

Designing Australian Land Power For The 21st Century

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Designing Australian Land Power for the 21st Century

Major Peter K. Singh
Australian Army



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EXECUTIVE SUMMARY

Title: Designing Australian Land Power for the 21st Century

Author: Major Peter K. Singh, Australian Army

Thesis: Australian land power should radically change to be relevant to Australia's security needs in the 21st Century.

Discussion: Radical change to the Australian Army is required. The paper describes why this is necessary and how it should be achieved. In doing so three issues will be addressed.

First, Australian land power needs to be developed for both expeditionary operations in the Asia-Pacific region and also for continental defense. The priority should be on expeditionary operations. This represents a radical departure from the Army's current force structure and capability development program. The imperative for change is caused by an acknowledgment of historical patterns, current and future security trends in Asia and Pacific regions, and the Government's new policy which emphasizes "forward cooperation" for regional security.

Second, redesigning land power requires a cogent force development methodology. Such a methodology to achieve radical change does not exist in the Australian Army. In this regard, the United States Marine Corps Warfighting Laboratory's concept-based approach to force development can be used as a model for redesigning Australian land power. Success in land operations requires the adoption of a philosophy that uses force development processes as an actual strategic capability. Analysis also identifies lessons for the establishment of an Australian Army Battlelab.

Third, a major project should be conducted to initiate momentum to change Australian land power. The concept is for a three phase project, entitled *Landpower21*. The project should use the proposed force development methodology to achieve the new strategic goals for land power.

Recommendation: In short, this paper advocates that Australian land power must emphasize new strategic goals, adopt an improved force development process, and initiate a pivotal project to create momentum for change.

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ABBREVIATIONS

ABP	Assumption Based Planning
ADF	Australian Defence Force
CDS	Combat Development System
CTC	Combined Training Centre
DOTES	Doctrine, Organization, Training, Equipment, Support
FMF	Fleet Marine Force
MAGTF	Marine Air-Ground Task Force
MCCDC	Marine Corps Combat Development Command
MRC	Major Regional Conflict
OMFTS	Operational Maneuver From The Sea
QDR	Quadrennial Defense Review
RTA	Restructuring The Army

PREFACE

*Victory smiles upon those who anticipate the changes
in the character of war, not upon those who wait to
adapt themselves after the changes occur.*

- Giulio Douhet

By looking at war on a broad canvas it is possible to see that Australia's defense strategy exhibits many of the characteristics of fortress warfare. Australia's strategy is comparable to France's military experience prior to the Second World War. During this period French doctrine, in a relative sense, regressed rather than progressed. Although equipment and organizational changes modified the appearance of the French Army of the 1930s, the apparent modernization was misleading.

Lack of French doctrinal progression was rooted in political, institutional, historical and strategic factors. As a result the French Army was induced to perceive technological developments from the perspective of already accepted concepts. They did not perceive new ideas or weapons overturning or forcing a fundamental transformation of accepted doctrine. The ostensible tragedy was building and reliance on the Maginot Line for fortress defense.

However, the real tragedy of French military planning was something of much greater significance. The mistake was creating a French Army that could not reply to the unexpected or respond to a limited threat beyond the fortress. "Where flexibility was needed, France and her military were content with an inflexible concept of war and a rigid, step-by-step doctrine."¹ The French Army's problem was not the existence of the Maginot Line, it was the 'Maginot' mentality.

In contemporary times the Australian Army is showing similar symptoms. The Army's plan for restructuring is based on one strategy, namely, the continental defense of Australia. Organisation, equipment, doctrinal concepts and force development are all focussed on this single strategic outlook. This is logical if Australia's impelling security risk is aggression like the Japanese threat during the Second World War. But in this elaborately futile defensive system the Army envisages only one battleground - northern Australia. Apart from yielding the initiative to a potential adversary, this Cartesian logic will create a superb Army for battles that are unlikely to occur. Meanwhile, the real value of Australia's land power as an instrument for regional security is allowed to wither.

The consequences of a 'Maginot' mentality should be a salutary lesson for Australian defense planners. A concept of fortress defense and a singular strategy are the seeds of disaster. Instead, Australian land power should be radically reshaped to be relevant for the 21st Century. Doing so will require the achievement of three goals.

First, Australian land power needs to be developed for expeditionary operations in the Asia-Pacific region and also for continental defense. The priority should be on

¹ This thesis for French military thinking is made by Robert Doughty in *The Seeds of Disaster. The Development of French Army Doctrine, 1919-1939*, (Connecticut: Archon Books, 1985), 184.

expeditionary operations. This represents a radical departure from the Army's current force structure and capability development program. Chapter 1 will provide evidence that the imperative for change is derived from an analysis of historical patterns, current and future trends in the Asia-Pacific region, and the Australian Government's new policy which emphasizes "forward cooperation" for regional security.

Second, redesigning land power requires a cogent force development methodology. Such a methodology to achieve radical change does not exist in the Australian Army. Chapter 2 will examine the United States Marine Corps Warfighting Laboratory's concept-based approach to force development. The chapter will describe why the Warfighting Lab can be used as a model for redesigning Australian land power. Analysis also identifies lessons for the establishment of an Australian Army Battlelab.

Third, a major project should be conducted to initiate momentum to change Australian land power. Chapter 3 will propose a concept for a three phase project, entitled *Landpower21*. The project should use the proposed force development methodology to achieve the new strategic goals for land power.

In short, this paper advocates that Australian land power must emphasize new strategic goals, adopt an improved force development process, and initiate a pivotal project to create momentum for change. Each of these aspects will be discussed in turn. Together they demonstrate why and how land power should be radically changed in order to be relevant to Australia's security needs in the 21st Century.

CHAPTER 1

NEW STRATEGIC GOALS FOR LAND POWER

Australia's current direction for developing land power is inconsistent with emerging trends. The aim of fielding land forces that are primarily concerned with continental defense is at odds with Australia's future security needs. This assertion is supported by an examination of historical patterns for the use of land forces as an instrument of national power in the Asia-Pacific region since 1945. Also, the current unresolved conflicts in the Asia-Pacific region and an arms build-up provide empirical evidence which cannot be ignored. Both these factors will shape Australia's security strategy into the next century. This chapter will analyze these trends to explain why Australia should emphasize new strategic goals for its land forces.

Historical Patterns

The history of conflict in the Asia-Pacific region in the 20th Century demonstrates a unique pattern for land warfare. The pattern highlights the importance of land power and its contribution to Australian security.

Unfortunately the contribution of land power has been obscured because of the complex variables involved in land operations. Unless the capabilities of land forces are

understood by Australia's government, its defense strategists and citizens, then the Army will remain at an inappropriate disadvantage in relation to other services. Consequently land forces will not attract the resources essential to sustain combat capabilities.

Military theorists have obscured the importance of land power. Proponents of air power and naval power have created an advantage over advocates for land power. Alfred Thayer Mahan, the American naval strategist, explained the precepts of sea power using the ocean as a single medium. The Italian visionary, Giulio Douhet, and later Britain's Hugh Trenchard and America's Billy Mitchell, were able to do much the same for air power. One of the difficulties associated with land operations has been the inability to produce a single set of strategies in the same context that air and naval power have achieved. Contemporary treatises on strategy usually deal with sea power and air power in distinct, self-contained chapters. By contrast, land operations are dealt with across many chapters.

In an Australian context, it is important to understand the unique aspects of land power. Land forces to a far greater extent than navies and air forces rely on elements of other services for transportation, protection and support. Land forces are not confined to a simple medium. Different terrain, such as jungle, urban, mountain, desert, littoral and open country, provide complicating effects for land operations. Different types of operations from counter-terrorism, to counter-insurgency, to peace-keeping through conventional operations require distinct methods of operation. Unlike its service counterparts, land forces must operate among the civilian population. On land, concerns for the rules of war are omnipresent.

Despite the trend for reliance on air and naval power, there are many countries and non-state entities that use land power as their principle military instrument to achieve political goals. The decisive action of any effort to defend a nation's population has been on land, relying predominately on land forces. There is no overwhelming evidence to suggest the future will be different. The 1991 Gulf war showed that despite the Coalition's air and naval supremacy, land power was the essential instrument to achieve the political objective -restoring the sovereignty of Kuwait. As Alexander Bevin theorized in 1995, "victory comes from human beings moving into enemy territory and taking charge."

Whereas navies and air forces employ and operate expensive equipment and platforms to allow them to function in their respective environments, land forces rely on individual soldiers, working in unison, to complete each mission. In an abstract sense, even without weapons it is still possible to generate land power. On land, man is the real instrument of war. If nothing else, warfare in the Asia-Pacific region throughout the 20th Century indicates the preeminence of land power in peace-time and during conflict.

All countries in Asia have felt the effects of war this century. The period since the Second World War has been one of turmoil. To make sense of these wars it is useful to divide them into a number of categories, shown at Diagram 1. These categories denote the cause of the war, but the categories are arbitrary because each war is distinct. The information primarily comes from Guy Arnold's *Wars in the Third World Since 1945*.¹

¹ Guy Arnold, *Wars in the Third World Since 1945* (London: Cassell, 1991).

Arnold uses four categories, whereas Diagram 1 has five categories and additional information.

Wars of Colonial Liberation	Communist Containment
Indonesia v. Dutch Vietnam v. French Malay Emergency (1948-60)	Korean War (1951-53) Vietnam War (1965-75) US covert action in Afghanistan v USSR Indonesia's repression of the PKI (1965)
Civil Wars	National Consolidation
Chinese Civil War (1945-49) Pathet Lao in Laos Khmer Rouge in Cambodia Huks in Philippines NPA in Philippines Mujahideen v. Afghan Government North Vietnam v. South Vietnam Brunei Rebellion (1962-63)	Internal problems in India Bangladesh War for Independence Tamil Tigers in Sri Lanka Karens in Myanmar Muslim Separatists in Sumatra Separatists in Timor Warlords in Thailand Muslim Separatists in Philippines Separatists in Bougainville, PNG
Interstate Wars	Not Categorized
North Korea's invasion of South Korea Vietnam's invasion of Cambodia (1978) China's attack on Vietnam (1979) India's Wars with Pakistan (1948, 1965, 1971) India's War with China (1948) Indonesia's confrontation with Malaysia Indonesian invasion of East Timor (1975) Disputes over the Spratlys	Fiji's military coup (1987) India's invasion of Goa (1965) China's consolidation of Nepal

Diagram 1: Wars in the Asia-Pacific region since 1946

Two categories in the table involved non-Asian countries. The first category consists of the wars of liberation against colonial powers. It includes Indonesia's war with the Dutch, and the wars in Vietnam and Malaya against, respectively, the French and British. The second category comprises the wars for communist containment. These conflicts include the United Nation's commitment to the Korea War and the United States and allied involvement in the Vietnam War. Also in this category is Indonesia's violent repression of communists in 1965, where reportedly 500,000 died.

The next three categories refer to conflicts endogenous to the Asia-Pacific region.

The third category is civil war, in which an opposition seeks to gain control over the whole country. This group includes the Chinese Civil War, the victories by Pathet Lao in Laos and the Khmer Rouge in Cambodia. It also includes North Vietnam's invasion of South Vietnam. The fourth category consists of wars of national consolidation. This is where a government confronts an armed opposition who is demanding some type of reform. This category includes Sri Lanka's fight against the Tamil Tigers, Myanmar's war with Karen tribesmen, and Papua and New Guinea's conflict with the Bougainville Revolutionary Army. The fifth category comprises interstate wars, by which is meant territorial or ideological disputes with neighboring countries. These include North Korea's invasion of South Korea, Vietnam's invasion of Cambodia and China's attack on Vietnam in 1979.

It is revealing to put these wars in a global context. The regional distribution of wars and war related deaths between 1945 and 1989 is shown at Diagram 2.² It indicates that war deaths were heavily weighted towards Asia, and the Far East in particular. Although closer analysis of the data shows that from 1980 to 1989 there was a dramatic decline in the number of wars and deaths in the Far East. The 1990s was quieter, but still witnessed lingering conflicts. Overall, the Asia-Pacific region is not immune to settling its disputes through war. These disputes are invariably protracted. Moreover, Asia is the only region this century that has experienced war across the entire spectrum of conflict, including the use of nuclear, biological and chemical weapons.

² Ruth Leger Sivard, *World Military and Social Expenditures 1989*, (Washington DC: World Priorities, 1991) 23.

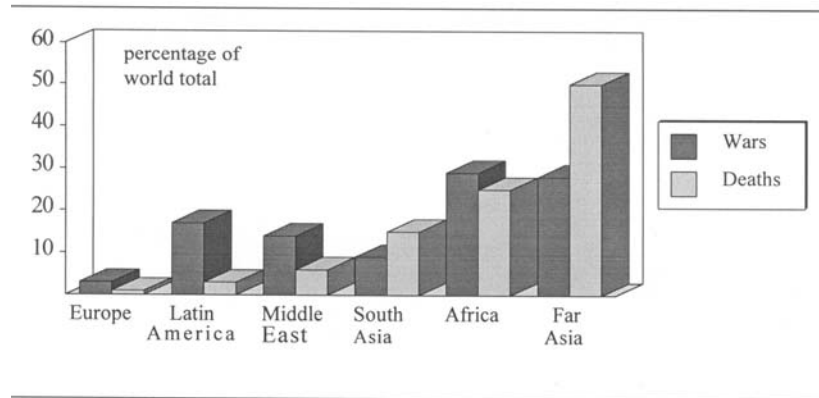


Diagram 2: Regional Distribution of War-related Deaths, 1945-89

This empirical examination of wars in the Asia-Pacific region since 1945 reveals some remarkable patterns. The following analysis should be read with reference to the impact of land power in shaping Asia since 1945.

- ✓ While 1945 to 1975 is perceived as a period of decolonization, there were actually few wars between native peoples and former colonial masters.
- ✓ On the other hand, most wars resulted from nation-building struggles in a post-colonial environment.
- ✓ On five occasions offensive campaigns by major powers failed to achieve their military objective: the United States failed to win North Korea; China failed to win South Korea; the United States failed to maintain South Vietnam's sovereignty; China's 1979 attack on Vietnam was thwarted; and the Soviet Union's intervention in Afghanistan ended in a humiliating withdrawal.
- ✓ No wars were primarily maritime.
- ✓ Relatively few were strictly conventional wars involving opposing armies fighting for territory.
- ✓ Wars were generally limited in geography and scale, thereby negating air power's full range of capabilities. The United States refused to bomb China during the Korean War. Neither Pakistan or India attempted to attack each others cities when such options were possible. Air targets were limited in the Vietnam War.
- ✓ Most wars involved guerrilla warfare against government forces. Governments with sophisticated air forces and armored forces did not gain a decisive

advantage through the use of these capabilities. The United States and Soviet Union employed fixed and rotary-wing aircraft extensively in Vietnam and Afghanistan, but these capabilities were not decisive.

- ✓ The pattern fits the argument that warfare is trending towards low-intensity conflict. Asia is increasingly experiencing less conventional wars. However, small wars and conflicts remain numerous, confined and intractable in nature.

As well as these empirical observations, a number of lessons can be derived from an assessment of Australia's use of land power during this period.

While Australia might not be an Asian country, its security concerns have always focused on Asia. Australia's involvement throughout the 20th Century has seen land power being employed in an expeditionary role. The exception was during the Japanese attacks on the Australian mainland in 1942. At that time Japanese attacks resulted in substantial Australia land forces being deployed throughout Australia for continental defense. But the campaign to defend the Australian continent was not fought or won in Australia. Rather, the battles for Australia were resolved in the Asia-Pacific region. The Japanese threat could never have been removed without Japan being occupied by Australian and Allied land forces.

Throughout the 20th Century, Australia's employment of land forces in Asia in an expeditionary role was pervasive. In 1900, Australia sent troops to China in the aftermath of the Boxer Rebellion. At the beginning of the First World War the Australian Naval and Expeditionary Force captured German New Guinea, which was kept as a trust under the auspices of the League of Nations.

At the outbreak of the Second World War, an infantry division and several air squadrons were dispatched to defend the Malay peninsula and Singapore. This

expeditionary force was destroyed by Japanese aggression, foremost by Japanese land forces. Despite these losses, Australia committed significant ground forces to the war in the Pacific. At the war's end six infantry divisions were in action outside Australia. Although Australian forces played a subordinate role to its more powerful ally, it was not until April, 1944, that the United States Army outnumbered the Australian Army with troops in combat.

After the Second World War, the Australian Army deployed expeditionary units to Asia until its withdrawal from Vietnam in 1972. During a thirty year period of continuous expeditionary operations, the Army fought in Korea, Malaya, Borneo and Vietnam.

The political fallout of the Vietnam War unnecessarily maligned Australia's "forward defense" policy for the next 25 years. As frustrating as the Vietnam war may have been, it still achieved the broader political objective of containing communism in South Asia. Yet, extinguishing the odium of Vietnam has been slow. It has recently begun with Australia's tentative foray to Cambodia in 1992-93 as part of a United Nations peace-keeping mission. The successful outcome of the Cambodian mission might be a turning point for Australia to more actively use its military instrument of power to promote regional security.³

On a more general note, historical patterns of land warfare in Asia since the Second World War evince some indicators for future conflicts.

³ United Nations Transitional Authority in Cambodia (UNTAC). UNTAC was able to accomplish its central task of holding a free and fair election and laying a sound foundation for the people of Cambodia to build a stable and peaceful future, (Security Council Resolution 880). Australia provided the force communications unit and the UN mission commander, Lieutenant General John Sanderson.

Asia-Pacific wars usually do not involve one nation trying to conquer another nation's territory for material gain. Conflict has not occurred for reasons of expanding living space, winning natural resources or territorial aggrandizement. Conflict between states has generally been about disputed claims along a border. Punitive attacks are rare, and there is no evidence of pre-emptive strike. Intra-state conflict has been more prevalent and is ideological in nature.

Land forces in these wars operated differently to the accepted Western model. Air and naval components did not have as dominating impact on operations as they did in other regions. All wars, large and small, have relied on land forces as the principle instrument of power. A reliance on dominating a conflict with air and naval power has been Western paradigm for war. The application of Western war techniques, epitomized by the United States and Soviet Union, were not decisive. European scholars and soldiers alike are mesmerized by swift campaigns with decisive results. By contrast, many of the post-Second World War conflicts in Asia have been protracted.

Asian generals demonstrate a willingness to employ the indirect approach to campaigning.⁴ The strategy used by the North Vietnamese Army and the Viet Cong in Vietnam aimed to avoid presenting the Americans with a target. It was a campaign concept that relied more on stratagem than sheer force.⁵ Another aspect of the indirect

⁴ As an example, General Vo Nguyen Giap showed tactical skill at the battles of Vinh Yen and Mao Khe in 1951, but on both occasions he was defeated by air and sea power. He therefore resolved to shift his main effort to Tonkin in 1952-53, leading to the victory at Dien Bien Phu in 1954. Giap showed operational flexibility and selected the indirect approach to negate the enemy's strengths. Dien Bien Phu also showed how dependent European land power had become on air and sea power. Christopher Bellamy, *The Evolution of Modern Land Warfare*: New York: Routledge, 1990), 231.

⁵ Russell Steth, *The Military Art of People's War. Selected Writings of Vo Nguyen Giap*, (New York: Monthly Review Press, 1970), 299-300.

approach is the transition and interplay between guerrilla and regular forces. It is a strategy of attacking the enemy at two levels simultaneously, and deftly shifting the emphasis (or main effort) between the levels of conflict.

Experience from a century of conflict in the Asia-Pacific region shows that land forces can be used for tasks such as effecting the evacuation of their nationals from dangerous situations at one end of the spectrum, to conducting conventional operations at the other end. The philosophical traditions of Asia have contributed to a more blurred view of the division between war and peace than in European thinking. Christopher Bellamy eloquently describes this aspect in *The Evolution of Modern Land Warfare*: "Like the Buddhist prayer wheel, the circle of comparative peace, guerrilla war, mid-intensity war, major war, revolves and returns to its starting point, and revolves again. Smooth transition from one level of conflict to another is part of the Asian approach to war."⁶

On balance, Australian land power was successful in shaping the region and achieving political objectives. There are many advantages to the Asian way of war, but the oriental in combat should not be accorded supernatural powers. A century of experience in expeditionary operations shows that Australia did not have to rely on technological dominance in order to successfully apply its land power in Asia.

If historical patterns shape perceptions on the utility of land power, then analysis of the current and future environment makes the same point as a reality. At this stage we can assess the relevance of Australian land power in the future.

⁶ Bellamy, 237.

Future Regional Conflict

The Asia-Pacific area as we know it today was shaped primarily by war. Current security issues in the area are still affected by the legacy of wars this past century. The academic question is: what lessons do the wars teach us? While the strategic question is: are wars seen in the past fifty years likely to recur in the next quarter century?

Sources of Conflict
1. India's nuclear arms race with China and Pakistan.
2. Competing Russian and Japanese claims to the Kurile Islands.
3. Divided sovereignty on the Korean peninsula.
4. Competing sovereignty claims between mainland China and Taiwan.
5. Unresolved dispute between China and Japan over Senkaku Island in the East China Sea.
6. The armed Communist and Muslim insurgents in the Philippines.
7. Strong separatist movement in Sabah.
8. Competing claims to Parcel and Spratly Islands in South China Sea
9. Bougainville secessionist movement in Papua and New Guinea.
10. Philippines claim to the Malaysian state of Sabah.
11. OPM resistance movement in Irian Jaya.
12. Continuing resistance to Indonesian rule in East Timor.
13. Aceh resistance movement in northern Sumatra.
14. Dispute between Malaysia and Singapore over Pulau Batu Putih Island in the Straits of Johore.
15. Competing Indonesian and Malaysian claims to Sipadan and Ligitian Islands.
16. Residual conflict and instability in Cambodia.
17. Residual conflict between Government and resistance in Laos.
18. Armed resistance and guerrillas along the Thai-Lao border in north-eastern Thailand.
19. Secessionist, Communist insurgent, and pro-democracy rebellions in Burma.
20. Insurgency in Bangladesh.
21. Territorial dispute and occasional skirmishing between India and Pakistan over Kashmir.
22. Hostilities along the Burma-Bangladesh border.
23. Sikh and other insurrectionist movements in India.
24. Insurgencies in Sri Lanka.
25. Contest for the independence of Nepal.

Diagram 3: Sources of Conflict in the Asia-Pacific Region, 1998⁷

⁷ Adapted and updated from the information provided in David Homer (ed), *The Army and the Future: Land Forces in Australia and South-East Asia*, (Canberra: Australian Government Printing Service, 1993), 37.

A vision of nature of future warfare might be found in the types of conflicts currently besetting the region. Existing conflicts might act as a catalyst for more widespread involvement, including Australia's participation. These conflicts are summarized at Diagram 3.

The nature of these conflicts tend to support the thesis that the character of war is changing. In *The Transformation of War*, Martin van Creveld takes the rather extreme view that the era of what he calls "Trinitarian war" has passed. van Creveld wrote in 1991 that "conventional war may be at its last gasp" and he opined, "in the future, war will not be waged by armies but by groups whom today we call terrorists, guerrillas, bandits and robbers ..."⁸

Critics of van Creveld cite the conventional nature of the 1991 Gulf War as a weakness of the thesis. More recently, however, other analysts also write of the apparent end of the era of Clausewitzian war.⁹ By Clausewitzian war, they mean wars between states for clearly defined political aims. Although future wars may not fit the Clausewitzian model and may appear uncontrollable, it is important not to dismiss them as "anarchy" or "primitivism." Mary Kaldor and other authors, including Arkadii Popov, an advisor to President Yeltsin, make this point in *Restructuring the Global Military Sector: New Wars*.¹⁰ Writing in the same book, Radha Kumar provides insight on the emerging nature of warfare in South Asia.

⁸ Martin van Creveld, *The Transformation of War*, (New York: The Free Press, 1991), 197, 205.

⁹ Examples of renown authors who make a similar hypothesis include Michael Carver, *War Since 1945*, (London: The Ashfield Press, 1990); and Chrispher Bellamy, *The Future of Land Warfare*, (New York: St Martin's Press, 1987).

¹⁰ Mary Kaldor and Vashee Basker, *Restructuring the Global Military Sector: Volume I New Wars*, (London: United Nations University, 1997), 3.

The trajectory we have seen in South Asia is that what starts as movements with legitimate political aspirations for devolution, cultural, economic and social rights, or political reform, gradually move into a spiral of armed insurgency, disintegrative politics and internecine war. The reasons for this are threefold: government intransigence in addressing legitimate aspirations and the resort to divide-and-rule tactics; cross-border intervention with either covert or overt state support for militia groups, inevitably leading to move support for the more manipulative groups; and diaspora nationalism (both contiguous and far-flung.)¹¹

Despite the logic of the new-war argument, the build-up of conventional arms in the Asia-Pacific region appears to be at variance with such a hypothesis.

There is frequent speculation that an arms race is taking place in East Asia. Since 1995, figures indicate the region is now the second largest market of arms after the Middle East.¹² East Asia now eclipses NATO in arms purchasing. Asia also claims eight of the ten largest militaries in the world, and spending on modernization has increased 35 percent over the last six years.

The last twenty years have seen substantial change in the sophistication of military technologies in the Asia-Pacific region. Many countries are introducing longer-range fighter-bomber aircraft such as F-16s and F/A-18s. India operates two air craft carriers, while Japan, Thailand and China have given consideration to the acquisition of this generic capability in recent years.

Of concern is the spread of ballistic missile, chemical and nuclear technologies into the region. In early May, 1998, Pakistan test-fired an intermediate-range missile called Ghauri. That allowed Pakistan to overtake India in the missile race.¹³ India quickly

¹¹ Radha Kumar, "Conflicts in South Asia: Kashmir and the Tamil Eelam," in *Restructuring the Global Military Sector. Volume I New Wars*, 279-280.

¹² The International Institute for Strategic Studies, *The Military Balance 1996/97*, (London: Oxford University Press, 1996), 279.

¹³ Pakistan plans to develop a longer-range missile called Ghaznavi. Although the Missile Technology Control Regime (MTCR) prohibits technology transfer of such missiles, some of Pakistan's missile components are reported to have come from North Korea.

responded with the test-denotation of five thermo-nuclear devices, announcing that China was the country's main potential threat.¹⁴ The contest highlights the reality of nuclear capabilities in the region. Diagram 4 shows the warhead capabilities of selected countries.¹⁵ All countries have, or are in the process of developing ballistic missiles.

Country	High Explosive	Chemical	Nuclear
Pakistan	Held	Potential to Build	Possibly Held
India	Held	Potential to Build	Held
China	Held	Possibly Held	Held
Taiwan	Held	Potential to Build	Potential to Build
North Korea	Held	Possibly Held	Potential to Build
South Korea	Held		Potential to Build

Diagram 4: Warhead Capabilities Held by Selected Countries

At this stage, the outcome is unclear for Asia's proliferation of ballistic missiles and weapons of mass destruction. Suffice it to say, that warfare at the higher end of the conflict spectrum is a possibility. Therefore it is a reality that Australian forces might have to fight in such a high-intensity environment. It is also a reality for which the ADF has made almost no preparation whatsoever.

In summary, the prognosis is that future conflict in the Asia-Pacific region will occur across the entire spectrum of war. These other factors also portend a fragile future.

- ✓ The relative decline of the Western powers (United States, Russia, Britain and France).
- ✓ The rise of new Asian powers.
- ✓ The challenge and rivalry impelled by the region's economic ascent.
- ✓ Demographic changes, resource and environmental tensions.
- ✓ The impact of ideology to create new tensions.
- ✓ The proliferation of advanced and long-range weapons of mass destruction.

¹⁴ These remarks were made by India's Minister for Defence, George Fernandes.

¹⁵ Homer, *op.cit.*

Australia's paradigm for warfare is Western in character, yet its military operations are likely to be against an Eastern foe, wielding both conventional and unconventional forces.¹⁶ It is probably because of the complexity of land operations, and the national commitment required, that post-Vietnam defense strategists have shied away from advocating Australian land power as a viable instrument. Instead, the focus of Australian defense preparation is now firmly fixed on maintaining a technological edge in air and naval capabilities.

Australia's recent reluctance to engage on the ground in Asia has meant a reliance on the United States to look after Australia's higher-level security needs in the region.¹⁷ But, unlike the United States, Australia's future prosperity is increasingly and inextricably linked to Asia. This has caused the current Australian Government to rethink defense planning and particularly the need to explore defense cooperation measures. The impact of changing Australian defense policy on land power is now of paramount concern. This theme will be addressed in the final part of this chapter.

Emerging Strategic Goals for Land Power

The Australian Government recently announced its review of the strategic trends shaping Australia's place in the world. According to the Minister for Defence, Ian McLachlan, *Australia's Strategic Policy*, released in December 1997, sets the context for

¹⁶ Australian defense strategists postulate that only an Asia country could invade Australia. Paradoxically, the Australian Army uses as a training model a notional enemy using Soviet weapons and tactics.

¹⁷ *Defending Australia: Defence White Paper 1994*, (Canberra: Australian Government Publishing Service, 1994), 96. "We will continue to rely on the extended deterrence of the US nuclear capability to deter nuclear threat or attack on Australia."

decisions about military capabilities to 2020 and beyond.¹⁸ Economic transformation in the Asia-Pacific and a changing strategic balance between the region's powers required Australia to reassess its security strategy. The immediate outcome of the assessment is a different perspective for security and, concomitantly, new military priorities and objectives.

Australia's security strategy over the last decade emphasized self reliance for the defense of continental Australia.¹⁹ Within this strategy, regional engagement aimed at influencing security on the approaches to northern Australia. The military campaign envisaged accepting battle in the air-sea gap, and then (if necessary) defeating a "weakened" enemy on land in northern Australia. This was the defence-in-depth concept.²⁰ Consequently the Australian Army's impetus for doctrine and capability development is predicated on fighting the land battle in northern Australia. Major exercises are designed to test doctrine and capabilities against a notional enemy raiding northern Australia in up to company sized groups.²¹ The new security strategy, however,

¹⁸ *Australia's Strategic Policy*, (Canberra: Department of Defence, December 1997).

¹⁹ Australia's official strategic thinking has evolved slowly from the early 1970s onward. Defense planning was hampered by incomplete political guidance. It took Dr Paul Dibb, consultant to the Minister for Defence, in his seminal *Review of Australia's Defence Capabilities* (Canberra: Australian Government Printing Service, March 1986) to move the Government to articulate an official strategy. The 1987 defense white paper provided clear Government guidance, stating national security aspirations and announcing its strategy of "defense in depth."

²⁰ The defence-in-depth strategy is outlined in *Strategic Review 1993*, (Canberra: Department of Defence, December 1993), 44. "Our strategy for the defence of Australia is defence-in-depth.... (it) exploits our geography by aiming to keep an adversary at arm's length, and make any operation on Australian territory more difficult for an aggressor."

²¹ Major land exercises have been designed to conform with the operational concept outlined in *Defending Australia: Defence White Paper 1994*, 48. "The Australian Defence Force possesses a substantial (sea and air) capacity to prevent large hostile forces from landing and being sustained on our territory. However, smaller groups could penetrate our shores anywhere across the north ... In the early stages of a conflict, Regular infantry units and airfield defence guards would protect vital assets ... 'call-out', the Reserve infantry brigades wouldfree some regular units for response and other tasks."

foreshadows a profound impact on the Australian Defence Force (ADF), particularly the Australian Army.

The Government's new policy for national security emphasizes cooperation with Australia's neighbors to keep the region secure.²² It reflects an evolution in understanding that Australia's national interests and defense priorities do not begin at the northern coastline. Trade relations and economic well-being are equally as important as protecting territory and infrastructure assets. National indicators show Australia's economic prosperity increasingly lies in Asia. As McLachlan articulated, "we promote forward cooperation first and foremost because it is in our national interests."²³

In essence, the policy of "self-reliance" has evolved into one of "forward cooperation." In a Government policy address to the Australian Defence Studies Centre, McLachlan further explained, "that concept involves military capability, mobility and flexibility so our forces can respond to protect our national interest. (Therefore) the ADF must have capabilities to undertake and sustain military operations in support of strategic interests in the Asia-Pacific region."²⁴ Among the services, the Australian Army will

²² Unlike the United States, Australia does not have a single authoritative document that articulates its national security strategy. Each department publishes its respective strategy. In this case, the Defence Department's *Strategic Review 1997* and the Foreign Affairs and Trade Department's *White Paper, 1997* are consistent. The Minister for Foreign Affairs and Trade, Alexander Downer, stated "The (Foreign Affairs) White Paper makes it clear that Australia's security means much more than safety from direct attack. It means preserving our nation's capacity for independent decision-making. And it means recognizing the growing interrelationship of Australia's security and economic interests with the security and stability of the Asia-Pacific." Cited in "Charting Australia's Regional Future: The White Paper on Foreign and Trade Policy", speech by Alexander Downer, Minister for Foreign Affairs and Trade, to the Foreign Correspondents' Association, Sydney, 29 August, 1997.

²³ "Australia's Strategic Objectives - Decisions about Military Capabilities to 2020 and Beyond," Media Release, Office for the Minister for Defence, Parliament House, Canberra, 11 November, 1997.

²⁴ "Australia's Strategic Objectives," Address to the Australian Defence Studies Centre, 11 November. Speech text provided by the Office for the Minister for Defence, Parliament House, Canberra.

require the greatest reorientation of its doctrine and capabilities. Just as the Government is rethinking its approach to national security, so too must the Army rethink its design for military operations in the 21st Century.

The question arises, can Army's current system for managing conceptual change, implementing innovation and developing new capabilities meet the challenge of radical transformation? Minister McLachlan believes the Army has significant limitations in complying with the new strategic direction. The Minister made this clear when he publicly announced, in late 1997, the Australian Army had deficiencies in structure, training, and equipment which put barriers in the way of its ability to respond quickly and effectively to defense emergencies. The Government's new strategic priorities require the Army to be more mobile, better trained and better equipped to handle a wide range of military contingencies. McLachlan further explained these objectives would be achieved through the implementation of a plan entitled "Restructuring the Army."

Unfortunately the plan for Restructuring the Army (RTA) will not fulfill the Government's expectations. This is primarily due to a break in continuity between evolving national security strategy and Army's planning for force development. Planning for RTA commenced two years before the current Government came to power. As such RTA is designed for the "defence-in-depth" strategy for continental Australia.²⁵

²⁵ Australia's long-standing defense policy of "self reliance" is based upon three principles: first, the ability to defend Australia with its own military forces; second, the promotion of regional security and stability through effective cooperation and partnership within the region; third, strong alliances and the promotion of global security and stability. Notably, this defense policy stated emphatically that the ADF is structured only on the basis of the first principle. See *Defence of Australia 1987* (Canberra: Australian Government Printing Service, 1987), 31.

The official proposal for the force structure of Army for the 21st Century has not been analyzed with reference to the new strategy of "forward cooperation." It is misleading for Army to suggest otherwise. In fact, the opposite might be closer to reality: that Army's *planned* capabilities, mobility, training and equipment are *not* suited to operations involving regional engagement in the 21st Century.²⁶ Despite these limitations there are some durable aspects of RTA, particularly the objectives for improving force development processes.

Implications for Land Power

Minister McLachlan stressed that Army must review the way it currently conducts its core business. One of RTA's objects is an Army in which structural and technological change is regarded as an essential norm.²⁷ To achieve the Government's new goals for security, Army has been tasked significantly change its approach to force development, how development is managed, and how new warfighting concepts are culturally embraced. Therefore, critical to RTA are initiatives to create a Combat Training Centre (CTC) for evaluation, a Battlelab for experimentation, and a center for integrating combat doctrine. Overall, these initiatives seek to improve Army's system of force development.

These type of initiatives are, however, not unique to Australia.

²⁶ In 1989, Defence Minister Kim Beazley, the political architect of defense self-reliance, proclaimed the ADF a balanced force. He stated the old dichotomy between forward defense and continental defence has no analytical potency today, because Australia can do both. But this claim is a delusion. In force structure and resource terms, such a dual capability is not evident across the three services, at least not in the Army. Without ground forces capable of significant force projection, no defense force can claim to be balanced. This analysis is elaborated on by Michael Evans in "From Defence to Security: Continuity and Change in Australian Strategic planning in the Twentieth Century," *Serving Vital Interests: Australia's Strategic Planning in Peace and War*, (Canberra: University of New South Wales, Australian Defence Force Academy).

²⁷ "Restructuring the Army," Media Release, Office for the Minister for Defence, Parliament House, 15 October, 1997.

The Australian Army can learn from other countries rather than attempt to implement a new force development process from scratch. A coherent system for force development unifies the three crucial entities of national military strategy, new operational concepts and technological enhancements. In terms of coherency, the military services of the United States can serve as a benchmark.

Since the conclusion of the Cold War the United States has been steadily changing the way it military will fight. It has been doing so in a remarkably systematic fashion with relatively little of the cultural derision that often characterizes such radical changes. Often military leaders with strong alliances and nostalgia for the arms to which they have devoted their lives do not relish the idea of change.²⁸ This problem is not readily evident in the United States.

The fundamental changes in the United States might not be apparent because on the surface much of its principle equipment will be for the foreseeable future those items designed for use against the Soviet Union. Many of the successful weapons systems used in the Gulf War originated from procurement decisions made during the Nixon, Ford, and Carter administrations. Adapting this equipment for use in new types of warfare may or may not be appropriate. But perhaps more important than new equipment is new doctrine.²⁹ That is, knowing how best to fight given ones aims, capabilities and the environment.

²⁸ This general observation is made by Harold Winton in *To Change an Army: General Sir John Burnett-Stuart and British Armored Doctrine, 1927-1938*, (Lawrence, Kansas: University Press of Kansas, 1988).

²⁹ This evaluation was made by the Institute for National Strategic Studies in *Strategic Assessment 1996: Instruments of US Power*, National Defense University, Washington DC, National Defense University Press, 220.

Substantial progress has been made in changing United States military doctrine since the end of the Cold war. The services have published their analyses of how best to conduct operations in a future conflict environment. New doctrine is evident in their respective strategies: the Army's *Force XXI*; the Navy's *Forward From the Sea*, incorporating the Marine Corps' *Operational Maneuver From The Sea*; and the Air Force's *Global Presence*.³⁰ Each publication announces a shift in warfighting concepts. The military as a whole is placing more emphasis on joint operations and the services are unified by a vision to dominate the full spectrum of conflict.³¹ Strategy, operational concepts and new warfighting capabilities are being evolved because of top-down joint direction, and a corporate willingness to embrace change.

The approach by the United States military's to new operational concepts and capabilities can serve as a model for force development. Like the other services, the Marine Corps has recently begun to evaluate new ways for warfighting. The Commandant, General Charles Krulak, established the Commandant's Warfighting Laboratory in 1995 and charged all Marines to make a "commitment to innovation." The program to develop new operational concepts and conduct experiments over the first five years has been christened *Sea Dragon*. Notably, *Sea Dragon* is a process, no a solution or panacea. Thus far, *Sea Dragon* has achieved exceptional results, although the Marine Corps is a long way from embracing all the new concepts and recommendations. Crucial to the success of *Sea Dragon* is the Marine Corps Warfighting Laboratory.

³⁰ Army's *Force XXI*; Navy *Forward From the Sea*; Marine Corps' *Operational Maneuver From The Sea*; Air Force's *Global Presence*.

³¹ Department of Defense, "Joint Vision 2010: America's Military Preparing for Tomorrow," *Joint Force Quarterly*, Summer 1996.

The Australian Army has an opportunity to learn from the United States Marine Corps. The strength of the Marine Corps' approach is threefold. These include its' concept-based force development process, the integration of experimentation into the broader system of force development, and the underlying philosophy that links force development with military strategy.

Analysis in Chapter 2 will show the relevance of the Warfighting Lab to redesigning Australian land power for the 21st Century. For the Australian Army's immediate challenge is not so much about forecasting the right doctrine for the 21st Century, rather it is about institutionalizing a system that will evolve the right doctrine and capabilities.

CHAPTER 2

CONCEPT-BASED FORCE DESIGN

Planning for the future, whether in the military or business environment, is often perceived as no more than speculation with little precision or accuracy. However, although the future is unknowable, it is not completely obscure. Various planning methodologies can, when used in unison, provide a basis for informed decisions. Staff at the United States Marine Corps Warfighting Laboratory claim they use a unique methodology for force development planning.

Rather than dwell on improving existing platforms and systems, "the Marine Corps is moving into the future through concept-based experimentation."¹ In analyzing the Marine Corps' concept-based approach it is appropriate to make two comparisons. Initially analysis will compare the Warfighting Lab's approach with other methodologies used for future planning, both in the military and business sectors. While the constraints and "bottom-line" for defense and the business planning are very different, both involve making decisions for an unknowable future.² A comparative analysis will determine the

¹ James A. Lasswell, "Wall to Wall: Sea Dragon's Next Phase Explores Urban Warfighting Tactics for the 21st Century," *Armed Forces Journal International*, January 1998, 36.

² Richard Simpkin expounded the radical method of training military commanders: essentially that business was a far better school for command in real war than peace-time soldiering. See his book, *Race to*

extent to which the Marine Corps' claim that its "innovative" concept-based approach is truly justified. A second line of analysis will indicate lessons for the proposed Australian Army Battlelab. This comparison is useful to identify any design limitations with the embryonic Battlelab. (This theme will be explored in Chapter 3.)

Overview of Methodologies

In the article "The Art of Strategy and Force Planning,"³ Henry Bartlett and others provide an overview of planning methodologies. It's emphasized that none of the approaches are exclusive. They should be seen as overlapping sections of a spectrum rather than absolute categories. Though, for the purposes of clarification, each approach has been labeled by their respective author. During an actual planning cycle, several methodologies or all would be used. A synopsis of the various planning methodologies provides a framework for analyzing the Marine Corps force development approach.⁴

Top Down. This approach uses national objectives to drive force planning, giving a "macro perspective". A limitation is constraints are only considered late in the planning process. Also, this method is prone to rigidity and often there is a lack of challenge to high level objectives by low level planners. This point is illustrated by *Joint Vision 2010*, the overarching force development plan for United States Defense Department. *Joint*

the Swift: Thoughts on Twenty-First Century Warfare, (London: Brassey's, 1986). Its not surprising then that General Krulak and his senior officers attending training at the New York Stock Exchange in 1995. Wall Street traders are among the fastest decision makers. The Marine Corps acknowledges they can learn from them.

³ Henry Bartlett, G. Paul Holman and Timothy Somes, "The Art of Strategy and Force Planning," *Naval War College Review*, Spring 1995, vol XLVIII, no 2.

⁴ The United States Naval War College has undertaken a comprehensive analysis of this subject. See the Strategy and Force Planning Faculty's, *Strategy and Force Planning*, 2nd edition, (Newport RI: Naval War College Press, 1997).

Vision 2010's driving ambition is for "full spectrum dominance," (from the high to low end), against all comers, in all combatant commands. Notably, no constraints or priorities for full spectrum dominance are indicated.⁵

Bottom Up. Existing military capabilities are used as the driver, but this approach can easily lose sight of the "big picture." The Quadrennial Defense Review (QDR) is largely based on this methodology. For instance, the Navy will review its carrier capabilities based on the premise that carrier battle groups are essential for power projection. The Navy is unlikely to analyze whether force projection from the sea will be made redundant by capabilities in other services in the future.

Scenario. In scenario-based planning the situation drives capability development. The approach involves an assumed set of conditions and a postulated problem. Its advantage is it provides a specific and tangible focus. It also encourages clear priorities and acknowledges the dynamic nature of a scenario, which aids contingency planning. The limitation is the future rarely conforms to planners' expectations. Moreover, there is a tendency for scenarios to be retrospective. Such an approach is evident in French military planning in the 1930s with the outcome of the Maginot Line concept. It also reflects the current approach used by the Australian Army which is now embedding military capabilities to particular areas in northern Australia based solely on the scenario of small-scale enemy incursions attempting to destroy infrastructure assets.⁶

⁵ Department of Defense, "Joint Vision 2010: America's Military Preparing for Tomorrow," *Joint Force Quarterly*, Summer 1996.

⁶ This became the basis for force structure design in the Army 21 study conducted in 1995-96.

Threat. Central to this methodology is identifying potential foes and assessing their capabilities. The problem arises in deciding what constitutes a valid threat. This approach is inherently reactive and often bias to quantitative data that leads to overlooking qualitative factors such as leadership and morale. United States defense planning in the Cold War was unequivocally threat-based.

Mission. This methodology is functionally based. Development is across the broad categories of military activities (such as deterrence and power projection) irrespective of plausible threats. There is a tendency toward sub-optimization and ignoring higher goals.

Hedging. This approach is characterized by preparation for any conceivable military contingency or tasking of military force. It assures balance, flexibility, and often leads to an equitable distribution of resources between the services. This methodology often results in very costly force development strategies being adopted. *Joint Vision 2010's* aspiration for "full spectrum dominance" has all the hallmarks of hedging. Although "dominance" in every part of the spectrum is not critical to United States national interests, it became a goal simply because its forces might be employed across the spectrum.

Technological Margin. This approach centers on deterrence by fielding systems superior to those of a potential enemy. Generally the costs of development and new platforms leads to a smaller overall force. There is often a sacrifice of balance, flexibility and numbers. A liability exists because technocrats might embark on enhancements for self-serving reasons rather than actual strategic or operational needs.

Fiscal. In this methodology force development is budget driven. Fixing the defense budget to a percentage of the Gross Domestic Product, and then further apportioning an amount to capital investment is indicative of this approach. This approach provides for good managerial control, but does not necessarily reflect the international security environment.

Dynamic or "Bartlett" (author's own). In this model Bartlett combines the key variables of security environment, resource constraints, objectives (ends), force (means), risk and strategy. As one variable changes, the others must be readjusted to "realign the balance." This methodology might require modifying the ends, changing the means, revising the strategy, or re-evaluating the risk of failure. The flexibility required for this approach is problematic for large organizations such as Defense.

The Warfighting Lab's methodology is referred to as concept-based. However, before the Marine Corps' methodology is explained, it is instructive to elaborate on the conventional approaches used by other planners. The purpose of describing the various conventional methodologies is to demonstrate how the Warfighting Lab's concept-based process is a hybrid, drawing on the strengths of many approaches. It will also be used as evidence to demonstrate that the ADF's claim that it is capabilities-based military force cannot be sustained when critically examined.

Scenario-based Force Development

Developing a range of scenarios upon which to base future planning is a common methodology in both business and military arenas. Charles Taylor's study, *Alternative*

World Scenarios for a New Order of Nations,⁷ has received wide usage in strategic planning by the United States military and by business and other non-government organizations. The study provides a set of four plausible scenarios against which users can build policies and make decisions while anticipating and making judging the consequences before implementation. The four scenarios are to be used together, allowing planners to compare the influence of variables across time in realistic situations.

Scenario drivers are plausible trends and events that establish the themes of the scenarios (for example, geography, economics, military factors, science and technology.) Taylor's study also used national and international political and economic drivers. Each scenario includes similar "driver trends." The scenarios are revised and updated in line with world changes as they occur. They are not meant to be predictions in themselves, but guides to possible futures which are subject to various changes in world events.

The advantage of the alternative scenario approach is "that it provides the context for planning where a spectrum of trends and concepts can be considered across a variety of settings."⁹ Having four scenarios rather than just one overcomes the deterministic and predictive approach of single scenario-based planning. To give a private sector example, a similar methodology is used by the Shell Corporation in its future planning.

Shell's *Global Scenarios 1995-2020* postulates two possible future scenarios. These help planners prepare for discontinuities and sudden change by anticipating

⁷ Charles W. Taylor, *Alternative World Scenarios for a New Order of Nations*, Strategic Studies Institute, US Army War College, 1993.

⁹ Taylor, 110.

possible future events. The basis for all Shell's future scenarios are the three inescapable forces of liberalization, globalization and technology.

According to Shell, change is inevitable for five world areas, namely: the European welfare states, the Gulf economies, Chinese politics, Japanese regulation, former communist and state-owned enterprises especially in India, Russia and China. From this environmental scan, Shell developed two future scenarios characterized as "Just Do It" and "Communitarianism."

✓ ***Just Do It!*** This scenario details a hyper-competitive, rapidly-changing world characterized by individualism, political libertarianism and small government of fluid informal networks and porous international borders. The United States is the exemplar of the "Just Do It" world. In this scenario the traditional powerful position of the nation-state might be weakened in comparison to powerful transnational entities.

✓ ***Communitarian ("the big me")***. In this world, individual welfare is linked to the welfare of the whole. Governments have an important enabling role, as do long-term relationships. Society is the foundation of successful economies and strong nations. This is often known as the "Asian Way." In this scenario the nation-state remains the preeminent international power broker, but with new internal drivers and aspirations.

The mechanics of how these scenarios feed into actual decision-making processes is not made clear. In large organizations, with protracted acquisitions and policy formulation, the constant updating of long term plans is problematic. Judging how often scenarios should be revised and how exactly should these revisions impact on extant longer term plans is a matter for the organization's top-level leadership. The military experiences a dilemma when major acquisitions and technology improvements are superseded by the time they are implemented.

An important proviso for scenario-based planning is that a single scenario cannot be relied upon as a credible projection over the longer term. The strength of Shell's two examples is they take several scenarios as their starting point. A broad range of contingencies and planning methodologies provides force developers with a more balanced and flexible view of the future.

Capability vs Threat Based Force Development

United States Defense planning in the Cold War was unequivocally threat-based. Brigadier General James Dubik contends in his article, "Capability vs Threat Based Planning,"¹⁰ that Cold War logic continues to dominate the QDR. Soviet forces and global war models have been replaced by the major regional conflicts (MRC) scenario, in which the United States is prepared to fight and win two major regional conflicts (near) simultaneously. Less optimistic projections envision winning one MRC while containing another. In these new scenarios, North Korea and Iraqi threats replace the USSR as the "yardstick foes." Dubik criticizes this approach as being a mere sizing function, not a strategy. As a way of defense thinking, Cold War methodologies have been adopted rather than fundamentally changing the way we think to fit new strategic circumstances.

Dubik proposes the replacement of threat-based planning with "capability-based" planning. Dubik asserts that capability-based planning better meets the asymmetry and uncertainty of the future strategic environment. Dubik argues "the US must maintain sufficient conventional military strength to deter interstate conventional wars while at the same time develop military capabilities that can prevent and defeat asymmetrical threats."

¹⁰ James M. Dubik, "Capability vs Threat Based Planning," *Armed Forces Journal International*, January 1997.

Under Bartlett's model, this could be interpreted as hedging, or covering all possibilities. In the era of tightening defense budgets, the Dubik capability-based methodology is the most expensive of planning strategies.

The ADF claims it is a capability-based military force. The *Defence White Paper -1994* stated it focused on capabilities rather than threats as the basis for its force planning. Dubik's capability-based model is very similar to that promoted by the ADF. That is, Australia's defense posture and capabilities are determined by the nature and level of the capabilities that might confront the ADF.¹¹ While the White Paper does not posit the existence of any current threat to Australia, regional capabilities are used as the basis for Australian defense planning under the rubric of "notional adversary capabilities." Alternatively, this approach might be described as *generic threat-based* force development. The ADF's capability-based approach is actually a fusion of threat-based and assumption-based methodologies. A brief description of assumption-based planning will explain this point.

Assumption-based Force Development

Closely related to Bartlett's hedging methodology is Assumption Based Planning (ABP). ABP was developed by the RAND Corporation as a means of dealing with strategic uncertainty. Generally, conventional planning methods merely use current trends to forecast the future. Such a method relies on continuity of events. If trends do not continue as anticipated then the strategic plan begins to unravel.

¹¹ *Defence of Australia*, 1997, 22.

ABP seeks to identify when assumptions about the future are likely to fail. This requires planners to critically examine their strategy to identify assumptions that may prove to be vulnerabilities. Indicators are used to provide advance warning that an assumption's potential vulnerabilities are becoming a reality. This knowledge can then be used to shape events to avoid exposure of a vulnerability of a particular assumption. Hedging actions prepare an organization for the failure of an important assumption.

The ADF's indirect use of assumption-based planning is evident in its priority for the development of strategic information and knowledge systems.¹² The intended outcome of these systems is to provide the ADF with timely warning of an emerging potential adversary. These knowledge systems would indicate an adversary's *intent* to conduct military operations and therefore assumptions about enemy capabilities might be refined or validated. These future knowledge systems will focus at the strategic level.

Unfortunately the Australian Army has no equivalent indicators to help validate its assumption its next critical battle will be in northern Australia. The Army could make effective use of ABP to complement its capability-based force structure planning. Potentially, the Army could use ABP to set a range of indicators to identify that its next campaign would *not* be in northern Australia. The activation of such indicators would allow the timely reorientation of the land force for employment in another theater.

Without these indicators Army has limited flexibility and will always be ill-prepared to conduct operations outside Australia. This is a high risk omission given a number of destabilizing regional trends and the new security policy of "forward

¹² Defense has forecast some 60 percent of its force development budget will be spent on gaining the knowledge edge.

cooperation." It is also remarkable given historical precedence for the Australian Army's involvement in expeditionary campaigns.

The major drawback of ABP is that assumptions may not always be correctly identified nor their weaknesses understood. Additionally, hedging actions may be beyond the power of the organization or country involved. For example, the United States (because of its lead in many instruments of national power) is far better placed than Australia to influence world events to suit its own interests. Middle ranking powers would do better to anticipate events rather than believing they can deal with them when they arise.

Observations on Planning Methodologies

There are no fail-safe formulae for future planning. Analysis of the existing planning methodologies for force development reveal a number of lessons.

- ✓ No single planning strategy is in itself adequate.
- ✓ Threat-based analysis is valuable in that it offers possible futures upon which planning may be based, however, their underlying assumptions need to be constantly re-examined. This may pose difficulties for a force development process that is inherently slow-moving, cumbersome and inflexible (such as the military acquisition cycle).
- ✓ In an uncertain strategic environment with no defined current threat, contingency (mission) and scenario-based planning allows for a more versatile force that is not limited by notions of adversary capabilities, which can in themselves be misleading. If a range of contingencies are identified, using several broad scenarios as a guide, then capabilities can be optimized across the range.
- ✓ A extremely flexible force structure, with provision for surge capacity, is required if capability-based planning is adopted.

Whether by design or intuition, these key lessons have been incorporated into the Marine Corps' concept-based approach to force development. The Marine Corps' methodology is a hybrid, but with some unique and innovative features of its own.

Marine Corps Approach to Force Development

The Marine Corps concept-based force development approach has three pillars. The first pillar is a vision of the future. The second pillar is the alignment of force design with national strategic goals. The third pillar is the initiation and management of a major program for change. This pillar incorporates features such as experimentation, innovation and informed strategic decision-making.

Identification of these pillars is the result of studying the operation of the Marine Corps Warfighting Laboratory. These pillars have not been derived from a manual or official documents. Rather the analysis is based on the author's interpretation and observations. Therefore, the concept-based approach which will be described in this paper does not constitute official Marine Corps doctrine. With that caveat aside, each of the pillars will be analyzed for lessons relevant to the Australian Army.

First Pillar - Framing the Future

The Marine Corps Warfighting Lab's perspective for force development centers on the future battlefield environment. It is a truism that the future cannot be predicted, and consensus on forecasts are near impossible. Yet, a vision of the future battlefield is critical to generating new operational concepts. Fortunately, in the United States there is no shortage of intellectual resources dedicated to the theme of future warfare.

Speculation on future warfare is a growth industry. Analysts envision a broad spectrum of possibilities for the future battlefield including asymmetrical opposition, joint warfighting imperatives, weapons of mass destruction, cultural/economic collision,

non-combatants, technological acceleration, stateless war, space warfare, urban/close terrain, the extent of commercial-off-the shelf items, information warfare, revolution in military affairs and the diverse list goes on.

At the authoritative level, the National Defense University's *Strategic Assessment 1996*, identifies geo-strategic developments (demographic, economic, cultural and resource factors), information technology and the changing character of governments as the catalysts to bring about a changed environment for warfare. "In order to make its will felt effectively in this new environment, the United States Government is changing the way it uses its instruments of power. These include non-military, political military and warfighting instruments of national power."¹³

Against this background of wide-ranging academic debate and changes in policy that the Commandant has the challenge to ponder, plot and steer a course for the transformation of the Marine Corps.

Confronting the Marine Corps' leaders are an abundance of future battlefield possibilities. The art, or indeed risk, is to select the set of capabilities for development that will account for the greatest range of future contingencies. It is the imprecise process of reducing many possibilities into a few probabilities.

The first Director of the Warfighting Lab, Colonel Anthony Wood, emphasizes capability development begins with the future, not the past. As the Lab's Director Wood

¹³ *Strategic Assessment 1996*, 10. The instruments of national power include non-military instruments diplomatic, public diplomacy, international organizations, economics, intelligence. The political-military instruments include the productive and technological base, arms control, defense engagement in peacetime, security relationships, overseas presence peace operations and humanitarian support. The warfighting instruments include unconventional military instruments, limited military intervention, classical military, emerging military instruments countering weapons of mass destruction.

states, "developing and understanding the future is the context in which capabilities and concepts are generated. It ensures that militarily irrelevant capabilities are not built."

However, Colonel Wood goes on to warn that the most important part of the process is also the most difficult. Envisioning the future battlefield and formulating new concepts and capabilities for operating in that environment is a difficult task. It is a task, however, that can be helped with a framework for future thinking.

To help envision the future and set the context for capability development, the Marine Corps' senior executive conducts an exercise in "framing". Framing defines the set of operational principles, beliefs and concepts at the service and departmental level. As Colonel Wood describes, "framing principles are the lens with which we look at a likely set of future conditions. The framing molds how we look at the future and develop the parameters for *Sea Dragon* ...this starting point must be right otherwise the experiments are irrelevant."¹⁴ In an interview, Colonel Wood described the framing principles of the Marine Corps as fourfold.¹⁵

- ✓ ***Sea-Based.*** The Marine Corps intends to use the sea as its base for littoral operations. Historically, Marines intended to rapidly get as much combat power and logistics ashore in order to gain an advantage in mass, and not expose vulnerable lines of communication from the beach-head to the fleet. Increasingly in the future, Marines will conduct operations with a minimum footprint ashore.
- ✓ ***Operational Maneuver From The Sea (OMFTS).*** The Marines intend to exploit their ability to maneuver at sea on the approaches to an objective. This avoids a fixity on landings and seeks to eliminate the requirement for the traditional beach-head. Instead, the Marines will focus on ship-to-objective maneuver.

¹⁴ Colonel Anthony Wood, USMC, Director Marine Corps Warfighting Laboratory. Interview with Major Singh at the USMC Warfighting Laboratory, Quantico, on xx January 1998.

¹⁵ Colonel Wood, interview with Major Singh at Larson's Gym, Quantico on 6 May 1998.

- ✓ **Combined Arms.** Marine forces are task-organized for each mission. The organization is known as a Marine Air-Ground Task Force (MAGTF). Task organizing is applied at all levels, from corps level (Marine Expeditionary Force) to battalion (Battalion Landing Team.) Ground and air elements are both envisaged as fire and maneuver forces.
- ✓ **Maneuver Warfare.** The Marine interpretation of maneuver theory is to focus on the enemy, not to hold or seize ground for its own sake. In *Sea Dragon's* Advanced Warfighting Experiments "Hunter Warrior" and "Urban Warrior," Marines did not attempt to hold ground or capture cities. Instead, Marine forces attempted to use new capabilities in this terrain to shatter the enemy's cohesion.

These framing principles, when combined with goals of the national military strategy, provides the basis for *Sea Dragon's* redesigning operational concepts and testing enhanced capabilities.

There is another important feature of the Marine Corps vision of the future battlefield. More than the other services, the Marine Corps believes in "equipping the man, vice manning the equipment." It underscores the Marine philosophy that there is a consistency between the past and future battlefields: man's involvement and the immutable nature of war. War's nature, so well articulated by Clausewitz, will exist on the future battlefield. For Marines the battlefield will remain a sanguinary environment of uncertainty, chance, friction and, above all, a contest of man's will.

Consequently the Lab is not embarking on a quest for technological silver bullets that will remove "man or uncertainty" from the battlefield. Instead the Lab's philosophy is "that uncertainty will be part of the future battlefield and technology should enable and extend of man's power to operate in that environment."¹⁶ This aspect makes the Marine Corps approach distinct from the other services.

¹⁶ Interview with Colonel Anthony Wood, January 1998.

The concept-based approach is fundamentally different from the approach of the United States Army.¹⁷ Army's *Force XXI* and *Army After Next* projects are intentionally designed to be evolutionary and technological in nature. Indeed the time-frame for force development is linked to the decade-long procurement process. The consequence is that *Force XXI* and *Army After Next* are clearly technology driven. New doctrine and organizations will be implemented as technological enhancements are introduced into service. This can be characterized as "a few big-step" improvements that are spaced over decades. By contrast, the Marine Corps system is more like "hundreds of smaller steps." The pace of change is not dictated by the procurement cycle, because change is not just about technology. This is not to say that the Marine Corps is at a tangent to the overall direction for development from a joint perspective. Indeed, the Warfighting Lab's approach is congruent with departmental guidance.

As yardstick, the Marine Corps aligned its analysis of futuristic operational concepts and capabilities with the national military strategy. This alignment is a crucial aspect of *Sea Dragon*, and stands as the first order of business for the Warfighting Lab.

Second Pillar -Congruency with National Military Strategy

Sea Dragon's congruency with the national military strategy is vital.¹⁸ The link ensures Warfighting Lab develops relevant operational capabilities. It also provides a

¹⁷ The United States Army views *Force XXI* as a natural progression of today's CONUS-based, power projection army with improved lethality, survivability, operational tempo and sustainment: essentially today's Army plus digitized *appliques*. This evolutionary change will be maintained through the *Army After Next* program. For more information see Douglas Johnson "The State of the Army After Next," in Earl Tilford's *World View: The 1998 Strategic Assessment from the Strategic Studies Institute* Carlisle, PA: US Army War College, 1998). The Army's approach different in two respects: it is unequivocally technology driven and *Force XXI* is designed to lead the US Army away from a threat-based to a capability-based army.

¹⁸ This strategy is described in *National Military Strategy of the United States of America: A*

logic for subsequent implementation. Alignment with the national military strategy is found in that element of the strategy dealing with crisis response.

Crisis response is the strategic *raison detre* for a Marine Corps. Crisis response capabilities provide the United States with a wide spectrum of deterrent options and preventive measures that can applied rapidly. This strategy denotes rapid power projection, from the United States and between regions, into a potentially diverse warfare environments. *Sea Dragon* is designed to support this strategic goal.

Sea Dragon will be evolved in three phases. Each phase is linked to an aspect of the crisis response strategy. Diagram 5 shows how this might be visualized.

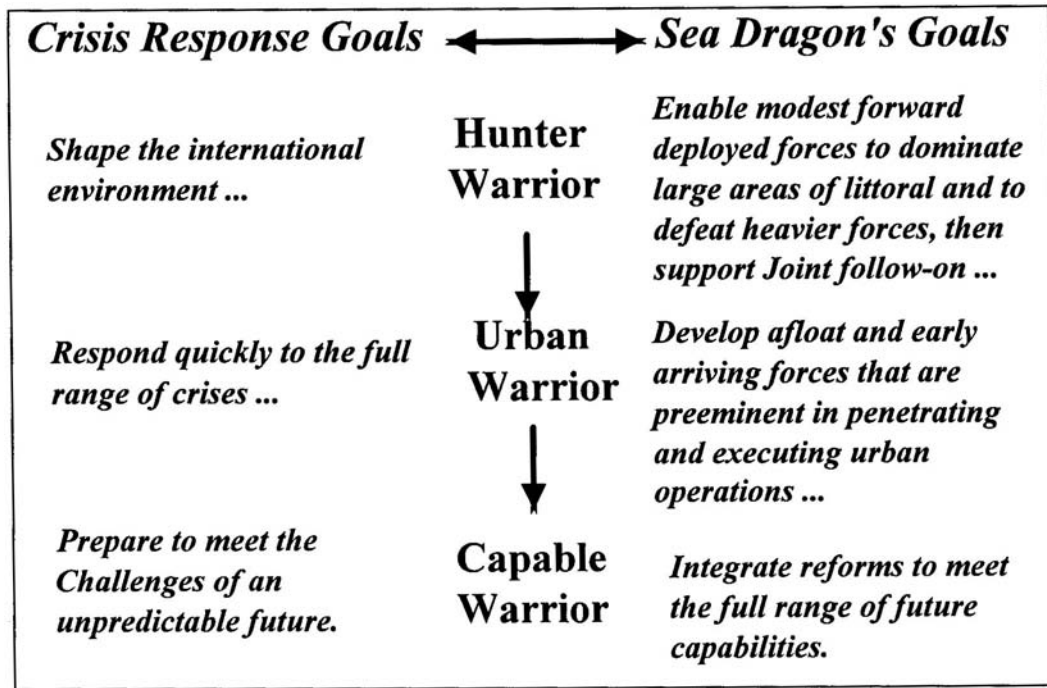


Diagram 5: Alignment of *Sea Dragon* and National Military Strategy¹⁹

Strategy of Flexible and Selective Engagement, (xxx). The national military strategy is derived from the national security strategy, described by the President in *A National Security Strategy of Engagement and Engagement*, (xx).

The first phase of experiments, entitled "Hunter Warrior," is aimed to develop operational capabilities that support "shaping the international environment ... to prevent conflict, deter aggression ... in key regions." Hunter Warrior will analyze capabilities that enable modest forward deployed forces to dominate large areas of the littoral, defeat heavier forces, and then support joint follow-on deployment.

"Urban Warrior" is *Sea Dragon's* second phase and is designed to develop capabilities that underpin the goal of responding quickly to the full spectrum of crises, from small scale contingencies to major theaters of war. Fighting in urban areas has been assessed as a potential arena of conflict into the next century. Conflict in the former Yugoslavia, Chechnya and Mogadishu are perhaps indicators of this emerging trend. Therefore Urban Warrior seeks to develop afloat and early arriving forces that are capable of executing urban operations. These potential capability enhancements could dramatically increase the ability of the Marine Corps to intervene in urban terrain in a wide spectrum of conflict. Military intervention might range from complex law and order type operations to mid-intensity (or higher) combat in high density urban terrain.

Sea Dragon's third phase is "Capable Warrior". This phase involves taking the results of the experiments conducted in Hunter Warrior and Urban Warrior and then deciding on the priorities for capability development. Capable Warrior is about bringing together three aspects of capability development. The first is an understanding of what new capabilities are offering with changes to technology, doctrine, training method and organization restructuring. Hunter Warrior and Urban Warrior will provide the data for these assessments. Another aspect is a strategic assessment of the future warfare

environment out to 2015. A wide range of agencies, including the Marine Corps University, will provide the input for this assessment. Fiscal and resource constraints will regulate the priorities for acquisition and pace of change. In the final stages, Capable Warrior will integrate proposed warfighting capability reforms within the parameters of strategic priorities and resource considerations.

Third Pillar - Integration of Experiments

The Warfighting Lab takes a holistic approach to capability development to avoid the pitfalls of stove-piping. Some organizations prefer to specialize their force development into functional areas. For instance, there are six types of United States Army Battlelabs.²⁰ The danger is that over time the interdependent relationship between functions becomes subsumed by differing departmental priorities and organizational barriers. Development becomes centered on particular functions rather than supporting the organization as a whole. A fragmented approach to capability development will fragment the impetus for radical change.

The Warfighting Lab has taken the practical approach to ensure experimentation results are fully integrated with the Combat Development System. The Combat Development System is the Marine Corps "principle tool for assessing, planning, and developing capabilities." The functional areas covered in this process include doctrine, organization, training, equipment and support facilities (DOTES.)²¹ In addition to

²⁰ There are six types of US Army battlelabs: Battle Command, Combat Service Support, Dismounted Battlespace, Mounted Battlespace, Depth and Simultaneous Attack, and Early Entry Lethality and Survivability.

²¹ United States Marine Corps, *Exploiting Hunter Warrior*, (Quantico, Virginia: Marine Corps Warfighting Laboratory, August 1997), 5.

DOTES, the Combat Development System also deals with supporting activities including resource allocation, information management, force structure, human resource development, material life-cycle management and infrastructure management. The Lab not only supports the front end of capability development, but every stage of the Combat Development System.

The Warfighting Lab casts a wide net when seeking operational improvement.

Typically experiments are directed at the following areas.

- ✓ Experiments in enhanced concepts, new tactics, techniques and procedures will influence future Marine Corps doctrinal development.
- ✓ The Lab conducts experiments with new organizations such as the cellular command element. The results of experiments will influence the restructuring of the Marine Air Ground Task Force.
- ✓ The advanced warfighting experiments are also used to test the impact of new training programs. Here new programs are designed to condition individuals and units for a future battlefield environment. For instance, in "Hunter Warrior" sub-units were trained in different combat techniques, individual mental-conditioning and skill programs. These results will transition to the formal schools and will influence for training and education programs.
- ✓ The Lab intends to include experimenting with improved training facilities that enable Marines to better master the skills required on the future battlefield.
- ✓ Finally, experiments directly provide evidence to support recommendations for acquisition with the potential to initiate new programs and cease or amend existing acquisitions in the pipeline.²²

The Combat Development System is the responsibility of the Marine Corps Combat Development Command (MCCDC). MCCDC's organization is shown in Diagram 6.

²² United States Marine Corps, *Exploiting Hunter Warrior*.

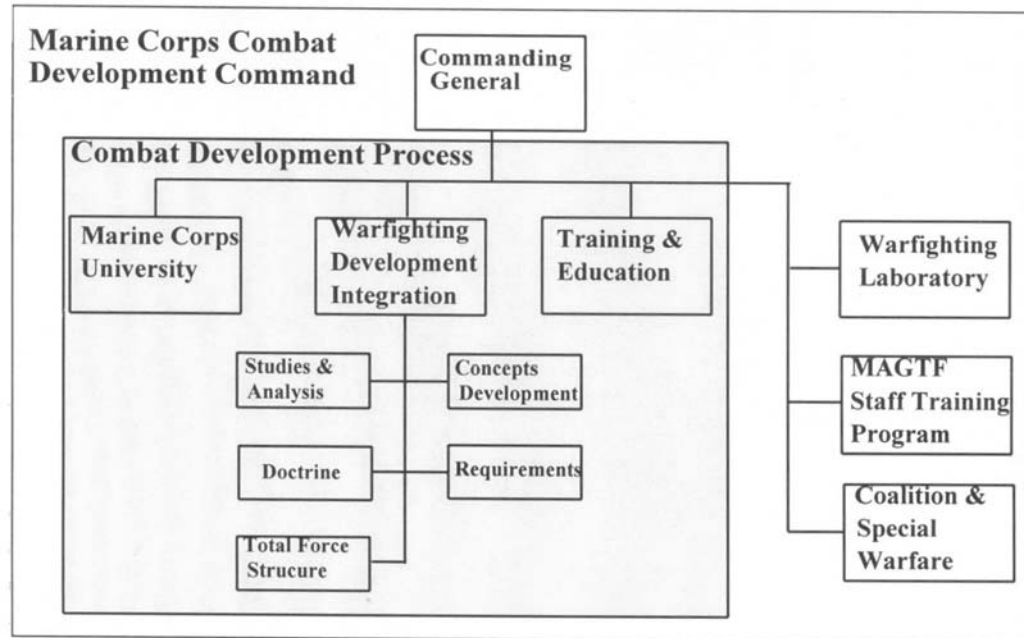


Diagram 6: US Marine Corps Combat Development System

Although the Warfighting Lab is part of MCCDC, it has an independent status to preserve its objectivity. The Lab also has a direct line of communication with the Commandant. This ensures that strategic (or big-picture) priorities remain the focus of its work. The Commandant's direction and guidance to the Lab is considered as essential to ensuring that it plays *the* pivotal role in force development.

As illustrated in Diagram 7, the status of experimentation has been raised as a co-equal function with analysis of force requirements and acquisition. Broadly, the Lab's experiments will identify workable and unworkable solutions.

- ✓ **Things that work.** Depending on how well initiatives work the Lab will make recommendations directly to the Fleet Marine Forces Development Command or Systems Command.
- ✓ **Things that do not work.** Failures are either discarded or sent back in the process for further development.
- ✓ **Things that require further experimentation.** These are identified and follow-on experiments are conducted.

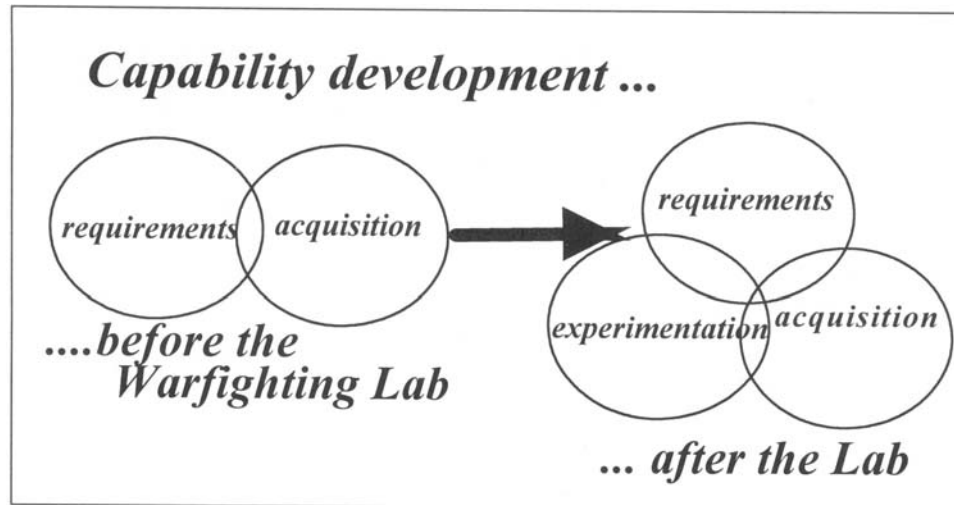


Diagram 7: Integration of Experimentation

Results from experiments can be transmitted to three functional areas.

Recommendations can be made for acquisition. Results are formally and informally transmitted to the Fleet Marine Forces (FMF) through reports and their participation in the experiments. Representatives from MCCDC in the areas of doctrine, training, concepts and requirements participate in the analysis and prepare their own reports. This process assists the Warfighting Lab to integrate experimentation. Equally important is the Lab's contribution to top-level executive decisions.

General Krulak, as Commandant, seeks to use *Sea Dragon* to radically improve the capabilities for naval power projection. He therefore expects the outputs from the Warfighting Lab to provide him with information so he can formulate executive action. The outputs from *Sea Dragon* are thus designed to assist executive decision-making for longer term strategies.

With the completion of *Sea Dragon's* first phase, Hunter Warrior, the indications are that the Lab has provided the Commandant with a substantial body of analysis to take

some far-reaching decisions on how the Marine Corps can be shaped. For instance, Hunter Warrior provided three clear lessons. First, in some circumstances Marines can dominate large coastal areas with modest forces. Second, Marines can employ a small number of MAGTF units that have the potential to inflict severe losses and create circumstances that defeat heavier forces. And third, modest forces can substantially increase the odds in favor of successful joint operations.

Why Follow the Marines?

There are some compelling reasons why the Australian Army might adopt a similar approach to force development as the Marine Corps.

- ✓ The context of change facing the Australian Army is similar to that facing the Marine Corps. Both organizations are inherently "light" with an overriding requirement for responsiveness and flexibility.
- ✓ The Warfighting Lab has a crucial and clearly definable role in a comprehensive system force development.
- ✓ The process of experimentation and project management used by the Warfighting Lab are valuable tools for which there is no equivalent in the Australian Army.
- ✓ The Warfighting Lab is versatile because it has the capacity to deliver changes quickly to take advantage of existing technologies and also manage radical change over the longer term.
- ✓ The Warfighting Lab is resource efficient which is a significant issue because of the resource limitations of the Australian Army.
- ✓ Finally, the adoption of similar analytical processes increases the opportunity for combined Marine Corps and Australian Army experiments and validation projects for capability development.

Clearly, the Lab's concept-based experimentation is a viable instrument for shaping the Marine Corps. Both *Sea Dragon* and the Warfighting Lab concepts can be used by the Australian Army as a model for redesigning itself for the 21st Century. A proposal showing how this can be accomplished is the subject of the next chapter.

CHAPTER 3

REDESIGNING AUSTRALIAN LAND POWER

The Australian Army is in danger of becoming marginalized as an instrument for shaping regional security.

While *Australia's Strategic Policy* continues to give priority to the direct defense of Australia, there is now greater emphasis on "proactive" operations to allow the ADF to seize the operational initiative and meet an adversary in the northern maritime approaches. The review goes a step further by envisaging that the ADF should be prepared to deny forward bases to a potential enemy that could subsequently support operations against Australia.

The ADF's concept for forward operations is the projection of air and sea power. Meanwhile, land power remains firmly rooted to the continent, abet for small scale special operations. The policy review consequently heralds new force development priorities which have the potential of relegating Army to a limited role as the strategic "long-stop."

The ADF's force development priorities place the instrument of land power at the bottom of the list. The first ADF force structure priority is to maintain what is called

"the knowledge edge." That is, knowing and exploiting information to allow the maximum effective use of forces in combat. Command and control systems, intelligence capabilities, surveillance systems and information technologies are critical to the defense strategy. The second priority is the ability to defeat attacks through the extensive maritime approaches to Australia, and here the focus is on aircraft, ships and submarines. The third priority is the ability to strike and the ADF contemplates upgrading the Air Force's F-111 aircraft, maintaining special forces and acquiring longer-range stand-off weapons. The fourth priority is to defeat hostile land forces on Australian territory, and this entails "counter-terrorist and land warfare operations with emphasis on improving surveillance, mobility and aerial fire support."¹ To achieve the top three ADF priorities, the Army appears destined to be the sacrificial lamb.

Army's Wrong Direction?

Army's planned capabilities, mobility enhancements, training and equipment are not suited to operations involving regional engagement. A synopsis of the plan for Restructuring the Army shows the major force structure changes in the next three to five years. According to Major General John Hartley, Deputy Chief of the Army, "this is our vision for a restructured Army of the future."² This vision is summarized below.

- ✓ Improved mobility through the acquisition of more light armored fighting vehicles, new armored infantry vehicles and helicopters for troop lift.
- ✓ Reallocation of personnel from base units to combat units.
- ✓ The Reserve trained to a higher standard and integrated into regular units.

¹ Stewart Woodman, "Punching Above its Weight? Australia's 1997 Strategic Review," *New Zealand Defence Quarterly*, Autumn, 1998, 12.

² John Hartley, "Army's Future Plans/Strategy," *Serving Vital Interests. Australia's Strategic Planning in Peace and War*, (Canberra: University of New South Wales, Australian Defence Force Academy), 152.

- ✓ A shift from a dynamic divisional structure to multiple brigade sized formations, which are task-organized for continental defense.
- ✓ Modernized command and control systems.
- ✓ Raising a regular commando battalion to increase options for counter terrorism and strategic strike.

The limitations of Army's current development process are readily apparent.

There is no vision of land power encompassing joint capabilities, particularly air strike.

Army doctrine does not acknowledge air power as a potential maneuver element for the land battle.³ Army has no plans to develop concepts and doctrine for operations in Asia.

There is also no vision for sustaining of expeditionary forces.

The Army's vision of the future ignores the potential of conducting operations in an environment with weapons of mass destruction. No measures for protection from chemical attack or theater missile defense are envisaged. Yet, according to William Steele in his *Joint Force Quarterly* article, "Preparing the Army in the Pacific for the 21st Century," short and mid-range ballistic missiles, weapons of mass destruction, and limited power projection will be common and increase the scope and lethality of regional conflict.⁴ Douglas Macgregor, in *Breaking the Phalanx*, concludes that "in the early phases of future war, precision-guided missiles will play a decisive role in an effort to

³ Army's doctrine has marginalised air combat activity in the land battle. Rather than being used as a combat maneuver force in the single battle concept, *Fundamentals of Land Warfare* states "air campaigns are interactive and should, if necessary, be pursued simultaneously with land operations." *Fundamentals of Land Warfare*, Manual of Land Warfare Part 1, Vol 1, Australian Army, 1993, 74. In terms of force development, *Defending Australia: Defence White Paper 1994*, (51) infers the same, where: "Infantry and reconnaissance units in Army can be supported by considerable firepower through a combination of artillery, helicopters, tanks and other armoured vehicles. Air assets such as the FIJI strike aircraft and the F/A- 18 fighter can provide additional support if necessary."

⁴ William Steele, "Preparing the Army in the Pacific for the 21st Century," *Joint Force Quarterly*, Autumn/Winter 1997-98, 64-65.

gain the initiative."⁵ Without these basic capabilities, Army's contribution to the achievement of strategic objectives will always be muted.

These omissions in Army's vision have occurred because for too long Army has narrowly defined its role and contribution to the ADF's strategic objectives. The Army has almost exclusively prepared for low intensity operations in northern Australia. This narrow focus ignores the potential capabilities that land power can achieve for other strategic objectives. Land power can contribute to gaining the "knowledge edge" in the region, interdicting maritime approaches and participating in strategic strike.

To achieve a more active destiny in the 21st Century, Army should take a joint perspective and develop a range of land power capabilities for both the actual defense of Australia and forward cooperation in the region. An expeditionary type force is inherently flexible to achieve both tasks. Thus the Army objectives are win the land battle in northern Australia, and also provide land power capabilities to shape regional security. The Army can use the Marine Corps concept-based to redesign land power to achieve these objectives.

Landpower21: A Process for Changing the Army

Like *Sea Dragon*, the Australian Army should adopt a three phase, five year, concept-based process to identify the direction for capability longer-term development. This concept is shown at Diagram 8. Each phase should be based on a concept for Warfighting and linked to strategic objectives. Phases 1 and 2 could be conducted concurrently in the first three years. The phases would primarily involve experiments in

⁵ Douglas A. Macgregor, *Breaking the Phalanx, A Design for Landpower in the 21st Century*, (Westport, CT: Praegar Publishers, 1997), 49.

the application of new doctrine, organizations, training methods, equipment (harnessing emerging technology) and support. The result must assist the Chief of the Army to make far-reaching decisions on how the Army should be shaped. *Landpower21* is the working title for this proposed five year process. *Landpower21's* three phases are outlined below.

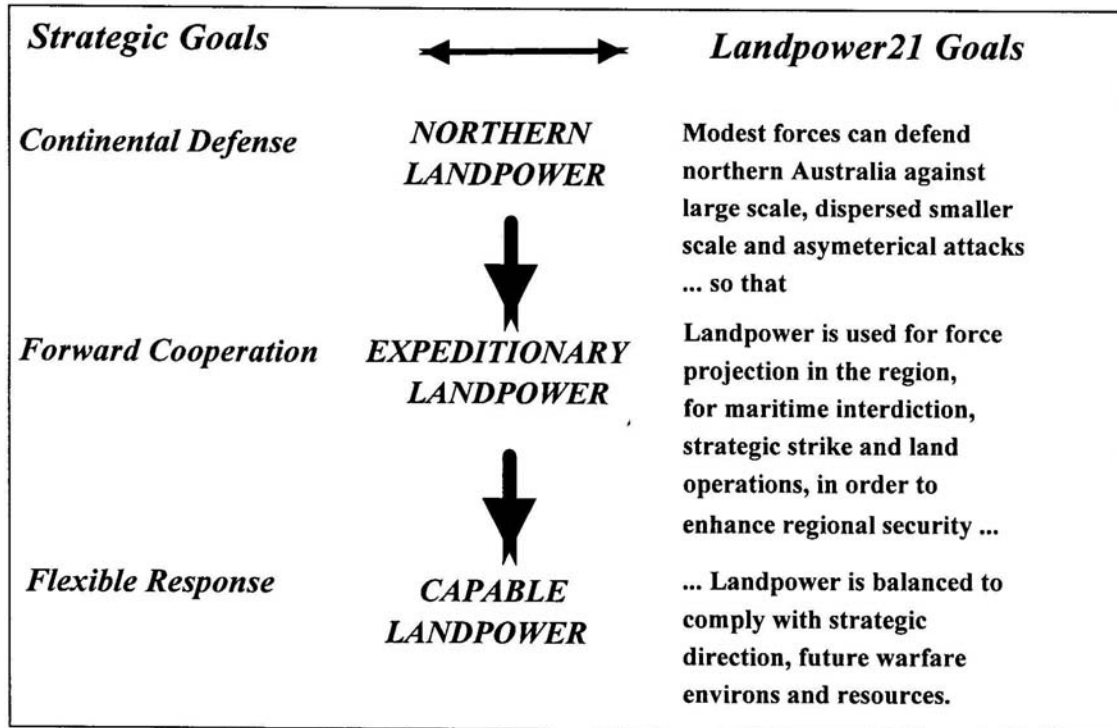


Diagram 8: Proposed Alignment of Strategic and Land Power Goals

Phase 1 - Northern Landpower. The concept is that the Australian Army can defend northern Australia with modest forces (say 5,000 personnel or less). Foremost is achievement of "knowledge supremacy" which can be used to orchestrate the application of land power.

The Army must also be able to employ a small number of strike forces to inflict severe losses to defeat enemy special forces, asymmetrical attack or heavier forces. This concept also embraces premise that modest forces can substantially increase their odds in

northern Australia by using joint capabilities, civilian information networks, Government non-military and para-military organizations, and national infrastructure.

If the enemy can be inspired to asymmetrical attacks, then our Army should develop concepts for asymmetrical defense. This might involve using guerrilla warfare tactics to complement conventional forces. Achievement of this concept would free the resources for the Army to also operate as an expeditionary force.

Phase 2 - Expeditionary Landpower. This concept involves Army being used instrument for force projection in the region. Projection of land forces, as part of a joint and coalition force, would need to be capable of maritime interdiction, strategic strike and overseas deployment for operations involving regional security. The envisaged force would be expeditionary in nature because it would deploy, conduct operations to achieve the mission and then return to Australia. An expeditionary force requires character and capabilities to conduct "three block" operations. These include humanitarian, peace-keeping and mid-intensity combat operations occurring either as stand-alone, contiguous, or simultaneous operations in the same area.

To be credible, the force must be flexible, lethal and quick to respond. It must also be capable of achieving decisive outcomes. Forces should be interoperable with regional allies in order to comply with the Government's emphasis on regional cooperation.

To make a contribution to shaping regional security, such a force must be able to punch well above its weight. This might include operations in the higher end of the conflict spectrum. These expeditionary capabilities would underpin the goal of

responding to the full spectrum of crisis, from small scale contingencies to major theaters of war in the region.

Phase 3 - Capable Landpower. This phase involves designing an Army that balances land power for continental defense and land power for regional security. The results of experiments from *Northern Landpower* and *Expeditionary Landpower* would be used to design force structure and decide priorities for capability development. In this phase, overall land power balance would be achieved through the analysis of three elements. First, an understanding of the new capability requirements and opportunities identified in *Northern Landpower* and *Expeditionary Landpower*. Second, a strategic assessment of the future regional environment in the first quarter of the 21st Century. Third, a forecast of the resource constraints for programming acquisition and managing the pace of change over the first ten years.

Embedding Innovation

Landpower21's five year cycle should be iterative to ensure that change becomes the norm. As strategic priorities change, so too must the Army. This does not mean a boom-bust cycle for Army. Instead, it is about Army's flexible approach to land power to ensure it contributes to the broad achievement of national military objectives as part of a joint effort.

Army's current limitation to progress is its functional outlook.⁶ This is akin to horse saddle-makers in the 1920s believing that they were in the saddle business, rather than transportation comfort business. Consequently, when sales declined many

⁶ The impression is that Army generally thinks of itself in terms of a function. That is landpower is a function of the Army. Instead landpower is an instrument of national power where all services provide capabilities.

saddle-makers focused on making better saddles instead of leather upholstery for the emerging car industry. The function of making saddles obscured their real strategic imperative of staying in business. Likewise, the Army should focus adapting to strategic priorities for land power rather than locking itself into increasingly less useful functions.

A functional outlook increases the chance of Army becoming irrelevant to Australia's 21st Century security needs. Alternatively, a different perspective for land power is the first step to developing relevant concept-based operational capabilities. This involves not only an acuity of mind and a new approach to the force development process.

Crucial to the achievement of *Landpower21* is the operation of an Australian Army Battlelab.

Australian Army Battlelab

In the past year, the Australian Army has developed a Battlelab concept in anticipation of its establishment by 1999. At this stage proposals for the operation of the Battlelab have not been endorsed. Although its function is emerging whereby, "The Battlelab should serve as a practical mechanism for identifying and developing new concepts, and addressing new capabilities resulting from developments in advanced technology, or changes to organization, tactics or doctrine."⁷ It appears the function of the Army Battlelab and the USMC's Warfighting Lab are akin. There is, however, a major design shortfalls with the proposal set forth by the Battlelab Working Group.

⁷ Bruce A.R. Scott, "The Australian Land Battlelab - A Proposed Concept," *Combat Arms*, Issue 1/97, Headquarters Training Command - Army, Sydney, 1997, 57.

The Battlelab has (like its United States Army counterparts) taken a doctrine-based approach to force development. This ignores the broader issues of a changing regional strategy and technological advances. These factors provide the impetus for change. Being doctrine-led is one of the reasons for the demise of the French Army in the 1930s.

Initial analysis shows a number of design flaws in the Battlelab concept. Lieutenant Colonel Scott's article, "The Australian Battlelab - A Proposed Concept," describes the proposed Battlelab based on the deliberations of the Battlelab Working Group.

According to Scott, each Battlelab study will usually have three phases: Design and Preparation, Serials and Analysis. The Battlelab's first phase stands in contrast to the Marine Corps' concept-based approach. In the Battlelab approach, "the first phase commences with members of the core team performing an initial assessment of the particular Force Development problem and deciding whether it is (generally) feasible for the Battlelab to provide the desired outcomes."⁸ Two design flaws are evident. First, right at the outset the process filters problems based on the capacity of the Battlelab, not necessarily based on the importance of the project. Second, the process starts with a problem, with reference to existing doctrine and capabilities, and not a concept. This limitation is evident upon closer scrutiny of the Battlelab Process. Lieutenant Colonel Scott describes the Battlelab Process as:

...essentially the application of the scientific method and it may involve iterative application of a model-test-model process. The Battlelab Process should provide a means of performing objective tests and evaluations of relevant 'change' factors by enabling the: determination of a baseline capability; identification of deficiencies and

⁸ Scott, 61.

limitations; development of potential solutions and improvements; and 'measurement' of the impact and effectiveness of changes through the employment of field tests, simulation, wargaming, operational analysis and drawing conclusions.⁹

The focus of the proposed Battlelab appears to be on improvement to existing capabilities based on identified operational performance problems. Who articulates these problems is not made clear in the article. By inference, it appears that these problems would be generated by various elements in the force development system involved in doctrine and acquisition. According to the Battlelab Working group's deliberations: "Identification of what linkages will be required will result from considerations of the future development of the Land Force and the possible migration to a 'Doctrine led Army'. Such 'links' can be considered at the functional and infrastructure levels."¹⁰

The drawback here is development is likely to be limited to the existing functions and infrastructure levels. Therefore new functions and new organizations are likely to be created under this model. As a corollary, redundant functions and infrastructure levels are unlikely to be discarded. This formula for incremental change becomes more obvious when Scott describes how a 'Doctrine led Army' would transform itself:

Doctrine provides the fundamental guidance to the Army. As such it underpins the Army Training System, and both guides and is advanced through the development process. Successful development of the Battlelab and the Combined Training Centre (CTC) concepts will require that both the Battlelab and CTC can contribute to the identification of problems with Doctrine and investigation of solutions, and that lessons learned can be fed into the Doctrine model. Revised Doctrine can then be output to the Army Training System via the Training Advisers.¹¹

Other problems with the Battlelab proposal are also evident. The foremost problem is the Australian Army does not have a coherent system for capability

⁹ Scott, 58-59.

¹⁰ Scott, 65.

¹¹ Scott, 65.

development. A coherent system would combine strategic direction and a vision of the future battlefield with experimentation, implementation planning and acquisition. The Army is currently undertaking programs to improve the functions of strategic policy-making, capability planning, implementation and acquisition.

Insufficient attention is being directed to redesigning Warfighting concepts and experimentation of new capabilities. This aspect of capability development is ineffective. Without a coherent capability development system a military organization can become dysfunctional. Peculiarities can arise. For example, the Australian Army has more regular bandsmen than regular artillery gunners, and more drummers than mortarmen.¹²

Improving Australia's Battlelab Concept

Significant changes are required to improve the Battlelab concept. Otherwise it will become just another bureaucratic cog in the force development system. The Battlelab would do well to adopt the methodology of the Marine Corps Warfighting Lab. It should also work exclusively on a major top-down project like *Sea Dragon* and the proposed *Landpower21*. The recommended changes to the Battlelab are:

- ✓ Use the concept-based methodology for force design.
- ✓ Operate within the framework of a major reform project, and not on piecemeal experiments.
- ✓ Deliver outputs that immediately influence force development, particularly for acquisition.
- ✓ Ensure new concepts and experiments cover the DOTES spectrum.

¹² Documentation to support this assertion is not readily at hand. However, from the author's recollection, the Australian Army has four regular artillery batteries. There are five regular infantry-type battalions: 1 RAR and 2 RAR (light infantry), 3 RAR (para), 4 RAR (commando) and 5/7 RAR (mech); in all some 2,900 regulars (of which some 70 are in regimental bands.) The Australian Army Band Corps has in excess of 250 bandsmen, thus providing the Army with over 330 regulars whose main job is to play a musical instrument than fire at the enemy. Regular bandsmen number 11% of infantry in regular battalions. Well done Generals!

- ✓ Ensure objectivity and relevance by using free-play, combat-like experiments.
- ✓ Ensure outputs can be used by the Chief of the Army to make far-reaching strategic decisions.

These recommendations are about putting in place at the outset the right mechanisms to enhance the effectiveness of the proposed Battlelab. It will ensure the Battlelab plays a pivotal role for the Army to achieve the Australian Government's new strategic goals with alacrity.

Putting it all Together

The relationship between the various elements concerned with designing a new Army are shown at Diagram 9. The crucial links are between four elements: the Chief of the Army, the Battlelab, the major functional commands (combat, training and support) and the force development system. These elements should be unified by the *Landpower21* process. Noting that the Battlelab will have the pivotal role in implementing *Landpower21*.

Landpower21 also requires the integration of various planning methodologies (as discussed in Chapter 2.) These methodologies would be consciously applied at certain stages across the process.

As a whole, the picture should be one of an integration of planning, experimentation and implementation. What is missing, however, is a philosophy that makes the system a strategic and operational capability in itself. A proposal for a capability development philosophy is outlined in the final part of this chapter.

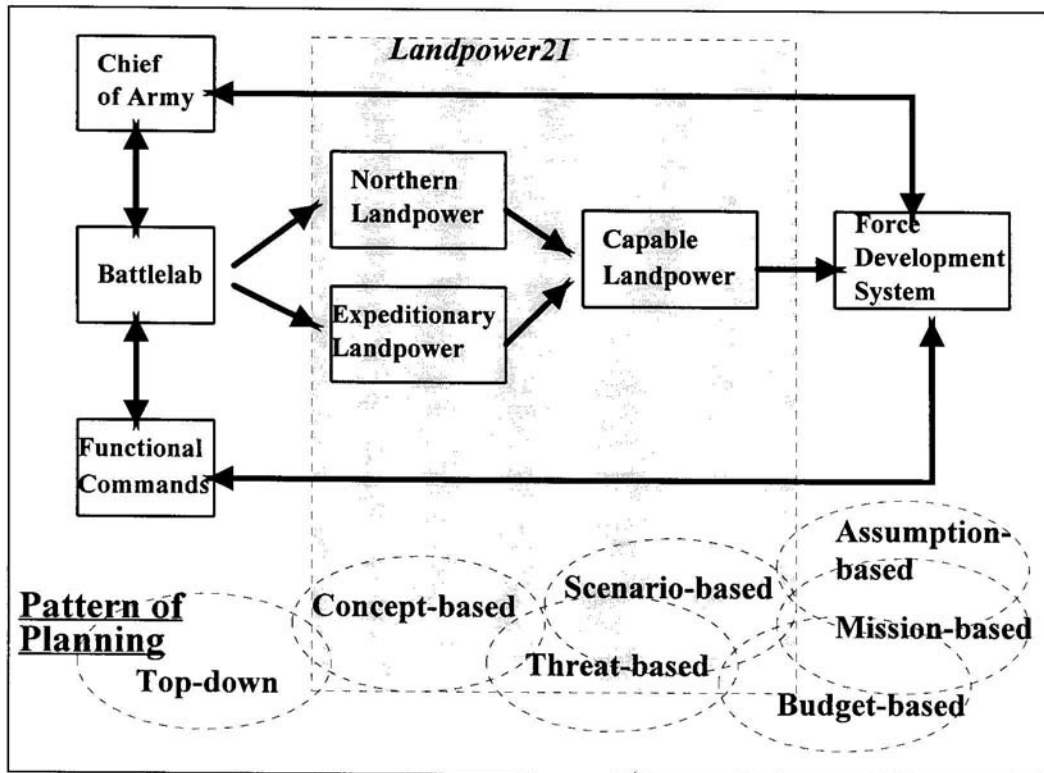


Diagram 9: Landpower21: Planning and Process

A Philosophy for Capability Development

The Australian Army's philosophy for capability development is not readily apparent. Indeed, Major General Hartley stated "we were confronted with the task of designing an Army for the next century in the absence of an agreed force structuring methodology and relevant force development experience."¹³ Without a unifying philosophy the system's output is likely to become fragmented over time. The following five principles are offered as a philosophy for capability development.

- ✓ **Strategic.** The capability development system is in itself a strategic capability.
- ✓ **Future Oriented.** Preparedness is about having decisive advantage to really defeat the enemy on the future battlefield. To achieve this the Army's senior leadership must agree a set of framing principles.

¹³ Hartley, 147.

- ✓ **Unified Effort.** Operational commanders, planning staff and scientists operate as a trinity for capability development. Not as a committee, but where the functions of experimentation, planning and acquisition are essential components.
- ✓ **Consistent.** Peace time does not exist for the capability development process.
- ✓ **Holistic.** Solutions are sought and integrated across the doctrine, organization, training , equipment and support spectrum. technology alone is never the answer.

These principles require a detailed explanation, but for the purpose of this paper they will only be briefly elaborated upon.

Capability development must be, in itself, a strategic capability and should orient to the future. If capability development is not about radical change then it is not really capability development. The ability to deploy new doctrine and weapons without the enemy's prior knowledge offers an opportunity to defeat him from a dimension he does not perceive. This is a key ingredient of maneuver warfare.

This phenomena, particularly when it involves the deployment of asymmetric capabilities, accelerates killing and shattering the enemy's cohesion. Enemy commanders find themselves up against weapons and tactics for which they have made no preparations. They will face the option of either submission or being killed off attempting at high risk to develop new ways of fighting.

An effective campaign using technological and asymmetrical advantages, progressively creates an advantageous position for friendly forces while making the enemy's situation increasingly more desperate. The ability to bring new capabilities to the battlefield is a strategy for operational success. History teaches us that technological advantage alone will rarely guarantee victory. Other factors such as organization, doctrine, organization and skill play an integral part of capability development.

How an army trains can contribute to the force development process. Peace-time exercises are usually designed to assess the military forces level of performance against a traditional base-line. Such an approach reinforces paradigms. It has the potential to stifle creativity. To counter this limitation, the approach to capability development should be the same in peace as in war. Once the war begins, innovation occurs in the heat of the campaign and there is often a need to unlearn and well as learn Warfighting techniques. So let it also be in peace.

Innovation should be spurred a long by experimenting with operational problems for which we have no ready answers. This can be achieved by more experimental (analytical) exercises and a larger proportion of two-sided free play. As succinctly put by Douglas Macgregor: "To the degree that any military establishment allows doctrinal organization and training methods to ossify or tries to centralize control over ideas for change, it risks obsolescence, whatever its current technical powers might be."¹⁴

In summary, a capability development philosophy coheres three separate entities into a triumvirate. First, the needs and problems of the operational commanders. Second, the analytical and unbiased skills of the scientists. Third, the capability development planning staff to manage the changes.

This chapter posited a system that advances in unison new technology organizational change and combat doctrine. The task of force development is not an easy one: but it can be assisted by the adoption of a cogent philosophy, an effective framework for analysis and experiments and a innovative culture.

¹⁴ Macgregor, 37.

CONCLUSION

The new millennium will witness Australian defense planners becoming increasingly Janus-faced (looking both east and west.) Australia's immediate prospects are caught between the world of Western military alliance and Eastern economic prosperity. Australia's military is also caught in an East-West paradox: its military capabilities, mentality and ethos are Western in character, but its military environment is decidedly Eastern.

This indicates that designing force structure for 21st Century can never be an abstract or clinical process. Rather it is a reconciliation between Australia's multi-dimensional security needs. The Government is addressing these issues with a new strategic outlook. The outcome must inevitably be a defense strategy that balances power projection for "forward cooperation" and continental defense.

It is upon the redundant edifice of defense-in-depth strategy that Australian land power must now be redesigned. In doing so, the Australian Army must fix three aspects in its approach to force development.

Army must adopt a concept-based approach to developing new ideas and conducting experiments. The current doctrine-based policy for force development is

valid in many circumstances, its central role should be diminished. A doctrine-based approach lends itself to incremental changes and outcomes that help us fight in the existing warfare environment. Concept-based planning, by contrast, promotes radical change and focuses on the future.

Army's force development system needs to better integrate experimentation into its force development system. A systems approach which includes doctrine, organization, and technology being advanced in unison is required. This means the Battlelab must to play a pivotal role for redesigning land power.

A philosophy for force development should be adopted. Capability development processes are an instrument for war. Army should make improvements accordingly. Indirectly it would foster a culture for innovation.

These concepts have successfully been implemented by the United States Marine Corps. It is a timely opportunity for the Australian Army to follow suit.

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