

Land Warfare Studies Centre

Working Paper No. 132

**SQUARE PEGS FOR ROUND HOLES:
CURRENT APPROACHES TO FUTURE
WARFARE AND THE NEED TO ADAPT**

by

Brigadier Michael G. Krause

June 2007

© Commonwealth of Australia 2007

This work is copyright. Apart from any fair dealing for the purpose of study, research, criticism or review (as permitted under the *Copyright Act 1968*), and with standard source credit included, no part may be reproduced by any process without written permission.

National Library of Australia Cataloguing-In-Publication Entry

Krause, Michael G.

Square pegs for round holes : current approaches to future warfare and the need to adapt.

ISBN 9780642296511.

ISBN 0 642 29651 0.

1. Asymmetric warfare. 2. Nuclear warfare. 3. Military art and science. 4. Military policy. 5. Operational readiness (Military science). I. Land Warfare Studies Centre (Australia). II. Title. (Series : Working paper (Land Warfare Studies Centre (Australia)) ; no. 132).

355.02

Land Warfare Studies Centre Working Papers

ISSN 1441-0389

Working papers produced by the Land Warfare Studies Centre are vehicles for initiating, encouraging or nurturing professional discussion and debate concerning the application of land warfare concepts and capabilities to the security of Australia and its interests. Working papers, by their nature, are not intended to be definitive.

Series Editor: *Scott Hopkins*

About the Author

Michael Krause is a serving senior officer in the Australian Army. Born in Melbourne, he is a graduate of the Royal Military College, Duntroon, the Australian Command and Staff College and the Royal College of Defence Studies. He is an Armoured Corps Officer with experience commanding at the troop and squadron level, and 2nd Cavalry Regiment in 2000–01. He has served on operations in Iraq and the Solomon Islands and has served in various staff appointments including as the inaugural Chief Staff Officer (Operations) to the Vice Chief of the Defence Force. He has previously contributed to the *Australian Army Journal* and was the winner of the 2006 Chauvel Essay Prize with his essay ‘The Case for Minimum-mass Tactics in the Australian Army’.

Acknowledgements

The author gratefully acknowledges the staff and members at the Royal College of Defence Studies 2006 for providing advice and comment during the development of this paper, especially those devoted members of the Study Group.

Land Warfare Studies Centre

The Australian Army established the LWSC in July 1997 through the amalgamation of several existing staffs and research elements.

The charter of the LWSC is to promote the wider understanding and appreciation of land warfare; provide an institutional focus for applied research into the use of land power by the Australian Army; and raise the level of professional and intellectual debate within the Army. The LWSC fulfils these roles through a range of internal reports and external publications; a program of conferences, seminars and debates; and contributions to a variety of professional, academic and community forums. Additional information on the centre may be found on the Internet at <<http://www.defence.gov.au/army/lwsc/>>.

Comment on this working paper is welcome and should be forwarded in writing to:

The Director

Land Warfare Studies Centre
Ian Campbell Road
Duntroon ACT 2600
AUSTRALIA

Telephone: (02) 6265 9890
Facsimile: (02) 6265 9888
Email: <lwsc.publications@defence.gov.au>

Disclaimer

The views expressed are the author's and not necessarily those of the Australian Army or the Department of Defence. The Commonwealth of Australia will not be legally responsible in contract, tort or otherwise for any statement made in this publication.

ABSTRACT

Western militaries are moving too slowly to adapt to the needs of future warfighting. The reality of nuclear weapons and the United States hegemony have prescribed the options for current and potential adversaries, leaving them with few viable approaches. One such is ‘complex irregular warfare’, a type of war that deliberately uses an asymmetrical approach in an attempt to dislocate Western strength. Countering this approach has significant implications for Western militaries. This paper concludes that: there will be increasing tensions between the services and strains on the joint community, that training for high-intensity war and adjusting for low-intensity is not the right answer, that there is a pressing need to embrace multi-agency operations, and that the West needs to adjust further to the realities of US leadership. Otherwise, we are destined to maintain and upgrade our high-end, industrial-age square pegs and be condemned for trying to force them into contemporary and increasingly complex round holes.

Square pegs for round holes?

Current approaches to future warfare and the need to adapt

INTRODUCTION

It is impossible to predict the future, and all attempts to do so in any detail appear ludicrous within a few years.

— Arthur C. Clarke¹

A ghost is stalking the corridors of general staffs and defense departments all over the developed world—the fear of military impotence, even irrelevance.

— Martin van Creveld²

Confrontation and conflict are facts of life and death, and warfare is a permanent feature of the human condition.³ Despite the waste, misery and, often, the futility of resorting to organised violence, Plato correctly lamented that ‘only the dead have seen the end of war’.⁴ War is as likely to be a part of our future as it has been a central theme in our past and is a reality of our present.

¹ Arthur C. Clarke, *Profiles of the future*, The Camelot Press, London, 1962, p. 9.

² Martin van Creveld, *Transformation of war*, The Free Press, New York, 1991 p.1.

³ Carl von Clausewitz, *On war*, M. Howard and P. Paret (eds and trans), Princeton University Press, Princeton, NJ, 1976, p. 149.

⁴ Commonly attributed to Plato; the quote appears on a plaque at the Imperial War Museum, London, was used by General Douglas MacArthur in his farewell speech to the Corps of Cadets at West Point on 12 May 1962, and opens Ridley Scott’s film *Black Hawk Down* (2001).

Yet predicting what future warfare might look like is difficult. As the recently released *2006 Quadrennial Defense Review* of the US Department of Defense states:

We cannot accurately characterize the security environment of 2025; therefore, we must hedge against this uncertainty by identifying and developing a broad range of capabilities. Further, we must organize and arrange our forces to create the agility and flexibility to deal with unknowns and surprises in the coming decades.⁵

While we cannot be accurate—if accurate is used here as a synonym for certainty—neither can we simply face the future with a blank cheque and prepare for every contingency. Not only would this be unaffordable, but would also lack focus and be a reactive rather than a proactive strategy. Military professionals and those in the broader defence and security spheres have a duty to succeed in contemporary conflicts while preparing for success in future war. Despite the poignant warning in Arthur C. Clarke’s quote, planning for the future requires thinking systematically about the future. War takes preparation, whether it is in the production of equipment, the training and readiness of forces, or the strategy and policies that guide action. Waiting for certainty is a short-cut to disaster, as it hands all initiative to an adversary. Predictions, assumptions and informed guesses have to be made if strategy and policies are to shape the direction of forces, plans and training, and to have them ready to be relevant in time for tomorrow’s war.

This paper is about future warfare. It is an attempt to identify and separate the important trends, ideas and principles that will shape warfare in the years to come. It will argue that two

⁵ US Department of Defense, *Quadrennial Defense Review*, 6 February 2006, p. A-6, accessed from <<http://www.globalsecurity.org/military/library/policy/dod/qdr-2006-report.pdf>>.

fundamental changes have occurred that are so significant that they will define the environment of future warfare. The first of these is what van Creveld has called ‘the indispensable nuclear weapon’.⁶ Nuclear weapons, especially when in sufficient quantities for ‘mutually assured destruction’, represent an end to the search for the ultimate weapon. The threat of a nuclear exchange will be a primary determinant of the character or conduct of future war. The second change is the current hegemony of the United States of America and its allies. The United States is now the world’s sole superpower, with rapid global reach and the ability to sustain power projection. Also, far from showing signs of national exhaustion, it is retaining its lead over potential rivals. These two factors are crucial, and the way that actors adapt to them will determine the character and conduct of war.

The character and conduct of future warfare is prescribed for adversaries because of the reality of nuclear weapons and the conventional dominance of the United States and its allies. These effects are two sides of the same coin and they produce an asymmetrical response from enemies. This response is best described as ‘complex irregular warfare’, a form of warfighting that attacks vulnerabilities in Western militaries and societies while remaining masked and below the threshold of conventional or nuclear response.

Complex irregular warfare will challenge Western militaries by placing them in a classic dilemma: do they re-structure and re-train to fight the current and likely future battle, taking hard choices and removing high-end capabilities, and in so doing weaken the very forces that are prescribing adversaries’ current

⁶ Martin van Creveld, ‘The indispensable nuclear weapon’, in G. Prins and H. Tromp (eds), *The future of war*, Kluwer Law International, The Hague, 2000, pp. 189–93.

options? Or do they continue to try to maintain full-spectrum capability and in so doing become jacks of all trades and masters of none, with spiralling equipment and personnel costs?

Important changes are required to combat complex irregular warfare. Future warfare will demand a 'beyond joint' interagency approach that emphasises land-centric multi-agency operations in which naval and air forces play an important but supporting role. This will put increasing tension on our current understanding of 'jointness'. Similarly, we will need to confront the comfortable adage that we train for high-end activities and adapt to low.

Part I of this paper expands on the key determinants of future warfare (introduced above) and analyses their influence. Part II examines how ready the current thinking, posture, structure and training are to operate within these influences, arguing for the need to adapt, expand and change our current thinking and policies. Part III discusses the necessary changes. Complex irregular warfare demands new skills and innovative approaches, which training for high-end warfare not only does not provide, but indeed may be fatally inappropriate to and distracting from

PART I: The Key Determinants

The end of history?

The end of the Cold War witnessed a wave of optimism that somehow the dreadful scourge of interstate war had been relegated to history's rubbish bin.⁷ There was a feeling that democracy had prevailed and that any remaining confrontation could be handled using international institutions operating within agreed codes of international law. Remaining disputes could be handled rationally and proactively to ensure they had no chance of slipping into conflict or war. Any remaining competition was likely to be economic rather than military.⁸ That this has not transpired is evidence more of historical continuity than a plunge into a new dark age. There is still an unequal sharing of power in the world. The struggle for power leads to confrontation and confrontation can easily deteriorate into conflict and war. In many ways the post-Cold War period has seen a return to disorder and uncertainty; there is the perception at least that some previously restrained forces have been unleashed.⁹ There is no need for concurrence on the specific issues that will prompt the recourse to organised violence, or in what priority or immediacy these issues will present. It is enough to agree that there are sufficient reasons for societies to fight. As Clausewitz observed, war is a *continuation* of politics by other means. In other words, the politics—or the struggle between ideas or ideals—comes first

⁷ Francis Fukuyama, *The End of History and the Last Man*, Maxwell Macmillan International, New York, 1992.

⁸ Christopher Chase-Dunn and Bruce Podobnik, 'The next world war: world-system cycles and trends', in V. Bornschier and C. Chase-Dunn (eds), *The future of global conflict*, Sage, London, 1999, p. 40.

⁹ James Gow, *Defending the West*, Polity, Cambridge, 2005, p. 38.

and the decision to resolve through violent means is a secondary or sequential consideration. If this is accepted, then the next step is to discuss the character and likely conduct of these violent struggles.

War's changing character: nuclear weapons

The advent of nuclear weapons has brought a fundamental change to the eternal quest for more and more powerful weapons in war and needs to be seen as an important discontinuity in history's march. Before the advent of nuclear weapons there could be no logical reason to stop acquiring increasingly devastating weapons to gain a decisive advantage and vanquish a foe. As Clausewitz urged, decision in war requires the maximum exertion of strength—there is no ingenious way to disarm or defeat a foe without shedding blood.¹⁰ As he states: 'If one side uses force without compunction, undeterred by the bloodshed it involves, while the other side refrains, the first will gain the upper hand'.¹¹ For Clausewitz there could be no point in withholding any weapon or limiting the use of force. This is an area where a literal reading of Clausewitz is unwise: nuclear weapons have changed this quest for total war for the primary reason that unlimited total war between nuclear-armed states makes no sense if it results in the destruction of both parties. War is an act of policy and this implies that war is not an end in itself but simply the means to achieve the political aim. Mutual suicide serves no political aim.¹²

¹⁰ Carl von Clausewitz, *On war*, pp. 75 and 77.

¹¹ *Ibid*, p. 76.

¹² John Keegan, *A history of warfare*, Pimlico, London, 1993, p. 381.

Martin van Creveld goes as far as saying that nuclear weapons broke states' power to make war against other states.¹³ This idea, however, is at variance with the argument that conflict and war are part of the human condition, and therefore, by definition, activities conducted by nuclear-armed states. Instead, nuclear weapons have, since 1945, put a limit on *how total* warfighting can become and still be a rational servant of policy. Nuclear weapons have therefore had a deep-seated impact on the character and conduct of war rather than on its nature. To be quite clear, war has become limited, and not because of war-weariness, any sudden outbreak of ethics, the role of international law, or any of the 'drivers for peace'. War has become limited not through choice but because of the advent of weapons that are too powerful to be used routinely and whose primary purpose is the threat of use.¹⁴ War is limited because it must be, rather than through some form of natural obsolescence or outbreak of goodwill.

The classic state of nuclear warfare is best described by the advent of 'mutually assured destruction' (MAD)—reached by the United States and the then—Union of Soviet Socialist Republics. With their combined 'nuclear arsenals' an all-out nuclear exchange assured the destruction of both parties and, as a by-product, had a catastrophic effect on the rest of the world.¹⁵ However, the principles of nuclear deterrence still have relevance for countries with smaller arsenals. As Avery Goldstein points out in his book *Deterrence and security in the 21st century*:

The Cold War security policies of China, Britain and France reflected a common strategic logic. Each ultimately embraced a policy that had as its top priority

¹³ Van Creveld, 'The indispensable nuclear weapon', p. 190.

¹⁴ Nicholas Fotion, *Military ethics: looking toward the future*, Hoover Institution Press, Stanford, CA, 1990, p. 31.

¹⁵ Martin van Creveld, *On future war*, Brassey's, London, 1991, p. 4.

the deployment of national nuclear forces sufficient to dissuade threats against vital interests, a priority that led all three to rely on a distinctive strategy of deterrence of the strong by the weak.¹⁶

The concerns that prompted these policies also motivated other states and are likely to continue to do so.¹⁷ Goldstein's book is of interest because it deals with the smaller nuclear-armed states rather than the United States or now Russia. He casts light on the result of other smaller powers, such as Pakistan, India, Israel and North Korea possessing or obtaining a modest nuclear arsenal. Britain, France and China created forces that did not reach a level of mutually assured destruction with anyone, but did create what Devin Hagerty has termed 'first-strike uncertainty'—the doubt that even the best-planned surprise attack would neutralise the victim's ability to launch an unacceptably punishing retaliatory strike.¹⁸

In the post–Cold War world, there is little doubt that nuclear weapons remain one of the most strategically distinctive features of military technology and retain their utility in the unexplored territory of a unipolar world.¹⁹ Nuclear weapons induce caution in uncertain times, are easier to re-target than the standing forces are to reconfigure, and are relatively cheap.²⁰ India and Pakistan, and probably Israel²¹, chose the nuclear path as one essential for security; they devoted the required resources, withstood external pressures and pressed ahead until a capable deterrent was achieved.²² While Israel has kept quiet about its capability,

¹⁶ Avery Goldstein, *Deterrence and security in the 21st century*, Stanford University Press, California, 2000, p. 2.

¹⁷ *Ibid*, p. 3.

¹⁸ *Ibid*, p. 44.

¹⁹ *Ibid*, p. 221

²⁰ *Ibid*, p. 223–24

²¹ See *The Australian*, 19 May 2006, 'Israel tested nuke in 1979'.

²² Goldstein, *Deterrence and security in the 21st century*, p. 250.

Pakistan and India have, from time to time, revealed their nuclear ability, either out of uncertainty about its technical reliability or, perhaps because their confrontation is closer to conflict, they feel that it is essential to issue a reminder of their forces potency.²³ Recently, Iran has joined the list, clearly willing to expend the resources and withstand international approbation to be perceived as a nuclear power. On the eve of Tehran being reported to the UN Security Council, the Iranian President, Mahmoud Ahmadinejad, said ‘The Iranian nation’s achievement of peaceful nuclear energy is so important that it could change the world equation’.²⁴ Iran’s current defiance is not based on a suicidal wish to take on the world, but instead is a calculated move to take advantage of the deep divisions within the international community over how to handle a blatantly emerging nuclear power against the backdrop of the awesome threat of nuclear weapons.²⁵ Their current success in gaining United States and world attention cannot fail to be noticed by other countries.

There is room, however, for guarded optimism, even if such is not a popular view. Goldstein argues that any leader, even a ruthless one, will behave with ‘uncharacteristic caution’ once they recognise the potentially catastrophic consequences of nuclear adventurism.²⁶ Similarly, nuclear weapons do not remove the desire or need for confrontation and conflict but do severely limit the available options. How this affects military courses of action will be discussed in the next section, but there is room for optimism that the existence of nuclear weapons further encourages varying diplomatic and non-

²³ *The Australian*, ‘Pakistan test fires missile’, 26 April 2006,

< http://media.theaustralian.news.com.au/20060430-pakistan_player.htm >.

²⁴ *The Australian*, ‘Iran “next superpower”’, 29 April 2006,

< <http://www.theaustralian.news.com.au/printpage/0,5942,18965272,00.html> >.

²⁵ *Ibid.*

²⁶ Goldstein, *Deterrence and security in the 21st century*, p. 276.

military paths.²⁷ Regardless, the existence of nuclear weapons represents a fundamental turning point or dead end in military matters—they represent a weapon too powerful to use effectively. Nobody has yet deduced how to wage a nuclear war without risk of unacceptable consequences, either sheer destruction or political backlash.²⁸

War's changing character: the US military dominance

The current US military dominance, and the general hegemony that the United States enjoys as the only superpower, is unprecedented in world history. There are several reasons for this. First, there has never before been a single superpower with such wide global interests and rapid and sustained global reach. Second, there has never been a power with global reach with a conventional capability that so exceeds its opponents as to make a conventional contest highly one-sided. Third, the United States is in the position where it has already achieved this domination without exhaustion and need only defend its position to remain pre-eminent. The onus is on others to catch, to match and to surpass. Fourth, the United States is the key driver, and major underwriter, of many of the world institutions that manage global affairs, and is uniquely placed to exert influence. Unlike nuclear weapons, however, the US dominance can be undone—world history has shown that hegemonic status is not permanent.²⁹ The only difficulty with this argument is that it is arguing by example rather than the particular circumstances in which the United States finds itself. Just as the current situation of the United States within the world is unique, so might be its staying power.

²⁷ Ibid, p. 283.

²⁸ Van Creveld, *On future war*, p. 10.

²⁹ Charles and Eugene Wittkopf, *World politics: trend and transformation*, Thomson Ewadsworth, California, 2006, pp. 96–97.

The United States is showing no signs of flagging in its hegemonic pre-eminence, and while the growth of so-called challengers such as China and India is extraordinary, both countries are still so far behind that they would have to eclipse all historical trends to catch the United States. Figure 1 compares the military expenditures of the top twelve spenders, the equivalent amount for the United States not including its expenditure on the wars in Iraq and Afghanistan. Further, US military spending is increasing (US\$288b in 2000 to US\$441b in 2006), its economy is the largest in the world and ranked second-strongest by the World Economic Forum for its continuing technological supremacy, and its innovation pipeline is second to none in the world. The United States has companies that spend heavily on research and development and are aggressive in adopting new technologies.³⁰

Country	Rank	Dollars (billions)	% of total
United States	1	420.7	43%
China	2	62.5	6%
Russia	3	61.9	6%
UK	4	51.1	5%
Japan	5	44.7	4%
France	6	41.6	4%
Germany	7	30.2	3%
India	8	22	2%
Saudi Arabia	9	21.3	2%
South Korea	10	20.7	2%
Italy	11	17.2	2%
Australia	12	13.2	1%

Figure 1: Comparative military spending, 2005³¹

³⁰ Source: The World Economic Forum at www.weforum.org.

³¹ Source: The International Institute for Strategic Studies at www.iiss.org.

The United States has extraordinary natural strength that will sustain it as a world player: its landmass, population and natural resources will remain a constant in world affairs. The current US position has been compared with that of Britain when the British Empire was at its height, with the warning that just as Britain faded, so too will the United States. As David Reynolds points out, however, with only 2 per cent of the world's population, and a small home base with few natural resources, it was always unlikely that Britain could control one-fifth of the world for very long.³² Unlike Britain, the United States has systemic natural strength. Unlike Europe, its population forecasts remain vibrant thanks to a steady flow of migrants and continuing high birthrates amongst minority groups, especially Hispanics. Similarly, and again unlike Europe, US Gross Domestic Product as a percentage of world GDP is expected to remain relatively constant until 2050.³³ The attacks of 11 September 2001 called into question complete reliance on geopolitics, as ICBMs had done decades earlier, but the fact remains that the United States is a large and secure landmass well-removed from potential state-based adversaries.

The United States not only has the capability to maintain its unprecedented lead over the rest of the world but also has proclaimed its intention to do so. The publication of the second Bush Administration statement on national strategy reiterates the commitment to a program to ensure US dominance in exactly the same words as the last.³⁴ The immense wealth that the United States is producing enables an expenditure on military force that far exceeds that of the rest

³² Quoted in L. Martin and J. Garnett, 'Postwar decline?', in *British foreign policy: challenges and choices for the 21st century*, Royal Institute of International Affairs, London, 1997, p. 14.

³³ Lecture notes, Royal College of Defence Studies, 19 May 2006.

³⁴ Henry Kissinger, *International Herald Tribune*, Views, 14 April 2006.

of the world. The Iraq invasion of 2003 confirmed what had been demonstrated in 1991: the United States has a formidable military capability that no other country is close to replicating. Therefore, it is safe to project US hegemony as the second major factor after nuclear weapons that will influence confrontation, conflict and war in the future. It can also be expected that military actions will invariably be in concert with or against the United States, or at least in the shadow of US interests. Exactly how actions might be conducted under the shadow of nuclear weapons and US hegemony is the subject of the second part of this discussion.

PART II: The Key Effects

Clausewitz wrote that the first and most far-reaching judgment that the statesman and commander have to make is to establish the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into something that is alien to its nature.³⁵ In concert with this, there is the need to accept the effects that nuclear weapons and US hegemony will have on future warfare, analyse how to take heed and advantage of these effects, and plan accordingly. There is not the luxury of wishing for a future environment that fits comfortable paradigms, budgets or traditional force structures: if adaptation is necessary then so too are growth and change. The United States and its allies cannot maintain and rely on square pegs if the future is likely to present round holes.

The ‘indispensable nuclear weapons’ and the US dominance in conventional military capability are the two key determinants for future warfighting. As long as they hold sway these factors are our guides for the environment in which future warfare will operate, and which militaries and security services need to accommodate in future planning. As argued earlier, nuclear weapons and US dominance have not made war obsolete or redundant, simply more restricted. War will find a way to adapt and overcome any restriction.

Operating with nuclear weapons

The above observation on war’s limit is still useful as it narrows the spectrum of future conflict and begins to give

³⁵ Clausewitz, *On war*, p. 88.

shape to the types of actors in future warfare. As van Creveld notes, the effect of nuclear weapons to date ‘has been not so much to put an end to war as to force people to look for and find other forms of political organisation, in whose name they could fight’.³⁶ In many ways, future confrontations between nuclear armed states will be much like the Cold War, with no direct confrontation between the protagonists but instead sponsored proxy conflicts—such as the Korean or Arab–Israeli wars. Another possibility is that both sides could intervene in a particular conflict in a third state and their respective professional military elites engage in a carefully prescribed gladiatorial conflict.

To take the latter possibility first, a possible scenario might be where two nuclear-armed states confront each other over an issue in which both have an interest but is not an issue of national survival to either. The confrontation could slip into conflict, either through mis-calculation or by a deliberate act on one or both sides, to test the relative conventional capability of the other. The fighting troops may be from the states concerned or they could be funded proxies. Both may publicly or privately agree to use all force short of nuclear weapons and make it clear that this is a limited conflict with limited objectives.

The threat of nuclear miscalculation will ensure great caution in future warfare between states that possess such weapons, or in conflicts in which one or both sides fight under the umbrella of an allied state. The chance of a misunderstanding or unacceptable battlefield success or failure, pushing beyond either stated or unstated limits and leaving nuclear response as the only option, means that this is a very risky game. This would be particularly true if operations were to be conducted

³⁶ Van Creveld, ‘The indispensable nuclear weapon’, p. 191.

within the borders of a nuclear-armed state or when operations in an adjacent or client state threaten to be too successful. The United States faced this quandary in Vietnam, where operations were conducted always with an eye to what the Chinese or Soviets would accept.³⁷

As such, warfare since 1945 has reversed an historical trend: antagonists have not tried to outmatch an adversary through more and better matériel. Once nuclear weapons are available, there is little point. Instead, the only option is to operate below the nuclear threshold and conduct operations that a nuclear option cannot prevent; in other words, operations that cannot be deterred. The three pillars of deterrence theory are capability, conviction and communication. A state must first have the capability and second the conviction to use nuclear weapons, and then must communicate both the capability and conviction to the state or states it is trying to deter. To these pillars should now be added the ability and need to convince the rest of the world that using nuclear weapons was the only viable option, a most difficult task given the advent of precision missiles.

To deter successfully, a state must be able to target something the other state holds dear—traditionally either its centres of population and production (counter value) or its own weapons (counter force). The strategy of a society or state without nuclear weapons must therefore be to dislocate an opponent's weapons, either by shielding its own weapons or by making its own population and means of production inaccessible. This, in effect, was the dilemma that faced the United States in both Korea and Vietnam where, in both instances, geo-strategic considerations of escalation allowed its adversaries the

³⁷ Bruce Kuklick, 'Academics and generals do not direct how America wages war', *Financial Times*, 18 April 2006, p. 11.

sanctuary of China. Osama Bin Laden took this further by creating a movement without a state. He cannot be deterred by nuclear weapons because he has nothing that can be targeted. The price bin Laden pays for this is that he can fight only an irregular war. It is difficult to see how he could ever move along the path from irregular to regular warfare, as prescribed by Mao, without coming into the open and presenting a target. As an aside, this is why irregular warfare (or terrorism as it is sometimes labelled, forgetting that ‘terror’ is just a tactic of the irregular) is not the bogey-man it is painted to be. Irregular warfare can be a pernicious nuisance, but it threatens a state’s integrity and being only when the irregular movement is either moving, or has the potential to move, into the next phase of warfare—the ability to form organisations and units that can contest and control sovereign territory. The real muscle-movements of history are state-based and concern state actors. This is why current irregular threats are a significant concern only when they have the potential to control territory. To do so, they will need safe bases, some form of permanent infrastructure and formed bodies to maintain control. As soon as they show any potential to do so they face the second key determinant of the future environment: the US military dominance.

Operating with US military dominance

The dominance of the US military in conventional warfighting is at so high a level, and likely to be maintained there, that it is unlikely to be matched or even challenged. The superiority of the United States, as demonstrated in Iraq and Afghanistan during the conventional force-on-force phases of those actions, is clear evidence of a capability and experience well beyond competitors. Coupled with a research and development budget and capability that dwarfs the rest of the

world, the United States will enjoy this dominance well into the future and this will be a key determinant of the character of future war.

Critics will immediately point to the lack of utility that this force has had in some recent actions, whether it be in Somalia or the current warfighting phases in Iraq and Afghanistan. The adversary in these places has adapted to US conventional capability and is waging a different type of warfare that makes much of the US capability redundant and unusable. There is an important additional factor, however: this adaptation is forced on an adversary by the US dominance and restricts and limits the capabilities an adversary can employ. The United States has effectively removed conventional warfare from the suite of practical enemy options and this removal is an important and critical victory for the United States and its allies. The United States has resolved to maintain conventional superiority that is not just incrementally superior to any likely adversary, but overwhelmingly so. The United States has pre-empted conventional warfighting, not in the sense of their policy for pre-emptive action, but in terms of winning fights before they can happen.³⁸ The United States gains scant recognition of just how important this factor is, yet such victories are of supreme importance.³⁹ In many ways, the United States has now advanced its conventional capability to so great an extent, and made it so powerful a weapon, that they can practise 'conventional deterrence' in much the same way as we understand nuclear deterrence to operate. This further limits the options open to an adversary, and any limiting of adversary options is an advantage. The more clarity there is of the options open to an adversary, the better the ability to plan,

³⁸ Robert Leonhard, *The art of maneuver*, Presidio Press, California, 1991, p. 63.

³⁹ See, for interest, Sun Tzu, *The art of war*, Oxford University Press, Oxford, 1963, p. 87.

train and equip accordingly. The inability and unwillingness of likely adversaries to match the capital expenditures and technological sophistication of the United States and its allies will make military parity highly doubtful, even when adversaries act in coalitions.⁴⁰ The superiority of the United States is likely to discourage strategic attacks on it, its allies, or those areas where it has interests. The risks of conventional interstate war are ever-increasing due to the cost and lethality of weapons systems, the flow-on effect to regional and global stability, and the strengthening international presumption against war and the associated penalties to those conducting it.⁴¹ Thus, US conventional excellence will have the effect of making conventional conflict increasingly unlikely.

The increasing unlikelihood of conventional conflict leads to the real provenance of the often-touted concept of asymmetry. Much of what has been written about asymmetrical war has done nothing more than describe the age-old tactic of attacking an adversary in ways or with weapons they do not expect. The US conventional superiority has forced adversaries in to asymmetrical action as the only workable option at the operational and strategic levels. Traditionally, armed forces have matched an opponent's capabilities with bigger and better weapons. Warfare during the modern period has generally been decided by superiority in conventional weaponry, in contests understood or described as 'symmetrical'. By severely constraining this option, the United States has forced an opponent to operate in asymmetrical contest, below the US military's detection and engagement threshold. Historically, this has been termed irregular or guerrilla warfare, and is often characterised as the province of the weak. The future may well

⁴⁰ R.D. Hooker Jr, 'Beyond *Vom Kriege*: the character and conduct of modern war', *Parameters*, Vol. XXXV, No. 2, Summer 2005, p. 9.

⁴¹ UK Ministry of Defence, Development, Concepts and Doctrine and Centre, *Strategic Trends*, < <http://www.dcdc-strategictrends.org.uk/home.aspx> >.

see states and organisations, even very wealthy ones, adopting irregular warfare by choice rather than by necessity.

War will find a way. In future warfare, an adversary will use all tools available that give them an edge. While the predominant form of warfare will not be conventional—but rather generally irregular—this does not mean that conventional or ‘high-tech’ combat will be ignored. The ‘irregular’ tag is used with caution: there is a need to be particularly wary of employing historical forms of war to prescribe the conduct and character of future warfare. No forms of warfare are obsolete and this is particularly true of conventional war. Where conventional warfare is not currently a sensible option for an opponent, this is not because of any inherent weakness or obsolescence in it, but because the United States has cornered the market. Remove the US conventional dominance and a vacuum would result. As nature abhors a vacuum, this space would be filled in a curious but understandable asymmetric and diametric reversal, especially if the West were to roll back conventional capabilities too far. That weakness or shortfall in capability could be the new asymmetric space for an adversary to exploit. In the future, we can expect to see a blurring of irregular, conventional and high-tech warfare into a hybrid form of complex irregular warfare in which an adversary uses all means available that have a reasonable chance of success.

Complex irregular warfare: options for an adversary

Complex irregular warfare (CIW) is the only real option open to an adversary if they are to confront an opponent who has nuclear weapons and the active support of the United States. The rise of CIW is the natural reaction to

America's overwhelming military superiority. As Frank Hoffmann has written:

The United States has pushed future opponents to alternative means that are purposely designed and deployed to thwart Western societies. This mode of warfare exploits modern technologies and the tightly [sic] interdependencies of globalised societies and economies.⁴²

In future conflicts, wealthy nations or organisations may deliberately opt to use CIW as a means to dislocate the US conventional capability even if an adversary had the option of squaring up in a symmetrical, conventional contest. In many ways, it could be said that Iran is conducting this very type of complex irregular war against the United States in Iraq today: a covert enabling training and advisory role that directly targets the United States whilst still preserving the semblance of peace and Iran's own national integrity.

Traditionally, an irregular combatant was defined by what they were not: they were not a regular soldier but might be an auxiliary, a mercenary or a member of some other local force operating apart from the regular force. The irregular soldier did not normally confront an opponent in direct combat but chose to skirmish or ambush, seeking to mask their weakness by using indirect means. This type of soldier also connoted the type of warfare they conducted: irregular warfare. An irregular warfare campaign achieves success by gaining an advantage over adversaries in the four dimensions of time, space, legitimacy, and support.⁴³ In Complex Irregular Warfare, the

⁴² Frank G. Hoffmann, 'Complex irregular warfare', in Foreign Policy Research Institute,
<<http://www.fpri.org/enotes/20060106.military.hoffman.complexirregularwarfare.html>>, 6 January 2006.

⁴³ Graham King, 'Irregular warfare', at <<http://www.darkcoding.net/strategy/irregular-warfare/>>.

proponent will adopt some or all of the four tenets of traditional irregular warfare but will also exploit contemporary society to further their ends. An adversary is likely to take advantage of globalisation and use technology to attack or cripple a state. Possibilities include cyber attacks on global telecommunications, interdiction of world trade routes, and attacks on the flow of capital. The same seamless transfer of assets that is a hallmark of a globalised world makes it easier to sustain an irregular force. Terrorism, coupled with a sensation-hungry media, becomes a favourite low-risk, high-payoff tactic of the irregular, a means to attack their foe and propagate their message. The interdependency of modern nation-states makes attacks on key nodes of energy, transport and telecommunications easier. Complex irregular warfare seems likely to be widely dispersed and largely undefined; the distinction between war and peace will be blurred to a vanishing point. Conflict will be nonlinear, possibly to the point of having no definable battlefields or fronts. The distinction between civilian and military combatants will disappear. Actions will occur concurrently against all vulnerable parts of a nation, including society as a cultural and physical entity. The tag 'complex' seeks to encapsulate the totality and complications of this type of warfare.⁴⁴ Either naturally or purposefully, this form of combat confronts the West with the type of warfare it least wants to fight: a high-manpower, drawn-out struggle with indeterminate ends, in which high-end technology is not dominant and military actions are not decisive. This will demand adaptations if the United States and its allies are to be well-prepared to counter CIW, otherwise, they will be using square pegs in round holes.

⁴⁴ William Lind, John Schmitt and Gary Wilson, 'The changing face of war: into the fourth generation', *Marine Corps Gazette*, October 1989, pp. 22–26.

PART III: The Key Changes Required

Preparing for complex irregular warfare

Military forces around the world are beginning to recognise the need for adaptation and change to prepare for CIW, but there is still much to be done. The 2006 *Quadrennial Defense Review (QDR)* of the US Department of Defense highlighted some of the areas in which the Department's re-orientation is likely to produce training and doctrinal changes. These included the need to prepare to participate in complex, interagency and multinational operations. It identified the need to develop training in irregular warfare, complex stabilisation operations, combating weapons of mass destruction and in information operations. The *QDR* recommended transforming the US National Defense University into a National Security University with broad interagency participation to help improve integration of effort. The *QDR* also recognised that complex irregular warfare was no longer the provenance of special forces—'general purpose' forces would need to assume greater roles in training, mentoring and advising foreign security forces. Finally, there was acceptance that complex irregular warfare requires a sound understanding of the cultural dimension and therefore improvements in language training and cultural skills.⁴⁵

⁴⁵ Written statement by Deputy Secretary of Defense Gordon England before the Senate Armed Services Committee, 8 March 2006, accessed from < <http://armed-services.senate.gov/statemnt/2006/March/England%2003-08-06.pdf> >.

Already, the US Marine Corps recognises that this type of warfare does not allow the luxury of building single-mission forces. What is required is for the Marines to achieve a better mix of expeditionary tools. This new balance should retain the Corps' historical role as the nation's shock troops, but also prepare the Marines for more protracted and subtle missions instead of 'first in/first out' missions or short 'operational raids' from the sea.

Both the United Kingdom and the Australian defence forces recognise the increasing likelihood of fighting irregular warfare and the decreased likelihood of state-based high-end warfighting. Like the United States, the United Kingdom has directed resources towards the threat and has placed considerable emphasis on 'special forces' as a key to tackling complex irregular warfare.⁴⁶ However, no modern military has gone far enough in recognising that CIW is not a passing fad but a form of war prescribed by nuclear weapons and US military dominance. Further, the very vulnerabilities and target sets that a modern state contains require this approach. Too many military and civilian analysts, strategists and academics see no link between conventional capability and the resultant irregular warfare. In most modern militaries there is emerging a split between the forces designated for counter-irregular warfare—invariably land-centric and often just special forces—and those concentrating on high-end conventional warfare—now a primary justification for maritime and air forces. This is a luxury that will be difficult to sustain and adapting to this reality has significant follow-on effects for contemporary military forces.

⁴⁶ UK Ministry of Defence, *The army of tomorrow*, 2005, p. 3.

Implications: joint forces

While there are many possible implications for modern militaries, there are four that have not received the prominence they deserve. The first is the reduced emphasis on joint forces. Just as many militaries are finally coming to grips with the essential need for joint approaches to complex military tasks, the needs of complex irregular warfare drive a practical and conceptual wedge between the joint players. Irregular warfare is invariably a land-centric operation and the overwhelming risk is borne by the land component. Irregulars do not have air forces or navies and, whilst air forces and navies will have an important role to play, their role is a supporting one. The issue is determined by land forces, be they special forces or regulars. Apart from smuggling and piracy, which are hardly high-end blue-water maritime actions, the irregular operates on land.

However, the US military and its allied forces are built as joint structures. Complex irregular warfighting will create tensions in joint structures as the different services carry an unequal load. As a result, we will need to move to a more mature understanding of what 'jointness' really means. It does not mean fairness, equality or interchangeability. Nor does it mean that, just because one service is the leader in the vast majority of actions, somehow the others are unimportant. In the post-joint or mature joint environment required of future warfare, the key determinants have to be the demands of the mission: appropriate commanders and troops are assigned to tasks based on need, not on whose turn it is. If the threat is water-borne piracy, then this should always be from the maritime service; if the threat is airborne smuggling, then this should always be an air-led operation. Further, if CIW is invariably a land-centric operation in which the land force bears the overwhelming risk, then the land force has the lead and the priority.

This priority calls into question the whole funding and command and control structures created for high-end joint warfighting. If a joint headquarters was designed from the ground up with CIW in mind, then we would be likely to see a proportionately larger land component and the supporting service partners would primarily be those involved in transport, lodgement and joint fires. Commanders of deployed forces would be invariably from the land force, again with supporting teams from the other services designed around the needs of the land force.

This realisation will be uncomfortable for many and be seen by them as a retrograde and anti-joint approach. Far from this, it actually demands a mature approach to joint action that sees it not as the end of the journey but the start. In many ways, this realisation reflects at a macro level the unhelpful squabbling within most militaries between the different arms and services. The big step forward in armies is when they concentrate on combined-arms effect as the essential first step of a strategy into which the different arms and services play their part. We must be so comfortable with our joint approach that we can support one lead service over long periods without doubting the worth of the supporting services.

One practical way in which this might be achieved is by the complete integration of joint approaches into and throughout the training continuum. At present, many forces have joint officer-induction training but personnel then do not come together and train again as joint forces until the middle of an officer's career, as some sort of add-on or next step. In the Australian Defence Force, for example, formal joint training is often first received at Staff College by middle-ranking majors who may have already completed ten to fifteen years of service. This is far too late to begin inculcating the joint

approach as the building block but instead makes it some sort of end in itself. There is also a natural tendency to fall back into the comfort zone of one's own service throughout a career.

A second, more uncomfortable question is the practical utility of promotion based on service quota. Most Western militaries currently have a set quota of officers at senior promotion bands from each service to spread the joint message through fairness and equality. This is essential when defence forces first take the joint road, as positive discrimination and a fair distribution of senior jobs is a practical way to break down single-service barriers. In a mature joint environment, however, the task will dictate the force rather than fairness or rotation of jobs based on service considerations. As already noted, CIW will be land-centric and, over time, it will be reasonable to expect that the officers and troops with experience will be primarily from the land force. Experience in this case may rest on an officer's experience in working with other agencies and in other countries more than in working with their own country's other services. If promotion is truly based on merit, then we can expect great tension on promotion by quota; even the rotation by service of key appointments will ultimately need to be questioned. Jointness as a concept is about results, not fairness or equality.

Implications: conventional forces

There was justifiable concern in many Western armies during the 'classic' period of United Nations peacekeeping that training and equipping for 'peace operations' or 'operations other than war' as the primary role of a force would denude it of warfighting capability. Instead, many armies trained for high-end conventional war and then adapted for what was termed low-

intensity operations. This had the added advantage of making best use of current and planned equipment and meant that some senior commanders could remain within the comfortable paradigms they had grown used to as they moved through the ranks. It also meant that all three services could have new kit, the key requirement for industrial warfare. It also suited military industry, which could continue to sell expensive equipment.

Training for high and adapting for low is a cliché that Western militaries need to challenge for a number of reasons. The first and most important point is to appreciate that countering CIW is very difficult; at the section and platoon level, it is harder and more demanding than conventional warfighting. In conventional division or corps-level operations, small tactical units move in accordance with synchronised plans, each performing a relatively ‘simple’ part of an overall whole—take that hill, defend that village or cross that obstacle are all the daily tasks of subordinate commanders. However, in complex irregular warfare, we expect small tactical units to be agile and adept at many competing tasks for extended periods in a chaotic environment full of neutrals, civilians and non-government organisations (NGOs) in a grey area between war and peace. The idea of the ‘strategic private’ is central to CIW, as the smallest act by the most junior rank can have a far-reaching effect in the tense environment of stability operations. This is complex work and demands an agility of thinking and acting not normally associated with regular forces.

Attitude, empathy and patience are the key mental attributes required of a soldier in complex irregular warfare. Being prudently slower on the draw, sizing up a situation and thinking of the bigger picture are the qualities required. This does not naturally come from training for high-end conventional warfighting. Indeed, a concentration on

aggression, joint effects and targeting can lead to a dehumanising of the very citizens the force hopes to influence. Cultural awareness, language training, and reconstruction are not normally high on the priority list for conventional warfighting but need to be for CIW. This style of warfare is not a dumbed-down, less daring variant of high-end fighting; it is its own form and it requires its own particular training.

Land forces need to adapt to CIW. Two important points need to be recognised. First, this is not just a job for special forces but has to become the norm for all land forces. Training, organisation and equipment will need to be focused on CIW as the primary mission and allow adaptation for conventional warfighting, rather than the other way around. Like special forces, the currency of CIW is the small team; we need to stop thinking in terms of battalions and remember that they are primarily administrative headquarters for subordinate teams operating with minimum mass in a complex environment.⁴⁷ Structures, training and, above all, education, need to change to accept this reality.

The second point is the slightly counter-argument that emphasises the difficulties of the new warfare. This is not classic low-level conflict but warfare against an adversary who will be highly advanced, technologically capable and well-trained. They will possess potent weapon systems capable of inflicting mass casualties. Consequently, the land force must be equally lethal and be able to operate in highly complex environments. Whereas the classic image of counterinsurgency warfighting is the dismounted infantryman, to ensure success against a lethal foe and minimise risk, CIW will require teams with a complete suite of arms. Australia, for example, argued

⁴⁷ Michael Krause, 'The Case for Minimum-mass Tactics in the Australian Army', *Australian Army Journal*, Vol. 2, No. 2, Autumn 2005, pp. 69–79.

successfully for new tanks as part of a combined-arms approach specifically to counter this type of threat. Force protection becomes especially important, not only because each soldier is a highly prized and highly trained asset, but also because of the ability of contemporary adversaries to use the world's media to dramatically magnify any episodes that favour them, particularly casualties⁴⁸

Army chiefs can therefore argue successfully for advanced weaponry and systems configured in combined-arms teams to counter irregular foes. If, on the other hand, they argue for this equipment for conventional war and then adapt it for CIW, then they should not be surprised that their fellow navy and air chiefs argue the same. As long as air forces and navies maintain high-level conventional forces then they will attract the majority of funds, as their equipment is expensive to buy and maintain.

There are other implications. Armies need first to challenge themselves to train and equip for the most likely and adapt to the unlikely. This is especially true because any need for high-level warfare will not be as demanding as we might think. Western armies have not fought a demanding combined-arms conflict against a similarly armed and trained foe since the Second World War. The invasions of Iraq in 1991 and 2003, often touted to emphasise the primacy of conventional forces, were one-sided affairs. The Western allies started with space

⁴⁸ The whole issue of the role of media, and the increasing scrutiny by the public of military operations, is a huge topic worthy of separate study. Suffice to say that military operations will continue to be played out in the full glare of public attention. Of concern is the disturbing trend by some to see operations by professional armies as battles between elites operating for governments, not for the people. The public become fascinated but somehow detached spectators, watching with the same interest and levels of Monday-morning criticism they would normally reserve for a football team.

supremacy and air superiority; conventional forces were overwhelmingly capable, with the latest night-vision equipment, Global Positioning System and networked forces. It should not be too difficult to train and equip for CIW and adapt to high-end warfare; at least we would be training for the most likely rather than the increasingly unlikely, and be training small teams with the agility of mind and purpose to react to any contingency. Similarly, we will be training troops for the type of actions they will be engaged in most of the time, and ensuring that the same troops can change their approach mid-stride, as circumstances dictate. The risk is acceptable.

What will still be required is an early-entry force able to defeat quickly any remnants of conventional capability in the subject country. These forces will need to react and deploy rapidly for both military and political reasons, but there should be no illusions that any rapid strategic effects are likely. An adversary, even if they choose to put up an initial conventional defence, will very quickly, through choice or necessity, begin to conduct a form of complex irregular warfare. All forces will need to plan from the outset for a protracted stability operation; we should not assume that any state or organisation will cease fighting just because it lacks the conventional means to do so. Planning will mean more than just military planning. It must include all arms of government, private contractors and, where possible, non-government organisations. The reality of CIW is that it requires a totally synchronised approach from all players at all times: the new joint is interagency.

Implications: multi-agency operations

Coupled with the realisation that 'joint' knowledge and skills have to be central rather than additional to all defence

members' understanding is the need to recognise the other actors within the CIW framework. Far from being the neat recognisable lines in conventional warfighting, complex irregular warfare will see a swirling and unclear environment in which forces operate 'amongst the people'.⁴⁹ This is a personal, close-range activity by small groups, enabled by high-tech networking, but where success is measured in terms of human interaction rather than kinetic targeting. As rehabilitation, stability and nation-building form so key a part of counterinsurgency warfare, an army officer is far more likely to be standing next to a person from another agency than they are to someone from another service. That other agency could be a government agency, an NGO or a private contractor.

The practical implications are important. Just as working in a joint environment must become second nature for military professionals as early as possible in their careers, so must they become comfortable working alongside agencies that represent all arms of national and international power. This is where cultural differences and competing agendas can frustrate and confuse. Often, this is because of a lack of exposure to other agencies until late in a career. Indeed, many officers first become familiar with other agencies in the combat theatre. This lack of knowledge needs to be recognised and practical steps taken to familiarise all sides with each other's particular goals and requirements. First, other arms of governments need to be staffed so that they can routinely allow personnel to attend combined training and education courses and to participate as equal players in training exercises. Second, combined staffs need to be formed rather than just joint staffs. These combined staffs must include functioning operators and decision-makers from other agencies, rather than just liaison

⁴⁹ Rupert Smith, *The utility of force: The art of war in the modern world*, Allen Lane, an imprint of Penguin Books, London, 2005.

officers. Combined staffs require operators embedded within staff functions, leading them where appropriate. Third, all arms of government must acquire an offshore mindset and have personnel trained and equipped to deploy their capability as rapidly as military forces. Complex irregular warfare will not allow a neat separation between fighting and post-conflict operations: reconstruction and rehabilitation must be part of the initial plan and other agencies must be in all ways prepared to operate during conflict. Reconstruction will need to be done under fire. Law and order will be a key requirement for stability operations: deployable organisations will need to be organised to run the complete law-and-order apparatus—from arrest through sentencing to detention—their charter must include training of indigenous auxiliaries and, eventually, home-grown replacements. Fourth, there should be commonality in logistics, communications and staff procedures across whole-of-nation and coalition contributors to aid a seamless and combined approach.

Implications: the need to support the United States

As argued earlier, the second major factor affecting future warfighting will be the continuing power of the United States. Unlike nuclear weapons—the first factor—US hegemony can be reversed, and how the West accommodates or attacks the position of the United States will have a major bearing on its longevity. If Western leaders are looking for one important way to offset future uncertainty, it is as simple as maintaining and increasing support for the United States. As long as it exists, US power is a factor that will have a profound effect on warfighting. Diminishing US strength may come because of actions over which the West has no control, but there is much that can be done to support and encourage the United States. Any wavering

of support and lack of resolve will have two consequences. First, it will bring forward more rapidly the time when the United States is no longer dominant, an event that will open the widest range of possible futures, some of which are, for the West, much more unpleasant than US hegemony. Second, the United States is already determined to sustain its position for as long as it can. It is impossible to influence the United States in any way if the decision is made to leave the hard work solely to it. The United States is a force for Western stability in the near future. Maintaining support and engaging with the United States is an investment in certainty in an uncertain future, a notion captured by the rubric 'better the devil you know'.

In practical terms, this means a much more focused effort during training to understand how US systems work, ensuring as great a degree of interoperability as possible. Staff procedures, equipment, doctrine and training need to assume working alongside the United States. Basing rights and combined training opportunities need to be extended to the United States at every practical opportunity. Officers' education needs to include a detailed understanding of US systems and procedures. Higher staff colleges need to imbue a thorough understanding of US governmental and strategic-level procedures rather than just familiarisation.

The United States, for its part, could do more to forge closer links with its allies and, rather than simply inviting others to participate in operations already determined, encourage greater input when planning and considering strategic options. Officer education in the US military needs to include more on working with allies, assuming their active participation and, in certain circumstances, their local leadership. This should be seen not as an unavoidable burden to ensure more flags in the sand but as a practical and sensible investment in helping to ensure enduring US dominance.

CONCLUSION

If politics is a term for the broader interaction between individuals or groups in the struggle for power, then warfare is its continuation by other means. The struggle leads to confrontation, and confrontation can lead to conflict. Until there is a perfectly equitable distribution of power, then confrontation is ever-present and conflict ever-likely.

Traditionally, conflict has been limited only by the means and will of rival forces. Clausewitz wrote of the need to focus total energy and of the folly of withholding any force from a struggle. Nuclear weapons and the current US hegemony, however, put limits on the force that can be applied by an adversary without the political aim of conflict being consumed by unacceptable destruction and violence. This condition has not put an end to conflict, as conflict is a by-product of political need rather than available weapons. War will find a way. The most practical current means for an adversary to operate successfully within the prevailing environment is to adopt a form of complex irregular warfare at the low end of the conflict spectrum. Complex irregular warfare is a strategic method of asymmetrically circumventing nuclear and conventional capability by dislocating its power. By fighting at lower levels, in small groups, and 'within the people' an adversary can render direct kinetic power, particularly from spatially dislocated weapons, far less effective or even useless. By using commercially available high-tech communications systems, by capitalising on the media's quest for sensational 'info-tainment', and by targeting the complex interactions that enable a globalised economy, adversaries can engage in conflict below the nuclear/conventional threshold.

The implications of complex irregular warfare for the United States and its allies are stark and unforgiving. First is the realisation that CIW is the most likely form of warfighting; education, training, structures and equipment must be optimised for its practice. This is not a task that can be left to special forces: all forces must be ready for this warfare as their most likely task. Second is the realisation that this is invariably a land-centric form of warfare, with the other services providing essential support. Just at the time when many have become comfortable with joint warfare, we have to accept that the demands of CIW will put great pressure and tension on the joint force. The trend is towards multi-agency combined operations rather than joint forces. Land forces will be the forces in the shortest supply, while conventional high-end air and maritime forces will be conspicuous by their non-use in their conventional roles. Each individual in the land force, as they make individual decisions and fight protracted operations amongst the people, will be under scrutiny by the global media—a totally foreign experience to crews of ships or planes. There is a third point, however, and that is the realisation that high-end air and maritime forces should best be seen in the same light as nuclear forces: their role is to deter conventional combat. In forcing an adversary to conduct complex irregular warfare, they perform a great service by prescribing the environment in which an adversary must operate. We should not pretend, however, that this realisation would sit comfortably, either with those services or with officials at budget time looking for cuts. We need a mature debate on the realities of modern warfare and its implications for current education, equipment, structures, partners and allies. Otherwise we are destined to keep and replace our high-end, industrial-age square pegs and be condemned for trying to force them into contemporary and increasingly complex round holes.

LAND WARFARE STUDIES CENTRE PUBLICATIONS

The General Sir Brudenell White Monograph Series

Schmidtchen, David, *The Rise of the Strategic Private: Technology, Control and Change in a Network-Enabled Military*, 2006.

Study Papers

- 301 Evans, Michael, *Forward from the Past: The Development of Australian Army Doctrine, 1972–Present*, August 1999.
- 302 Ryan, Alan, *From Desert Storm to East Timor: Australia, the Asia-Pacific and the 'New Age' Coalition Operations*, January 2000.
- 303 Evans, Michael, *Developing Australia's Maritime Concept of Strategy: Lessons from the Ambon Disaster of 1942*, April 2000.
- 304 Ryan, Alan, 'Primary Responsibilities and Primary Risks': *Australian Defence Force Participation in the International Force East Timor*, November 2000.
- 305 Evans, Michael, *The Continental School of Strategy: The Past, Present and Future of Land Power*, June 2004.
- 306 Evans, Michael, *The Tyranny of Dissonance: Australia's Strategic Culture and Way of War, 1901–2005*, February 2005.
- 307 Morrison, James C., *Mechanising an Army: mechanisation and the conversion of the Light Horse, 1920–1943*, June 2006.
- 308 Hopkins, Scott (ed.), *Asymmetry and Complexity: Selected Papers from the 2005 Rowell Seminar and the 2005 Chief of Army's Conference*, February 2007.
- 309 Hopkins, Scott (ed.), *2006 Chief of Army's Exercise Proceedings*, March 2007.
- 310 Wegener, Andrew, *A Complex and Changing Dynamic: Afghan Responses to Foreign Intervention, 1878–2006*, April 2007.

Working Papers

- 101 Evans, Michael, *The Role of the Australian Army in a Maritime Concept of Strategy*, September 1998.
- 102 Dunn, Martin, *Redefining Strategic Strike: The Strike Role and the Australian Army into the 21st Century*, April 1999.
- 103 Evans, Michael, *Conventional Deterrence in the Australian Strategic Context*, May 1999.
- 104 de Somer, Greg, *The Implications of the United States Army's Army-After-Next Concepts for the Australian Army*, June 1999.

- 105 Ryan, Alan, *The Way Ahead? Alternative Approaches to Integrating the Reserves in 'Total Force' Planning*, July 1999.
- 106 de Somer, Greg, *The Capacity of the Australian Army to Conduct and Sustain Land Force Operations*, August 1999, reprinted October 1999.
- 107 de Somer, Greg, and Schmidtchen, David, *Professional Mastery: The Human Dimension of Warfighting Capability for the Army-After-Next*, October 1999.
- 108 Zhou, Bo, *South Asia: The Prospect of Nuclear Disarmament After the 1998 Nuclear Tests in India and Pakistan*, November 1999.
- 109 Ryan, Michael and Frater, Michael, *A Tactical Communications System for Future Land Warfare*, March 2000.
- 110 Evans, Michael, *From Legend to Learning: Gallipoli and the Military Revolution of World War I*, April 2000.
- 111 Wing, Ian, *Refocusing Concepts of Security: The Convergence of Military and Non-military Tasks*, November 2000.
- 112 Ryan, Michael and Frater, Michael, *The Utility of a Tactical Airborne Communications Subsystem in Support of Future Land Warfare*, April 2001.
- 113 Evans, Michael, *From Deakin to Dibb: The Army and the Making of Australian Strategy in the 20th Century*, June 2001.
- 114 Ryan, Alan, *Thinking Across Time: Concurrent Historical Analysis on Military Operations*, July 2001.
- 115 Evans, Michael, *Australia and the Revolution in Military Affairs*, August 2001.
- 116 Frater, Michael and Ryan, Michael, *Communications Electronic Warfare and the Digitised Battlefield*, October 2001.
- 117 Parkin, Russell, *A Capability of First Resort: Amphibious Operations and the Australian Defence Policy, 1901–2001*, May 2002.
- 118 Blaxland, John, *Information-era Manoeuvre: The Australian-led Mission to East Timor*, June 2002.
- 119 Connery, David, *GBAeD 2030: A Concept for Ground-based Aerospace Defence in the Army-After-Next*, July 2002.
- 120 Beasley, Kent, *Information Operations during Operation Stabilise in East Timor*, August 2002.
- 121 Ryan, Alan, *Australian Army Cooperation with the Land Forces of the United States: Problems of the Junior Partner*, January 2003.
- 122 Evans, Michael, Ryan, Alan (eds), *From Breitenfeld to Baghdad: Perspectives on Combined Arms Warfare*, January 2003.
- 123 Hoare, Mark, *The Prospects for Australian and Japanese Security Cooperation in a More Uncertain Asia-Pacific*, July 2003.
- 124 Ryan, Alan, *'Putting Your Young Men in the Mud': Change, Continuity and the Australian Infantry Battalion*, September 2003.
- 125 Schmidtchen, David, *Network-Centric Warfare: the Problem of Social Order*, July 2005.

- 126 Watson, James, *A Model Pacific Solution? A Study of the Development of the Regional Assistance Mission to Solomon Islands*, October 2005.
- 127 Brailey, Malcolm, *The Transformation of Special Operations Forces in Contemporary Conflict: Strategy, Missions, Organisation and Tactics*, November 2005.
- 128 Stevenson, Robert C., *Not-so friendly fire: an Australian taxonomy for fratricide*, April 2006.
- 129 Schmidtchen, David, *Eyes wide open: stability, change and network-enabling technology*, May 2006.
- 130 Stevenson, Robert C., *The Human Dimension of the Hardened and Networked Army: The Lessons of Friendly Fire*, June 2006.
- 131 Blaxland, John, *Revisiting Counterinsurgency: a Manoeuvrist Response to the War on Terror for the Australian Army*, July 2006.

Books

Wahlert, G. (ed.), *Australian Army Amphibious Operations in the South-West Pacific: 1942–45*, Army Doctrine Centre, Department of Defence, Puckapunyal, VIC, 1995.

Dennis, Peter and Grey, Jeffrey (eds), *From Past to Future: The Australian Experience of Land/Air Operations*, University of New South Wales, Australian Defence Force Academy, Canberra, ACT, 1995.

Horner, David (ed.), *Armies and Nation Building: Past Experience—Future Prospects*, Australian National University, Canberra, ACT, 1995.

Dennis, Peter and Grey, Jeffrey (eds), *Serving Vital Interests: Australia's Strategic Planning in Peace and War*, University of New South Wales, Australian Defence Force Academy, Canberra, ACT, 1996.

Malik, Mohan (ed.), *The Future Battlefield*, Deakin University, Geelong, VIC, 1997.

Smith, Hugh (ed.), *Preparing Future Leaders: Officer Education and Training for the Twenty-first Century*, University of New South Wales, Australian Defence Force Academy, Canberra, ACT, 1998.

Evans, Michael (ed.), *Changing the Army: The Roles of Doctrine, Development and Training*, Land Warfare Studies Centre, Duntroon, ACT, 2000.

Evans, Michael and Ryan, Alan (eds), *The Human Face of Warfare: Killing, Fear and Chaos in Battle*, Allen & Unwin, Sydney, 2000.

Evans, Michael, Parkin, Russell, and Ryan, Alan (eds), *Future Armies, Future Challenges: Land Warfare in the Information Age*, Allen & Unwin, Sydney, 2004.

Parkin, Russell (ed.), *Warfighting and Ethics: Selected papers from the 2003 and 2004 Rowell Seminars*, Land Warfare Studies Centre, Duntroon, ACT, July 2005.