the expertise inherent in their particular Service. Officers will need

⁷¹ Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret, Princeton University Press, Princeton, 1976, p. 161.

to be more multi-disciplined than in the past. They will have to embrace and understand joint warfare doctrine and practices, and the implications of the law of armed conflict. They will also need to have enough skills to cope with an inquisitive and highly capable media. In keeping with the predominant technological phenomenon of the age, all officers must be proficient in the application of information technology to their full range of disciplines.

The Australian Army has an important and, in many respects, unique contribution to make in safeguarding and promoting Australia's national security. The Army can best maximise its contribution to national security, within available resources, by focusing on the development of professional mastery. It can also maximise its contribution by ensuring that its personnel, equipment, organisational arrangements and culture, military-political relationships, military-civil relationships, and doctrine are all developed to, and maintained at, the highest and most relevant levels.

The fundamental consequence for the Australian Army is that, in the euphoria of technological advances, the Army must not lose sight of what will always be its most potent component—the human factor. Leadership and decision-making, regardless of technology, will rest with leaders, and leadership is the key to professional mastery. Professional mastery will remain the single most important ingredient for operational success.

The Army must aim to sharpen the professional judgment of its personnel through challenge and experience. Collectively, professional mastery seeks to build a high-performing organisation at all levels. Professional mastery offers a new way to think about how we develop personnel to meet the challenge of the Army-After-Next. The ability to respond collectively to

change is based on developing the personal values, knowledge and competence that are the basis for action. Professional mastery strikes an equitable balance between developing the individual and equipping them with appropriate skills and attributes for specific future demands.

Historians and scholars frequently observe that it is less important for armies to predict the future than it is for them to adapt quickly when it arrives. The consistent theme throughout this paper has been that the critical ingredient for future success is the human element. The Army-After-Next that unfolds twenty-five years from now will be different from what we expect it to be. Future success will depend on how well the young people entering the Army today adapt to the future.

The ambiguous nature of future challenges demands serious intellectual preparation for warfighting. As Sir Michael Howard has suggested on a number of occasions, war is not only the most physically demanding of professions, but the most intellectually demanding of professions.⁷² Thousands of years of history confirm that ambiguity, miscalculation, incompetence and, above all, chance will continue to dominate the conduct of war.

⁷² Professor Williamson Murray, US Army Military History Institute, Carlisle Barracks, Pennsylvania, April 1999; provided to the author in a discussion with Major General Robert H. Scales, Commandant US Army War College, 27 April 1999.

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