

Australian Defence Force JOURNAL

ISSUE No. 193, 2014

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Chair's comments

Welcome to Issue No. 193 of the *Australian Defence Force Journal*.

The Board once again had more articles than needed for this issue, enabling it to be critically selective in its choices. The quality of prospective articles also continues to be an encouraging development, further enhancing the professional standing of the *Journal*.

I am pleased to announce that the lead article, by Brigadier Dan Fortune on 'Self-reliance: an outdated and unaffordable concept for the ADF', has been judged the 'best article' in this issue. As foreshadowed in my earlier comments, the Board has discontinued the practice of awarding a cash prize. Instead, the 'best article' will feature as the lead article and the author will receive an additional, non-monetary award, the details of which will be announced in the next issue.

We then feature a selection of articles on a wide range of subjects. Major Kathryn Ames addresses the contemporary influence of social media on Defence, particularly 'citizen journalism'. Dr Rhys Crawley examines the logistical challenges of sustaining amphibious operations in the Asia-Pacific region, using historical examples including the Australian-led deployment to East Timor. Major Mark Smith then argues for a restructuring of the Army Reserve, contending that despite numerous attempts at reform, its structure has remained largely unchanged.

This is followed by an insightful contribution from Major Balamurugan Subbu of the Indian Army on the geostrategic importance of India's island territories, based on an award-winning essay submitted to the *United Service Institute Journal*, one of our counterpart publications. Captain Andrew Maher then examines the application of 'complex adaptive systems concepts' to contemporary special operations, highlighting the work being undertaken at the Special Forces Training Centre.

Dr Elena Mazourenko and Mark Jobst advance a theory-based framework for critical thinking in Defence planning and assessment, and Peter Fleming and Dr Adam McKinnon address the capability benefits of integrating work health and safety legislation. The final contribution is an opinion piece by Dr Evan Resnick of Nanyang Technological University in Singapore on the potential for issues in East Asia to flare uncontrollably in the absence of a set of explicit or tacit 'rules of the game'.

The issue concludes with a selection of book reviews, with an additional number in the on-line version. As always, we remain keen to hear from readers wishing to join the list of reviewers, who are sent books provided to the Editor by publishers. If you are interested, please provide your contact details and area of interest to the Editor at publications@defence.adc.edu.au

Our July/August 2014 issue will be a 'general' issue and contributions should be submitted to the Editor, at the email address above, by mid May. Submission guidelines are on the *Journal* website (see www.adfjournal.adc.edu.au).

Just a reminder also to our readers that this is the last issue to be published in printed format. In future, all issues will be e-published and available on the *Journal* website, which already includes all previous copies dating back to 1976.

In closing, I would like to thank those ADF members who have concluded their posting-related appointments to the Board, namely Major General Iain Spence, representing the Reserves; Group Captain Mark Hinchcliffe, representing Air Force; and Colonel Rodger Shanahan, representing Army. I would also like to convey my special thanks to Professor Jeffrey Grey, who is relinquishing his appointment after serving on the Board for many years. Professor Grey has made a highly-valued contribution to successive issues of the *Journal*, as well as contributing significantly to its broader editorial policy and management.

In their place, I would like to welcome four new members to the Board. Group Captain Peter Wood, CSM, Director of the RAAF's Air Power Development Centre, will be Air Force's new representative; and Colonel Andrew Hocking, Director of Future Land Warfare in Army, will be Army's new representative. I am also delighted that Professor Michael Evans, the inaugural General Sir Francis Hasset Chair of Military Studies at the Australian Defence College, has agreed to join the Board, as has Dr Nigel McGinty from the Defence Science and Technology Organisation. All four—joining Navy's ongoing representative, Captain Justin Jones, RAN—will bring unique and valued perspectives to the Board.

I hope you enjoy this edition and would encourage your contribution to future issues.

A handwritten signature in black ink, appearing to read 'S. Wilkie', with a stylized flourish at the end.

Simone Wilkie, AM
Major General
Commander, Australian Defence College
Chair of the Australian Defence Force Journal Board

Self-reliance: an outdated and unaffordable concept for the ADF¹

Brigadier Dan Fortune, DSC, Australian Army

Introduction

An enduring debate of Australian defence policy since Federation, addressing the fundamental dilemma at the centre of Australia's geo-strategic circumstances, has been the conceptual choice between localised and global strategic policies.²

On one hand is the view that Australia lacks the capacity to defend the continent unaided. This has led to the forging of alliances and the strategy of building military forces to support such alliances wherever they might be threatened.³ On the other is the view that Australia's allies may not be either able or inclined to support the defence of Australia at a time of direct threat, dictating the need for Australia to build military capabilities to defend its territory as best it can.⁴

This latter concept of 'self-reliance' has been the central tenet of Australian defence policy since the end of the Vietnam War.⁵ The 2013 Defence White Paper, *Defending Australia and its National Interests*, retained the fundamental narrative of self-reliance by stating that the highest priority for the ADF is to deter and defeat attacks on Australia without having to rely on the combat or combat support forces of another country.⁶

This article will contend that self-reliance is an outdated and unaffordable policy principle for the ADF. It will argue that the affordability, relevance and utility of self-reliance in the so-called 'Asian Century' are questionable. And by critically examining the 2013 Defence White Paper it will show that the capacity for the ADF to act independently is—and has always been—a 'fantasy', dislocated from ADF capability development and force structure prioritisation.⁷

It will further argue that ADF self-reliance is an unachievable defence policy principle when assessed against historical and predicted levels of defence spending and the compelling realities of Australia's geo-strategic environment.⁸ It will conclude that it is delusional for Australian policy makers to continue to espouse the self-reliance rhetoric and that the next Defence White Paper should include a complete re-evaluation of what should now be described as a 'bygone notion'.⁹

The chronology of self-reliance: a tangled journey

The policy concept of increased self-reliance as a force structure determinant was first affirmed in the 1976 Defence White Paper.¹⁰ This document reflected the key theme of strategic thinking in the immediate post-Vietnam period, which sought to abandon the earlier concepts of 'forward defence' based on a network of regional alliances, while still recognising the value and primacy of the US alliance.¹¹ According to the 1976 Defence White Paper, the ADF would not be expected to be 'sent abroad to fight as part of another nation's forces'.¹² Moreover, short of a fundamental threat to Australia's security, 'it would not be prudent to rely on allied combat help ... [to deal with] a range of situations that we should expect to handle more independently'.¹³

Self-reliance was further explained and defined in subsequent strategic guidance documents throughout the next ten years, including the linkage of the self-reliance principle to that of the 'core force', which emerged in the early 1980s. This construct was developed to justify an ADF force structure priority focused on low-level contingencies which sought to retain a latent capacity for timely expansion as a 'deterrence of escalation that an enemy might be capable of'.¹⁴

Importantly, the 1983 *Strategic Basis Paper* identified as a key objective the requirement to 'develop military capabilities appropriate to the independent defence of Australia'.¹⁵ The linkage of the self-reliance principle to a more strict and codified defence of Australia policy emerged in the 1987 Defence White Paper.¹⁶ This nesting of self-reliance within a defensive 'layered policy of strategic denial of the air-sea gap' was based on the work of Professor Paul Dibb and his report to then-Labor Government Defence Minister Kim Beazley.¹⁷ The March 1986 *Review of Australia's Defence Capabilities*, subsequently referred to as the 'Dibb Report', served to provide a rationale for ADF force structure priorities, although its recommendations were acknowledged by Dibb as being both controversial and contested within the Defence Department.¹⁸

This contention was primarily based on Dibb's determination to 'clarify and add precision as well as procedural simplicity' to guidance on the previous concept of a 'core force' by limiting force structure and capability acquisition priorities to 'credible low-level contingencies'.¹⁹ The adoption of Dibb's central thesis of 'defence of Australia' (DOA) as the priority force structure determinant—and its nexus with the principle of self-reliance—was formalised in the 1987 Defence White Paper in what has been described as the most complete expression of the policy of a 'self-reliant defence of Australia',²⁰ with the opening paragraph asserting that:

This Government's policy of defence self-reliance gives priority to the ability to defend ourselves with our own resources. Australia must have the military capability to prevent an enemy from attacking us successfully in our sea and air approaches [a]nd Australia must have the independent military capability to defend them.²¹

The merging of the concept of DOA with self-reliance directed that the principal function of the ADF—and the core basis for choosing its capabilities—is the defence of the Australian continent from direct military attack and, in particular, the ability to do so against any credible level of attack without relying on the combat forces of our allies.²² This defensive posture impacted on ADF capabilities by prioritising intelligence, surveillance capabilities, and air and naval forces capable of defending the air-sea gap.²³ The Army was relegated to the secondary task of rounding up any lesser enemy forces that might evade these defences.²⁴ Optimising Army for the 'barren task' of continental defence in turn led to steady erosion in budget priority and, most importantly, numerous deficiencies in fundamental land force capabilities, including 'logistics, tactical mobility and combined arms'.²⁵

Unmasking alliance reliance

While the Cold War strategic context enabled a neat accommodation of the self-reliant DOA concept within a 'continentalism' construct, the new world order of the early 1990s transformed Australia's strategic imperatives.²⁶ The 1994 Defence White Paper, *Defending Australia 1994*, announced a more fluid and challenging strategic environment, as well as the requirement to emphasise the role of the ADF in regional security, albeit as part of the enduring DOA/defence in depth' force structure regime.²⁷

Of note, the definition of self-reliance remained fixated on developing independent capabilities to defend Australia without the help of the combat forces of other countries. However, without any apparent unifying strategic rationale, the guidance introduced and linked the principle of self-reliance with the notion of national identity and self-confidence.²⁸ It is here where the ambiguity and lack of discipline in the narrative surrounding self-reliance begins to emerge.

Critical analysis of the practicality and utility of the principle of self-reliance, in the context of broader defence policy conducted in the period following the 1994 Defence White Paper, highlights the tensions. For example, in relation to force structure, commentary at the time contended that ‘the capability margins and external support that have made self-reliance a realistic proposition are under increasing pressure’.²⁹ Further, as it pertained to ADF capacity for regional influence, the same commentator asserted that ‘not only are the objectives too vague to provide a basis for useful planning, they are being pursued within the confines of the existing self-reliance policy’.³⁰

More pointedly, the validity of the self-reliant DOA construct risked being unravelled when the reality of the criticality of the US alliance to ADF self-reliance was examined. For example, it was clear that stockholdings of essential items, such as ammunition, precision weapons and the repair of items such as night vision goggles, were utterly dependent on ‘guaranteed access to US supply’.³¹ Accordingly, it was argued that behind the rhetoric, self-reliance actually meant ‘not having to fight for any length of time’ and that Australia might well be practising not self-reliance but ‘very expensive self delusion’.³²

More broadly, key questions were raised regarding the longer-term credibility of the policy of self-reliance. Some argued that the ‘alliance plus self-reliance framework is obsolete’ and, as a doctrine, would be insufficient for Australia to position itself to enter the 21st century.³³ However, not all views were critical of the concept, with some arguing that the DOA construct and the priority on structuring land forces for continental defence behind the sea-air gap were ‘unassailable’.³⁴

While the debate regarding the coherence of self-reliance ebbed and flowed, what was clear was that the guidance in the 1994 Defence White Paper did little to assuage the fundamental deficiencies for developing robust land force structures. The Army continued to suffer from the ‘straitjacket of a strategy that had become a “blue-water Maginot Line”’,³⁵ which ultimately diminished land force capabilities and resulted in ‘hollow units and loss of strategic agility’.³⁶

This was evident in the ultimately failed attempt to ‘Restructure the Army’ announced in the 1994 Defence White Paper. Its methodology was based on a geographic, ‘continental ethos’ for the defence of mainland Australia.³⁷ Importantly, critics asserted that the concept:

... denies the reality that the Army has never fought anywhere but overseas throughout its history ... [and] proposes an Army that is eerily reminiscent of the 1940-42 militia, albeit on a smaller scale that ultimately had to be reorganised to meet the real requirements of the war we were fighting.³⁸

Shifting narrative: looking for a strategy

The change of government in 1996 led to a revision of the logic of DOA and the principle of self-reliance. In the 1997 Strategic Review, titled *Australia’s Strategic Policy*, the concept of self-reliance was more qualified and contextualised, with its narrative outlining an intent to ‘maximise self-reliant ability’, albeit noting this did not mean developing self-sufficiency across all areas of capability.³⁹

In what was viewed as a major change, *Australia's Strategic Policy* expressly discarded the strictures of the iconic DOA term, replacing it with a 'fresher and more active' term of 'defeating attacks on Australia'.⁴⁰ The guidance expressed the assessment that 'the best defence of Australia's interests goes beyond the defence of the Australian territory alone' through a more proactive strategy in which the ADF 'must have the capability to make a substantial contribution in many different possible circumstances ... to defend our regional strategic interests'.⁴¹

Of note, *Australia's Strategic Policy* introduced the notion that a self-reliant posture complements 'close regional engagement' and sought to reconcile and harmonise the self-reliance/alliance nexus by adding the somewhat counter-intuitive qualification that a self-reliant posture would strongly support Australia's alliances.⁴² Strikingly, in the relatively short timeframe between 1987 and 1997, the narrative shifted and blurred in clarity, moving from a priority for 'independent capabilities' to the less compelling 'maximise the ability to develop independent capabilities', while the assertive self-reliant continental defence morphed to a more ambiguous 'self-reliant posture to optimise regional and alliance frameworks'.

Notwithstanding the shift in ADF force planning priorities, *Australia's Strategic Policy* remained committed to 'Restructure the Army' implementation. This led informed observers to suggest a clear contradiction between Australia's evolving regional security 'in and with Asia' and the lack of land force capabilities to support regional partners, resulting in a 'strategy without an Army and an Army without a strategy'.⁴³

An evolving posture: seeking relevance

The Defence White Paper released in December 2000, titled *Defence 2000: our future Defence Force*, recognised geo-strategic trends such as globalisation, the turbulent neighbourhood in Australia's immediate region and the increasing complexity this presented. This guidance also importantly acknowledged new demands placed on the armed forces, including humanitarian relief, evacuations, peacekeeping and peace-enforcement.⁴⁴ This coalesced into guidance that consolidated the more expansive policy initiated in *Australia's Strategic Policy* to shift even further away from the classic self-reliant DOA construct to a broader approach for the ADF to 'defend the continent against direct attacks'.⁴⁵

Defence 2000 directed the ADF to 'evolve into a flexible instrument designed to achieve a wide range of different functions beyond the defence of Australia'.⁴⁶ What is clear is that the narrative of respective Defence White Papers continued to reinterpret the term self-reliance. In *Defence 2000*, it is described as a 'principle', which is less explicit and more ambiguous than the term 'concept' previously used in *Australia's Strategic Policy*. However, the principle of self-reliance still demanded the ADF be able to defend Australia 'without relying on the combat forces of other countries', although the requirement was carefully caveated to ensure 'this does mean a lack of confidence in our allies' or preclude planning for significant non-combat support.⁴⁷

Curiously, self-reliance remained fundamental to how 'we see ourselves as a nation' while concurrently an 'inherent part of the US alliance policy'.⁴⁸ The somewhat drifting, convoluted narrative of self-reliance continued. Notwithstanding the ongoing hedging in what self-reliance actually meant to force structure planning, Army priorities were specifically addressed in *Defence 2000*, with the guidance stipulating that:

The development of our land forces needs to reflect a new balance between the demands of operations on Australian territory and the demands of deployments offshore The development of our land forces will take fuller account of the demands of possible short notice operations in our immediate neighbourhood.⁴⁹

Unequivocally, the stipulated need for more potent and robust land forces was intended to address the mismatch between strategy and capability that was harshly exposed in the ADF's expeditionary operations in East Timor in 1999.⁵⁰ Army embarked on efforts to remediate the damage inflicted by the 'strategic myopia' of the self-reliant concept of DOA,⁵¹ including key initiatives such as 'Hardened and Networked Army' and the 'Enhanced Land Force', both of which included capability development efforts to address deficiencies in Army's survivability and versatility within the increasingly lethal and complex operational environment.⁵²

This was important for Army, as the guidance also contended that in the coming decade the 'force structure planning focus will ... be broadened to meet a wider range of possible contingencies, both on Australia soil and beyond'.⁵³ This represented a stark shift from the previous 30 years and recognised the criticality of the spectrum of immediate capabilities required from Army's 'force in being'.⁵⁴

Critics contended that the echo of a self-reliant DOA remained as a compromise to public opinion and the sensitivities of regional neighbours, and that it was artificial (as *Defence 2000* did) to assert that the ADF should be designed for the defence of Australia.⁵⁵ According to Hugh White:

[This prevented] us addressing squarely the real and complex policy problems ... [whereas to] build a credible, effective and sustainable defence policy for the coming decades, we need to rethink the place of 'defence of Australia', and bring Australia's wider strategic interests out from under its shadow.⁵⁶

Acting and posturing uniquely

The 2009 Defence White Paper, titled *Defending Australia in the Asian Pacific Century: Force 2030*, was framed by the shock of 9/11 and the subsequent global 'war of terror', in which the ADF was deployed in successive operations to Afghanistan and Iraq. The immediate strategic environment also had necessitated military commitments in response to ongoing tensions and failing state challenges in East Timor and the Solomon Islands.

Despite these factors, self-reliance remained the 'continuity' narrative in the 2009 Defence White Paper and the force structure determinant of the self-reliant 'direct defence of Australia' guidance remained.⁵⁷ This appeared to side-step the reality of the practice of policy, which had seen the previous decade characterised by the deployment of significant ADF land forces to fight across the spectrum of counter-terrorism, counterinsurgency and stabilisation campaigns as part of alliance coalitions in Central Asia and the Middle East.

While the self-reliance principle remained in the policy narrative, it continued to change shape and broaden its context. The words included, beyond DOA, the more expansive intention to 'act independently where we have our unique strategic interests at stake and in relation to which we would not wish to be reliant on the combat forces of any foreign power'.⁵⁸ It is here that self-reliance and 'posture' appeared interchangeable, as the language effortlessly seams, in the same sentence, into maintaining alliances, building international relationships to enhance our security, and working with others to pool resources.⁵⁹

Perhaps, more opaquely, the robustness of the ‘act independently’ is hedged by reality. In the terminology of the 2009 Defence White Paper, self-reliance would not discount the ‘expectation that the US would come to our aid’ in the event of a major direct threat.⁶⁰ Army, albeit to a limited extent, continued its escape from self-reliant DOA geographical determinism, with the White Paper asserting that ADF land forces were expected to be capable of conducting combat in the littoral approaches and operating effectively in security and stabilisation operations.⁶¹

Importantly, however, the necessary force structure determinants for Army were limited by the dictum that this would not involve a priority for capabilities to conduct ground operations against heavily-armed opponents in urbanised environments.⁶² Given that by 2025 over 60 per cent of the world’s population will live in cities—and in the Asia Pacific there will be over 30 cities with populations >5 million⁶³—this constraint on Army capability development appeared to echo the now largely-abandoned low-level contingency threat scenarios that permeated the Army’s role in DOA.

The funding mismatch: show me the money

Beyond the constant reinterpretation and increasing incoherence which had accompanied the evolution of the self-reliant narrative, one enduring and indisputable fact has transcended the 40-year journey; successive governments on both sides of politics failed to fund the ADF force structure necessary to provide a baseline of credibility to the rhetoric. Independent defence capacity is expensive, and while calculations are difficult, informed assessment indicates a requirement to spend between 3-4 per cent of GDP to fund a self-reliant ADF force structure.⁶⁴ These levels were never achieved and analysis reinforces the unaffordability of the self-reliant DOA concept; since the doctrine emerged in 1987, Australian government spending on defence has averaged about 2 per cent.⁶⁵

Throughout the 1990s, the ADF reverted to ‘survival mode’ and, while the 1994 Defence White Paper suggested spending would be held at around 2 per cent of GDP, by the subsequent 2000 Defence White Paper, spending had fallen to 1.74 per cent.⁶⁶ Fast forward to the 2009 Defence White Paper and the funding commitments announced in this document lasted just 10 days before over \$8 billion of promised funding was deferred and ultimately removed from the defence budget. In total, since March 2009, over \$25 billion of scheduled defence funding has been lost.⁶⁷

The politics of policy: defending the legacy

Dispassionate and informed views that support self-reliance as a useful tenet of policy over the last four decades are difficult to find. Interestingly, the only emergent voices defending it are its key architects. In 2004, Paul Dibb sought to diffuse any conflict between the doctrine of self-reliant DOA and the practice of defence strategy, which had seen over 20 Army-centric offshore deployments between 1989 and 1999.⁶⁸

In the face of growing criticism, he asserted that any alternative force structure determinant to the self-reliant DOA is ‘too ambitious, and would lack discipline’.⁶⁹ Years later, without acknowledging any of the emergent tensions in ADF force structure, Dibb sought to transpose the self-reliant DOA doctrine of 1987, and claim its continued relevance in Australia’s transformed regional circumstances of 2009.⁷⁰ Most curious is that his commentary ignored

the weaknesses in Army capabilities resulting from self-reliant DOA, which were compellingly and routinely exposed by the practical demands of Australia's defence policy throughout the intervening timeframe.

Perhaps most telling is the reflection of Kim Beazley who in 2009 wrote that the self-reliant concept:

... reflects at least in part the ideological perspectives and internal political debate ... and its content entered the conscious and sub-conscious approaches of then and future generations of Labor politicians. [Moreover] ... the image of a Liberal Party constantly hankering after a position that would structure Australia's forces around a politically appealing expeditionary opportunity is never far from Labor calculations.⁷¹

Importantly here, Beazley was acknowledging the significant political context surrounding the development and retention of the concept of self-reliance. However, his commentary is absent of convincing justification for its retention as a valid or affordable ADF structure and capability determinant for Australia in the 'Asian Century'.⁷²

Outdated and unaffordable

An historical critique illustrates the reality of the mismatch between self-reliant policy rhetoric and resourcing commitments. A concept that was fiercely questioned at its inception—but justified due to the 'benign foreseeable future' in the immediate post-Vietnam/Cold War environment, and fortified with what proved to be hollow promises of adequate funding—has been successively diluted and under-resourced.⁷³

As the independent 'geographic determinism' clashed with the prevailing alliance dependence and dynamics of emerging regional strategic realities, the underpinning logic of self-reliant DOA was severely challenged.⁷⁴ In response, it appeared the rhetoric sought to mask and then caveat the inconvenient truth of 'alliance reliance', as well as cloak the retention of self-reliance with a 'national identity' theme that, on reflection, appears unnecessarily jingoistic and bordering on self-consciousness. It also emerges that the concept of self-reliant DOA was initially crafted—to some extent—to mediate the Labor Party's internal ideological debate of the early 1980s.

Accordingly, for the following 30 years, this policy principle and associated narrative evolved and were recast by successive governments to accommodate political priorities.⁷⁵ These included the need to appeal to a domestic constituency, to disarm foreign policy sensitivities, and to contain any return to or development of an alternative defence policy principle or concept.

This political context surrounding the rigour needed for force structure clarity is a fact of life in a democracy. However, as noted by Kim Beazley, at its inception the concept of self-reliant DOA was not reflective of the bipartisan agreement that typically characterised the politics of Defence White Papers.⁷⁶ Most compellingly, the 'reasonably high levels of Defence spending required'—that were central to its justification—were never provided.⁷⁷

The resource mismatch has exacerbated the dilemma faced by ADF force structure planners as they have attempted to decode the ambiguous 'transformed' guidance and develop the clarity and discipline necessary to sustain credible and potent military capabilities. This dilemma has

resulted in claims of ‘self-reliance delusion’, which compromised a logical and intellectually robust approach to calculating ADF force development priorities.⁷⁸

Army: the ‘wooden gun’

Critically, this situation resonated most obviously in how land force capabilities have been calibrated. Here, the ‘dissonance’ between the real world practice of military strategy and the ‘doctrine of self-reliance’ is pronounced.⁷⁹ Since 1989, Army has been routinely deployed, often on demanding stabilisation operations in contested environments, typically with little or no warning time.⁸⁰ While some improvements occurred after the humbling experience of East Timor, there was still an ‘enormous amount’ of catch-up work required’ (for example, the urgent procurement of individual force protection equipment and more capable weapons systems) and ‘most funding was in the form of supplementation’.⁸¹

Disturbingly, this remediation was essential before land forces could be deployed, under a policy which espoused a self-reliant posture and an intention to act independently in support of Australia’s ‘unique strategic interests’.⁸² This demand exposed serious deficiencies in Army’s baseline capabilities which, despite more expansive tasking, were still principally structured for self-reliant DOA. Here, the cautionary words of former Prime Minister Robert Menzies resonate loudly. In a 1950 speech, he asserted that an Australian land force optimised to fight on Australian soil will always be ‘the equivalent of a wooden gun’.⁸³

Self-reliance in the Asian Century: an ageing relic?

In the Asian Century, the imperatives of US alliance management, and building engagement and capacity with regional partners, now predominate in Australia’s national security strategy and defence policy. Described in the 2013 *Australia’s National Security Strategy* as ‘a pillar of Australia’s security’,⁸⁴ the criticality of the US alliance to ADF capability and Australian military support to the US military rebalance to the Asia Pacific is reinforced in the 2013 Defence White Paper.⁸⁵

Importantly, the recent *Australia in the Asian Century* White Paper stipulated the requirement for the ADF to ‘direct increasing effort in the period ahead to the development of deeper defence cooperation, joint exercises and other forms of defence and security engagement with our neighbours’.⁸⁶ This regional imperative is amplified in the 2013 Defence White Paper, with an emphasis on building a shared sense of security with our partners and the priority for the ADF’s posture to contribute positively to Australia’s regional stability.⁸⁷

In the 2013 Defence White Paper, the narrative of self-reliance is contextualised ‘within the context of our alliance with the US and cooperation with our regional partners’.⁸⁸ This reflects a compelling reinterpretation of the ‘strategic essence’ that the concept had previously implied for the ADF’s DOA-era force structure,⁸⁹ as well as highlighting the increasingly fragile relevance of independent self-reliance. Indeed, the 2013 Defence White Paper’s reinterpretation is a significant departure from the historical rationale which determined that the ADF did not ‘need a structure or posture to build regional coalitions or alliances on which Australia’s direct security would depend’.⁹⁰

Importantly, this shift highlights the disconnect between the traditional interpretation of self-reliance and the complex judgments on risk and ADF capability priorities required for Australia's emerging strategic environment and exemplifies how the narrative has developed a 'remarkable tolerance for contradiction'.⁹¹ This is illustrated by 2013 guidance contending that a self-reliant posture would involve the ADF executing a regional maritime strategy to deny enemy staging bases 'most likely [conducted] in partnership with others'.⁹² Clearly, this concept has morphed beyond a specific principle to describe the need to operate independently in the defence of Australia to contemporary guidance that is now described by credible commentators as a 'mere statement of Australia's geographic and operational priorities in a wider coalition conflict'.⁹³

Magnifying the continued decline in the relevance of the principle of self-reliance for the Asian Century is the fact that the Government has 'aggressively extracted' money from Defence above and beyond any internal savings reform.⁹⁴ Analysis of the 2013 Defence budget indicates that the planned level of funding commitments will decline to historical lows of 1.6 per cent of GDP,⁹⁵ with the formal guidance contained in the 2013 Defence White Paper confirming that any increase 'towards a 'target of 2 per cent of GDP is a long-term objective' and subject to the heavily-caveated 'when fiscal conditions allow'.⁹⁶

The schism between policy and funding has deepened and widened. This is particularly pertinent to the increasing recognition, outside of Army, of the importance of building a flexible and adaptable land force as part of the potent joint capability essential to provide credibility to the ADF's maritime strategy.⁹⁷ However, the disconnect surrounding self-reliance contributes to a confused integration of strategy and force structure. This creates the risk that Army is again at risk of 'languishing in budget purgatory and being ill-prepared for the most likely future tasks'.⁹⁸

It is evident that the principle of self-reliance has very limited utility in Australia's current contemporary geo-strategic setting and the imperatives of structuring a credible and capable ADF which can respond to the increasing demands of the US alliance and a cooperative regional engagement posture. Accordingly, use of 'self-reliance' within defence policy is now subject to strident and consistent criticism, disparagingly being described as in the 'twilight zone' and no longer justified,⁹⁹ as well as being branded an 'ageing relic from the previous century'.¹⁰⁰

Conclusion

The defence policy of self-reliance has featured as a central facet of successive Australian government strategic guidance since 1976. The desire for a more independent ADF posture gained prominence in the post-Vietnam War consciousness and the relatively-benign stability that then described Australia's geo-strategic environment. The shift towards a policy of independence also reflected one perspective of a longstanding contest that had framed the Australian security debate since Federation.

The DOA doctrine which emerged in 1987 was in part a political wedge and an internal ideological compromise, reflecting the dominance of the 'continentalists' over the opposing, more expeditionary, alliance-reliance perspectives. This self-reliant DOA concept and the accompanying strategy of layered defence shaped ADF force structure determinants for the next decade. However, DOA was a controversial policy within Defence. It prioritised capabilities

optimal for denial of the air-sea gap and relegated Army to the role of a strategic goalkeeper against low-level contingencies.

Of note, this policy concept was never adequately funded and led to a chronic deterioration in fundamental land force capabilities within Army, which were starkly exposed as Australia's geo-political circumstances transformed. The key changes commenced at the end of the Cold War and successively included the impact of globalisation and shifting regional power dynamics, as well as the strategic shock of 9/11 and the associated national security imperative for government to employ the ADF, at least to a limited extent, to fulfil its US alliance obligations. The realities of these changed circumstances demanded a defence policy that could provide practical responses which, despite the self-reliant DOA construct, typically involved Army-led 'land centric' ADF deployments, both in the region and as part of global US alliance coalitions.

As a result of this policy-strategy-practice dissonance, the narrative surrounding self-reliance became increasingly incoherent and convoluted as it sought to reconcile this mismatch. This involved ignoring or seeking to caveat the realities of ADF 'alliance reliance' and attempts to justify the doctrine of self-reliance by wrapping it in a cloak of nationalistic self-image. This shifting narrative also served, in part, to mitigate domestic political risk and manage regional neighbourhood sensitivities. The constant reinterpretation compromised the logic of self-reliance as a useful and intellectually coherent principle for balancing and prioritising ADF force structure capabilities.

The ambiguity and contradiction have become most apparent in more recent times as the imperatives of Australia's national security strategy and defence policy for the Asian Century highlighted the lack of justification or utility for self-reliance as a policy concept or principle. In particular, insightful and respected analysis of the 2013 Defence White Paper has exposed the disconnect between the self-reliance rhetoric and the realities of Australia's defence posture and ADF force capabilities demanded by the contemporary geo-strategic environment. The combination of failure to fund the necessary force structure required to underpin the concept of independent self-reliance exacerbated the deficiencies and imbalance in Army force structure. This legacy, combined with the declining relevance of the principle in the Asian Century, serves to undermine the capacity of government to achieve the 'credible and capable ADF' essential for the maritime strategy it espouses.

The challenge now is to respond to the increasing calls to develop a more 'more useful and relevant contemporary concept' to provide the clarity and logical basis for funding and prioritising future ADF force structure determinants.¹⁰¹ Most tellingly, this need for new thinking and revised policy proposals, which can integrate and harmonise funding with the appropriate military strategy, was brought into stark relief by then-Secretary of Defence Duncan Lewis in his 2012 keynote address to a high profile audience of national security strategists and policy experts. Lewis has significant credibility in commenting on the challenges and politics of defence policy formulation, in particular the tension in funding and strategy, as his appointment followed extensive service as a senior Army officer and senior departmental bureaucrat, as well as his role as National Security advisor for successive Coalition and Labor Governments.

His statement that 'as things stand, I don't think we are structured or postured appropriately to meet our likely strategic circumstances in future'¹⁰² is a compelling and dire judgment on the negative legacy of four decades of the policy of self-reliance. Clearly, Australia is in increasingly

desperate need for a new defence policy principle, beyond the outdated and unaffordable concept of self-reliance, suited to the challenging circumstances confronting the ADF in the dawn of the Asian Century.

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‘Citizen Journalism’, the Military and the Media

Major Kathryn Ames, Australian Army

Introduction

The ADF and the Department of Defence more broadly have been criticised in recent years for their lack of engagement with the media—and perceived attempts to control public comment by Defence personnel.¹ This article seeks to consider this criticism within the context of the rise of ‘citizen journalism’, which has fundamentally changed the way news is gathered and reported, and to which traditional media, business and political organisations have had difficulty in responding.

It specifically considers the adequacy of Defence’s public information policies in the context of significant change within the Australian media environment, whereby the role and credibility of the ‘source’ has also changed. Firstly, the article will consider the foundations of ‘citizen journalism’, and distinguish between citizen journalism and ‘citizen sources’. It will then discuss the influence of citizen journalism and access to sources on traditional media, the latter being well-illustrated in last year’s Boston marathon bombings. Finally, it will address Defence’s public information policy in the context of a changing media landscape.

Foundations of ‘citizen journalism’

‘Citizen journalism’ occurs when individuals who are not normally journalists play ‘an active role in the process of collecting, reporting, analysing and disseminating news and information’.² The term refers to the ability of the ordinary citizen to broadcast facts, ideas or opinions on an issue, such as a news report, and is generally considered as an alternative to traditional media.

There is limited scope in this article to discuss differences between public, civic and citizen journalism but all are now synonymous with access to technology and community imperative; that is, the rise of different types of journalism that increase the ability of the lay person to access the public sphere are due to the ability to self-publish or promote issues through technology-enabled media, such as blogs and through social media.³ Jay Rosen, widely regarded as a founder of the term ‘citizen journalism’ with fellow academic Davis Merritt, says ‘[w]hen the people formerly known as the audience employ the press tools they have in their possession to inform one another, *that’s* citizen journalism’,⁴ highlighting the transition from the passive audience to the active participant in the media process.

In the early stages of the internet, citizen journalism was most widely associated with ‘blogging’, whereby ‘ordinary’ people were able to create online content in the form of a ‘web log’ (since shortened in the common vernacular to ‘blog’). In the mid 2000s, however, social media as we now know it emerged as a means by which people could communicate with one another. MySpace was established in 2003, Facebook in 2004, and Twitter in 2006, which was also the year the ability to download and stream audiovisual content from the web became a mainstream activity in Australia.⁵

Large organisations embraced social networking but these were organisations that clearly had a vested commercial interest in promoting its use (for example, Telstra's blog and social networking site was established in 2007).⁶ At the time, the impact of technology on communication generally, and the media sphere in particular, was unknown, with journalist and author Margaret Simons writing at the time, '[h]ow significant will the internet be in the future of news and information? We are certainly too close to the invention to be sure'.⁷

The speed at which media users engaged with technology so that they were in a position to 'report' on issues took media organisations by surprise.⁸ Traditional media organisations struggled to redefine themselves in the digital age.⁹ Policies and practices within traditional media organisations have generally failed to keep pace with how people access information and re-use or re-distribute it.¹⁰

This has in turn facilitated the rise in the credibility of citizen journalists who have been able to report, in an increasingly legitimate manner, on an event or issue. This is because citizen journalists are often participants in the event or issue on which they are recording their views. Citizen journalism is often associated with political activism or issue-based reporting, and now exists in a number of tiers: online bloggers, joint initiatives from citizen journalists, or institutionalised citizen journalism platforms, whereby citizen journalists come together to report on an issue, event or on the basis of geography.¹¹ Citizen journalism, therefore, is not necessarily the 'random' witnessing of an event; rather, it is also a form of institutionalised journalism, although the contributors are not required to be professional journalists.

However, some note that citizen journalists are actually often simply 'citizen sources' and see themselves as such.¹² A distinction between the citizen journalist and citizen source is important: the citizen journalist is actively engaging with technology in order to distribute information to an audience often based on a pre-determined agenda, while the citizen source is a member of the public who places video, comments, photographs or similar in the public arena. Their agenda is often not political; rather, it is an eyewitness account. A 'legitimate' journalist—and indeed a civic authority—may then seek opinion or verification from a citizen source.

An example of this could be seen in the reporting of the Boston marathon bombings by citizen sources via their Twitter accounts, with Qu's review providing an excellent account of this relationship.¹³ Qu details the way in which journalists accessed 'tweets' from eyewitnesses who were breaking the story by tweeting about the events. The eyewitness tweets ranged from suggestions that something had happened to accounts of the bombings, using various 'hashtags'. Journalists then requested immediate contact, via Twitter, with those eyewitnesses. This verification via personal contact is important for more credible media outlets, as publishing the tweet or comment on Facebook is not enough to support the story but contact and more detailed comment from the source is. That eyewitness is the 'citizen source'—they are involved because they were there.

Citizen sources are responsible for much of what we see of disasters around the world, particularly for example, where media organisations have limited coverage or access. Increasingly, the role of the professional journalist is to validate submissions from citizen sources. Citizen journalism, in contrast, tends now to refer to a more organised movement of citizen sources in relation to coverage of an event or issue, such as the Iranian election protests in 2009,¹⁴ the Middle Eastern uprisings of 2011, and ongoing events in Syria.¹⁵

The influence of citizen journalism (and sources) on traditional media

Traditional media increasingly relies on citizen journalists and sources to assist in filling publishing space. A contracting media workforce finds tension because of the need to fill more pages and more broadcast hours than ever before. Consumers of news are encouraged to become citizen sources and submit story ideas, photographs and video footage. Journalists seek engagement with potential sources through social media, using Twitter and Facebook to find stories and people who can comment or provide perspective on an event or issue, and there is now a clear realisation of the potential for social media to feed and drive the media agenda.¹⁶

While there has been much debate about the validity and worth of citizen journalists and sources within the media sphere,¹⁷ it is clear from a consumer perspective that the view of the participant (or eyewitness) carries with it a sense of legitimacy. Citizen journalists and sources, using social media sites such as Facebook and Twitter in the case of the Boston bombings, have played important roles in informing members of their community about issues and events, particularly in disasters. This trend commenced in 2004, when people with mobile phones caught the Indian Ocean tsunami on camera.¹⁸ In Australia, the Queensland floods in 2011 and again in 2013 relied heavily on participatory reporting to advise and report on issues.

Increasingly, users are bypassing traditional media for social media that is more timely and specific to an event or issue. Some traditional media outlets have recognised this and are working with the trend. Large organisations such as the BBC and CNN employ journalists simply to verify the contributions from the public (often in the thousands per day).¹⁹ Journalists also 'crowd-source', whereby they post a request for a source or verification from a witness on Twitter.²⁰ Journalists now exist in an environment of convergence, which is 'about being flexible enough to provide news and information to anyone and everyone, anytime and all the time, anywhere and often without abandoning key journalistic values'.²¹

Citizen journalism and access to citizen sources on media practice has also had a profound impact on the way in which an organisation communicates with the public and the media. A linear approach to communication, whereby there is an expectation that an organisation can control the information it distributes is now impossible, as 'the internet has inverted the social physics of information'.²²

Richard Edelman, chair of the world's largest PR firm, has recently argued for the increasing value of transparency (even 'radical transparency'²³) and public engagement.²⁴ There are many implications for organisations such as Defence, which have traditionally relied on a relationship with traditional media to promote and manage 'the news'. This is the focus of the next section of this article, which addresses Defence's public information policy and its currency in the current media context.

Defence's public information policy

The relationship between traditional media outlets and members of the ADF and Department of Defence is influenced by policy defining the ways in which members of the organisation are able to interact and respond to requests for information. The most pertinent of these are Defence Instructions (General) (DI[G]) ADMIN 08-1: *Public comment and dissemination of information by Defence members*, 08-2: *Use of social media by Defence personnel*, and 10-9: *Control and management of hand-held imagery*.

There are a number of issues with the current public information policy that render Defence unable to inform adequately or react to meet the needs of traditional media outlets—and this has been well documented.²⁵ Much of the argument has been about the timeliness of response to media requests, and the need for clearance at high levels of the ADF or Department of Defence.

DI(G) 08-1, to which other policies refer, is based on a number of premises: that internal and external publics need to be aware of Defence policies and activities so that support can be maintained for the organisation and its operations; that commanders need to be responsive to media and public enquiries in an accurate and timely way; and that by engaging the public ‘through the media’, Defence can inform and influence public perception. However, it is the requirement that the information Defence personnel provide to the public ‘must be coordinated, agreed and authorised’²⁶ that becomes problematic in a media world influenced by citizen journalism, and made more accessible because of citizen sources and access to social media.

The three main challenges for Defence in media relations (and therefore public engagement) in the current environment relate to power, speed and accuracy. Media organisations are now clearly not the only distributors of news. As noted by Richard Sambrook:

News organisations do not own the news any more. They can validate information, analyse it, explain it, and they can help the public find what they need to know. But they no longer control or decide what the public know.²⁷

This impacts directly on organisations, which also no longer have authority over news, because ‘it is not innate to the institution itself ... [and] news and information is clearly no longer the exclusive domain of professionals’.²⁸ This is as much true for organisations that rely on the media for profile as it is for media organisations themselves. Organisations are simply unable to control information that is said about them, and traditional media, working off an agenda set by citizen sources and journalists, can be expected to seek comment on an issue to ensure balance. However, as commentators have noted, the official voice of ADF members has increasingly become silent because by the time our voice wants to or is able to speak, the conversation has moved on.

There are also now more and more channels for members to interact with public and media. While Defence members are subject to the requirements of Defence policy and, if not cleared to speak, are unable to make public comment, members of their immediate friendship and family circle are not. These people now have access to a range of forums in which to express their views. While Defence may argue for time in order to ensure accurate response, the citizen source is very available to journalists and, critical to the argument in this article, is now considered credible to an audience. This is a distinct shift, as studies in the 1990s and early 2000s confirmed that sources not in a position of authority had difficulty establishing credibility.²⁹

So, if sources in a position of authority are now at times less credible than an eyewitness account—which are made increasingly possible as a result of citizen journalism and access to citizen sources—Defence needs to reconsider its deployment of official and authorised spokespeople as sources. The importance of being able to engage in public debate, respond and provide a source for comment cannot be understated:

In adding power to the source-journalist-audience equation, three related yet separate understandings of power arise. First, to be a news source is to have the power to speak publicly.... But there is more than presence; to be a news source is to have the power to define the world.... Finally, the ability to act as a news source is also the power to respond.³⁰

Rather than basing its information policy on the need for clearance at official levels, a shift in thinking as to who can be a source and under what circumstances they can speak is required. The media needs quick access to credible but not necessarily authoritative sources who can comment on an issue. Grappling with this problem is not new for many people working in public affairs in Defence or more broadly. What has changed is the media landscape, access to information from other sources now available to traditional journalists, and the desire by the public to hear from the ordinary voice.

We often talk about the 24-hour news cycle as being problematic but more pertinent is the access to alternative sources which allow a story involving ADF members to be published while the official view is bypassed or ignored. This is as true for good news stories as it is for those that have the potential to harm our reputation. Consider the implications if more members of the ADF were considered official sources and encouraged to engage in debate, and to speak about experience and views on policy. While absolutely more difficult to ‘manage’, the idea of radical transparency as espoused by Richard Edelman suggests that robust debate results in positive engagement by the ‘public’ members of an organisation.

Anecdotally, those working in public affairs often hear reference to the openness of the US approach to dealing with the media. Soldiers in US forces are encouraged to speak publicly about what they do, and a sense of personal accountability is reinforced through consequence rather than the need for clearance, as seen in the case of General Stanley McChrystal.³¹

Because journalists frequently source stories through social media, it is worth reviewing briefly the US approach to public comment in the social media space. The US Army, like the ADF, has a significant and active web presence. A key difference relates to policy rhetoric, where a more open and uncontrolled approach is taken by the US to management of public comment:

Online communities function best when they are not over-monitored. While it’s important to develop a terms of use statement, social media managers need to let people express their views online as long as they do not violate the posting rules. Even those opinions that differ from the opinions of the organisation or those of the leadership should be allowed to stay on the social media platform.³²

The review of social media from which this comment emerges argues that ‘providing a venue for discussion can help your organisation evaluate how its communication priorities are being received’.³³ Further, the US Army social media template suggests a balance in moderating pages and online exchanges between users, suggesting that moderators should ‘[a]llow users connected with your pages to fight your battles for you, as well, when possible. They are, by virtue of their nature, not the official (unit) responders and, as such, carry with them a different level of credibility’.³⁴

It is this last point that is most pertinent in the context of this article. It is clear that in reviewing the development of US policy for social media, openness has been gradually balanced by the need for caution, particularly in relation to operational security, whereas earlier policies were arguably more enthusiastic about embracing the means for promotion, without the counters against issues that arise. However, the recognition of the credibility of the unofficial voice is recognised—and it is this unofficial voice that arguably is silent in the Australian landscape.

It needs to be noted that in reviewing the ADF's use of social media, caution is noted about following the US lead, with the authors of the *Pathways to Change* document asking '[w]hy Australia would follow the lead of the United States when the goals and values of our military forces is not so clear'.³⁵ While our overall Defence goals and values may be different, the way media operates globally is fairly consistent, and journalistic practices in the US often lead the charge in developments internationally. How we use social media at an institutional level to promote ourselves and the great work we do is one thing; how we deal with public comment in an era of the 'citizen' or ordinary person being the expert and the most credible source for comment is another.

We have come a long way in attempting to deal with this issue but current Defence policies in public comment remain contradictory and vague in certain areas, which results in deference to inaction. It is difficult for members to respond quickly in a way that has organisational support without going through a complex clearance process, even for routine enquiries. This results in a lack of response which means the void is filled by others speaking on our behalf.

Moreover, some of our public information policies are arguably unworkable. For example, DI(G) 08-2 requires all dealings with social media to be recorded. This is in accordance with Defence's legislative obligations under Commonwealth archival requirements. However, the impracticality of doing so illustrates some of the difficulties associated with developing policies around communication for the ADF.

Conclusion

The influence of citizen journalism and access to citizen sources through technological advances has changed the media landscape in which the Australian military operates. The lines between traditional media and social media are becoming increasingly blurred and this trend will not reverse. To exist and have credibility with a range of publics, there needs to be a presence, and sources provide visibility. Paradoxically, the level of control our current public information policies exert in order to protect Defence makes it very difficult for members of the ADF to pro-actively and routinely engage with and respond to members of the public and the media in a way that promotes a positive public profile.

We are one of many large organisations facing the same challenges and it is the timely access to a credible source that will be of the greatest value to our organisation's ability to engage in public discussion and debate in the future. Improving our policies so that this is more easily facilitated (if facilitated at all) is going to be vital if we are to engage with our publics through traditional and social media channels in the future. If we do not speak, there will be a citizen or organisation to fill that space—and, most importantly, it will likely be someone who has more credibility than ever before.

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Sustaining Amphibious Operations in the Asia-Pacific: logistic lessons for Australia, 1914-2014¹

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Operating in the Asia-Pacific region has been the mainstay of the Australian military for the past 100 years. Current strategic direction, force capability and the arrival of the 'Asian Century' all suggest that this is to remain the case in the coming decades. Doing so requires overcoming the challenge of sustaining and maintaining forces for the duration of the deployment. Logistics, defined as 'the practical art of moving armies and keeping them supplied', is a fundamental enabler of force projection.²

In his groundbreaking study on logistics, Martin van Creveld quoted Napoleon to remind his readers of the influence that logistics has on military operations: 'It takes little skill or imagination to see where you would like your army to be and when; it takes much knowledge and hard work to know where you can place your forces and whether you can maintain them there'.³ One cannot understand military operations, whether past, present or future, without understanding and appreciating the influence of logistics. Fortunately, Australian military history offers some important logistic lessons for the ADF.

Through a series of case studies, chosen because they represent three very different military operations over nearly a century of service, this article examines the logistic systems—and both the successes and failures—of past attempts at sustaining operations in the Asia-Pacific region. Beginning with the low-intensity deployment of the Australian Naval and Military Expeditionary Force (AN&MEF) to Rabaul in 1914, the article describes the peculiarities of preparing for and conducting Australia's first amphibious operation.

It then moves to the high-intensity conflict of the Second World War, specifically focusing on Australia's logistic dependence on its American ally during the 1945 Balikpapan operation. The final case study, the Australian-led peacekeeping force to East Timor in 1999, shows how stretched the logistic system was in supporting Australian forces and meeting the logistic deficiencies of coalition members. All three case studies provide an insight into the pitfalls, capabilities and implications for sustaining future Australian operations.

Rabaul, 1914

On 6 August 1914, just days after declaring war on Germany, Britain asked Australia 'as a great and urgent imperial service' to seize and destroy the German wireless stations in the southwest Pacific.⁴ In response, in less than two weeks the Australian Government raised, equipped and despatched a joint expeditionary force of 1,500 men for overseas service.⁵ Command of the AN&MEF, as it was designated, went to Colonel William Holmes, a militia officer with Boer War experience.⁶

By the end of August, HMS *Hampshire* and an expeditionary force from New Zealand had destroyed the wireless stations at Yap and Samoa respectively.⁷ On 9 September, a small landing party from HMAS *Melbourne* did the same at Nauru.⁸ While this was happening, on 2 September the AN&MEF—which had been practising mock amphibious landings at Palm

Island off the North Queensland coast since leaving Sydney—left for Port Moresby, the staging base for its attack on German New Guinea.⁹

In the early hours of 11 September, a naval force representing ‘nearly the entire fighting strength of the Royal Australian Navy’ arrived off the coast of New Britain carrying the AN&MEF.¹⁰ At 0600, a party of 25 naval reservists rowed ashore at Herbertshöhe but found that there was no enemy and no wireless station in the area. At 0700, another party of similar size landed without resistance at a jetty east of the Kabakaul pier. They were told that the enemy had retreated up a jungle road towards the Bitapaka wireless station.

Reinforced from the sea, the Australians pursued them. With scouts out front, the party advanced on either side of the road. After some broken resistance from German reservists and locally-trained police, which resulted in Australia’s first casualties of the First World War, the Australians reached the wireless station.¹¹ Realising that the station was too isolated to hold, the Australians destroyed it and returned to the coast where they embarked for Herbertshöhe.¹² The day, and Australia’s first amphibious operation, was a success. The wireless station was located, and Australian casualties had been slight: 6 killed and 4 wounded. The German and native defenders, numbering less than 300, suffered 31 killed, 11 wounded and 75 were taken prisoner.¹³

Rabaul, the capital of German New Guinea, was occupied the next day, 12 September, without opposition. The British flag was hoisted and the occupation of New Britain proclaimed the day after. The German governor, Dr Eduard Haber, visited Holmes at Herbertshöhe on 15 September, and surrender terms were signed on 17 September. At that moment, the AN&MEF became an occupying force. A military administration, with Holmes in charge, officially commenced on 20 September. Over the next three months, the Australians occupied the remaining German islands and, where appropriate, left a garrison behind.¹⁴

In January 1915, Colonel Samuel Pethebridge, a former Secretary of the Defence Department, replaced Holmes as Administrator, and a newly-raised expeditionary force, Tropical Force, replaced Holmes’ men. The success of the operation, which removed the German wireless chain used by Vice-Admiral von Spee’s German East Asiatic Squadron, ‘secured Australia’s trade routes in the Pacific’.¹⁵ In so doing, according to historian John Connor, it ‘removed a real threat to Australia and its economy’.¹⁶

Combined with British and Japanese sea supremacy, for the rest of the war Australia and New Zealand could transport reinforcements to Europe and the Middle East with relative security. Following the Treaty of Versailles, Australia was given a mandate to administer German New Guinea, the military administration of which was replaced by a civil administration on 9 May 1921.¹⁷ Australia maintained a presence in New Guinea until the Japanese landed in 1942.

Logistic issues defined the expedition from the beginning. One of the reasons that the force was able to be raised so rapidly was because its rifles and uniforms came from existing stocks. In spite of this logistic success, the initial departure of the AN&MEF from Sydney was delayed due to problems loading supplies. When the force did sail, carrying 60 days’ provisions, it did so without mess tins or signalling equipment. The commander of the force, Holmes, knew that until trade recommenced, these supplies would have to feed his troops and the local population.

To reduce some of the pressure, on 1 September, while the troops were training at Palm Island, HMAS *Berrima* was loaded with 70,000lbs of frozen mutton.¹⁸ On reaching Port Moresby, where his force was to regroup before attacking Rabaul, Holmes was confronted with a logistic burden. There waiting for him was SS *Kanowna* carrying 500 men from the Kennedy Regiment, who had volunteered to join the AN&MEF. But their ship had run out of stores. Holmes could not take such a logistic risk and dropped the Kennedy Regiment from the expedition.¹⁹

Supplying the force during operations was a relatively simple task. In the absence of any resistance, supplies could be brought ashore using existing piers and jetties. Stores could be landed with ease, with time, where and when required. Once established ashore, work began on a water condensing plant near the wharf at Rabaul. Given the prevalence of mosquito-carried diseases, such as malaria, troops were forbidden from obtaining their provisions from water tanks. In the outstations, where there were no water condensers and tanks had to be used, the tanks were treated with kerosene to prevent mosquitos from laying their eggs, and water was boiled before drinking. But apart from water, everything else had to be acquired and delivered from Australia. With nearly 2,000 sea miles between Rabaul and Sydney, where most supplies came from, there was no such thing as an urgent request.²⁰

Realising the importance of resupplying both his force and the local population, Holmes worked hard and fast to establish trading routes between Australia and the administered territories of German New Guinea. Sometimes this led to inflated cargo prices or corruption.²¹ But generally, it ensured regular supplies of food, tobacco and coal. There were times, however, when Rabaul was cut off by the weather. According to the official historian, himself a key member of the administration:

The regular supply of provisions from Australia was a constantly-recurring problem during the military occupation, and when, as sometimes happened through strikes or other causes, communication by sea was entirely interrupted for a considerable period, strange shifts had to be devised.²²

Logistic considerations also led to the formation of Pethebridge's expedition. Britain's request to garrison the German islands north of the equator (a decision that was later reversed) could not be met by Holmes' force, which did not have enough coal or shipping for the task. Pethebridge's Tropical Force left Australia laden with two months' provisions, including coal, water, frozen meat, food supplies and camp equipment. The transport had a large freezer stocked with 819 sheep carcasses, 30 tons of beef and 2.5 tons of butter. Soon after he replaced Holmes as Administrator, Pethebridge was faced with a supply shortage. The troops had run out of sugar, flour and jam, and their general rations could only be met by dipping into the frozen meat Pethebridge had brought with him.²³ But things were not usually that grim and good planning prevented similar situations arising.

As the historian Ross Mallett wrote: 'That a force could be enlisted, equipped and shipped in little over a week must be considered extraordinary'.²⁴ Indeed, it was a remarkable logistic achievement for a joint force comprising a navy that was little more than a decade old, and an army that did not really exist until the outbreak of war. It is even more impressive given the 1911 estimation that it would take 'at least six weeks' to enlist, organise and train an expeditionary force for service outside Australia.²⁵

Luckily, ammunition expenditure was negligible during the operations and the resupply of that taxing item never became an issue for Holmes, Pethebridge or subsequent administrators. But food and water were available and, between 1914 and 1921, those provisions were rarely short. For a force entirely dependent on sea-borne resupply, the AN&MEF was fortunate to enjoy command of the sea, which ensured the safety of its lines of communication, and meant that sustainment was a comparatively easy task. Not only was the expedition to Rabaul Australia's first amphibious operation, it was also the first time that Australia was responsible for its own logistics—something that was not replicated at Gallipoli nor on the Western Front. On those fronts, and in most future military operations, Australia was dependent on its allies for logistic support.

Balikpapan, 1945

Australia's amphibious capabilities were found wanting at the outbreak of the Second World War. Amphibious operations had not featured in defence planning between the wars, and the valuable experience gained at Rabaul and Gallipoli had been eroded by fiscal challenges, a strategy of 'imperial defence', and time.²⁶ Australia's first amphibious operation of the war—and its first since Gallipoli in 1915—was against the Japanese base at Lae in September 1943. Although it was a success, Lae highlighted some deficiencies, particularly in Australian training and logistics. By July 1945, when the allies landed at Balikpapan as part of the Borneo campaign, these lessons had been learnt.

The third landing of General Douglas MacArthur's campaign to retake Borneo—the oil-rich island which the Japanese had occupied since 1942—Balikpapan was Australia's largest and last amphibious assault of the war. It was also strategically dubious; its commanders believed that it lacked 'any real object' and that it had no bearing on future operations against the Japanese.²⁷ Nonetheless, Balikpapan (OBOE 2) went ahead and like OBOE 1 (Tarakan, 1 May) and OBOE 6 (Brunei Bay/Labuan, 10 June), the task was allotted to the 1st Australian Corps, ably supported by US air, naval and logistics forces.

The operation was preceded by a massive preliminary bombardment lasting 20 days, the largest ever in support of an Australian operation, involving 3,000 tons of bombs, 7,361 rockets, 38,052 shells and 114,000 small arms rounds.²⁸ It destroyed the Japanese shore defences and knocked out most of the enemy's field guns.²⁹ While this was occurring, 'frogmen' from US Navy underwater demolition teams cleared approaches to the beaches.³⁰ The way was set for the force of 33,500 men, in over 100 ships, to begin their approach.

At 0700 on 1 July, five cruisers, 14 destroyers and 62 B24 Liberator aircraft opened fire on the beaches at Kladasan. Assembled offshore in nine landing ships (tank) (LSTs), the first two waves of troops transferred into US-controlled landing vehicles tracked ('Alligators') for the voyage to the shore. As they approached the 300 yards-mark from the shore, the massed fire support switched to the flanks and rear.³¹ The first troops reached the shore at 0855, landing on three beaches (Red, Yellow and Green) on a two-brigade, two-kilometre wide front. The second wave arrived four minutes later.³² Defending the area were 8,400 troops with 18 coastal, 26 dual-purpose and 78 medium and light anti-aircraft guns.

Within 15 minutes, the 7th Australian Division had secured the beachhead. With the support of mortars, machine-guns, tanks (including flame throwers) and superior fire support, they had advanced two kilometres by the end of the day. The next day, they secured the small airfield

at Sepinggang, 10 kilometres east of the landing. By 3 July, they occupied a frontage of eight kilometres and, by 9 July, had captured the large airstrip at Manggar, 20 kilometres from the landing.³³ In little over a week, they had taken all the initial objectives but fighting continued until war's end. Tactically, the allies performed brilliantly. But as the historian David Horner notes 'a total of 229 Australians were killed and 634 were wounded. Japan did not surrender one minute earlier as a result of this action'.³⁴

Among other things, the 1943 Lae operation highlighted the need for more specialised logistic units and better cooperation in joint operations. Both of these could be met through structural changes and increased training in amphibious warfare. In late 1943, the Army established joint beach groups, each consisting of troops, engineers, pioneers, signallers, medical staff and beach commandos, totalling 1,800 men. The role of these units was to clear the beach, liaise with the forces offshore, and unload the landing craft.³⁵ To improve training, an Australian/US amphibious training school, the Joint Overseas Operational Training School was established, with specialist training in logistics forming part of the program. Many of those in the beach groups attended the school, thus improving inter-Service logistics cooperation.³⁶

The importance and difficulty of resupply was not lost on those planning Balikpapan. Before operations commenced, the divisional commander with carriage of the operations commented that the problem was not in landing the troops 'but in landing heavy equipment and stores, since beaches may be vulnerable to shelling'.³⁷ This was one of the reasons why he selected Kladasan as the landing site, with its firm sand rather than the mangroves that were predominant along the coast.³⁸ Another was its close proximity to Balikpapan Bay, the use of which 'would ease the problem of supply over the beach and would be a safeguard against unfavourable weather'.³⁹

True to predictions, the voyage to the beaches was quick with the 'Alligators' carrying troops, stores and weapons ashore. The beach group, which had received General MacArthur's praise for their work on the beaches during OBOE 6, landed at Balikpapan with the second wave of troops and got to work marking out the beaches and directing the subsequent waves of troops. It was soon found that only one beach, Green, was suitable for handling the landing craft (tank) (LCTs) but that they could not get close enough to the beach to use their ramps. The beach groups therefore turned to the 2.5-ton amphibious DUKW trucks to unload stores.⁴⁰ By the morning of 3 July, the Americans had delivered and the Australian beach groups had unloaded nearly 1,000 vehicles, more than 16,500 men and nearly 2,000 tons of equipment and stores.⁴¹

With the beaches secure, work turned to creating docks for unloading stores. The Australians constructed a pontoon dock but, by far, the standout was the U-shaped dock built at Green beach by the US Navy's 111th Naval Construction Battalion, which allowed two LSTs to unload simultaneously, thereby improving the speed at which supplies could be disembarked and stockpiled.

On 10 July, a new beach, Brown, was opened on the south side of Balikpapan Bay. Protected from the swell, it could take eight LSTs at once, unloading them in an average of 10 hours.⁴² This became the major logistic centre for the rest of the campaign. By 21 July, the beach groups had landed 5,562 vehicles, 36,291 personnel and 32,127 tons of stores. The principal beachmaster put this success down to cooperation between the Services and between allies.⁴³ The experience gained since Lae, and the training at the Joint Overseas Operational Training School, had paid off.

By the time that the Australians landed at Balikpapan in July 1945, allied logistic arrangements in the Asia-Pacific were tried and tested. The establishment of the joint training school had ensured that the Australians knew how to conduct amphibious warfare and that they understood joint and combined logistic processes. 1945 was a world away from the logistic pitfalls experienced at Lae less than two years earlier. As the operations at Balikpapan showed, the Australians were now flexible enough to adapt to tactical realities and shift the location of logistic bases.

This was the result of many factors: experience, confidence, trust, clearly-defined roles and, importantly, sea and air supremacy. But it was also the result of plugging into someone else's logistic capabilities. In 1945, like in the First World War, Australia was still dependent on its allies for transporting its troops and supplies. Balikpapan, for example, would not have been possible without US logistic systems, particularly the shipping, to move all of the stores, equipment and masses of ammunition from the supply bases in Australia to the theatre of operations. It would be decades before Australia had to go it alone.

East Timor, 1999

As Russell Parkin has noted, the Cold War was 'a dark period for amphibious and joint operations' in Australia.⁴⁴ The combination of economic pressures and a continental defence strategy resulted in Australia losing the amphibious capabilities it had acquired throughout the Second World War.⁴⁵ In the mid-1990s, the ADF realised that in addition to the 'defence of Australia', it may also be required to protect Australian regional interests.⁴⁶ The East Timor crisis of 1999 would prove just how apt that realisation was.

In early 1999, the President of Indonesia announced that he would allow the people of East Timor to vote for independence. Anxious that the process run smoothly, in June 1999 the UN established a mission to monitor the ballot.⁴⁷ Recognising early signs of violence by pro-Indonesian militia, in July the ADF began planning for the possibility of having to evacuate Australian, UN and other foreign nationals from East Timor.⁴⁸

The vote on 30 August was held amongst increasing violence. East Timorese militia, supported by the Indonesian military, intimidated UN personnel and burned the houses of pro-independence supporters. Later estimates were that up to 250,000 East Timorese were displaced and 70 per cent of the infrastructure destroyed by the militia.⁴⁹ The violence increased after the results of the ballot were announced (in favour of independence) on 4 September. That day, Australia's Foreign Minister confirmed that Australia was willing to lead an international military force to restore order.⁵⁰ This attitude was in 'sharp contrast' to past Australian foreign policy, which had supported Indonesia's claims to East Timor.⁵¹

On 6 September, the ADF evacuated the first of what would grow to 2,500 personnel.⁵² While this was occurring, on 12 September East Timorese President Habibie reluctantly called for UN intervention and, on 14 September, Australia agreed to lead a UN force. On 15 September, the UN passed a resolution for the formation of a 22-nation 'International Force East Timor' (INTERFET) to restore peace and security in East Timor.⁵³

This was the first time that Australia had been the lead nation in a large-scale operation and, as such, the ADF had greater responsibility than ever before. Indeed, then CDF Admiral Chris Barrie described the deployment to East Timor as 'the most significant undertaking we have

had since World War II'.⁵⁴ Looking further back, it was the first joint operation under Australian command since Rabaul in 1914.⁵⁵

In the early hours of 20 September, five C-130 Hercules aircraft carrying Australian and New Zealand Special Air Service troops landed at Dili, the capital of East Timor. After securing the airport, they moved into the smouldering ruins of the town and then, along with infantry from the 2nd Battalion, the Royal Australian Regiment, established contact with the Indonesian military and got to work clearing the port. Some 1,500 INTERFET troops, the bulk of whom were Australian, landed that day. The situation was tense, not least because there was no telling how the militia or Indonesian military would react. Nonetheless, within days the situation had settled. Force numbers swelled to 11,500 by mid-November and the mission was accomplished by mid-December, with responsibility handed to a UN peacekeeping force on 23 February 2000.⁵⁶ The five-month operation was a success but, as the historian Bob Breen states, 'there was much ... to reflect on'.⁵⁷ Logistically, it had been 'a close run thing'.⁵⁸

There had been some preliminary logistic planning prior to the decision to form INTERFET but this planning was minimal and reflected the notion that it would be a short-term deployment. In reality, the ADF had two weeks warning that it would be responsible for sustaining INTERFET, Australia's largest logistics commitment since Balikpapan.⁵⁹ In that time, it had to get its own logistics in order—no small feat considering that Australian logistic units and systems had been cut back over the previous decade—and prepare to handle the logistics of the entire force.⁶⁰ Notionally, national contingents were meant to provide their own logistic support but not all had the capacity to support operations away from their own country and some arrived without any supplies at all.

In these cases, Australia as lead nation was forced to carry the logistic burden. This was not something the ADF was prepared for—its processes and IT systems were designed to support Australian forces operating in Australia, not Australian or other forces outside Australia—and it placed considerable strain on the ADF's logistic capabilities.⁶¹ Major General Peter Cosgrove, INTERFET commander, later stated that throughout the deployment 'our logistic engine was under extreme pressure most of the time'.⁶² The political scientist, James Cotton, went further in asserting that '[a]ssuming the lead nation role stretched Australia's logistics capability to breaking point'.⁶³

The first hurdle in the logistic process was Darwin. As the logistic terminal for INTERFET, all supplies went through Darwin before being sent to East Timor. The port and airport struggled to cope with the increased traffic that the deployment required. Bottlenecks resulted and delay ensued.⁶⁴ Nonetheless, through constant and hard work, supplies were despatched. Some supplies were sent by air but the overwhelming majority (91 per cent of cargo) went by sea.⁶⁵ This burden was carried by civilian ships, without which, Cosgrove noted, logistics 'would have been severely hampered'.⁶⁶ The RAN relied on its newly-purchased high-speed catamaran, HMAS *Jervis Bay*, to transport 90 per cent of all personnel to the theatre, thereby proving 'her worth time and again'.⁶⁷

The build-up of supplies was of secondary importance to the quick arrival of troops and, as such, reserves of ammunition, rations and water, which would usually accompany a force, were left behind. Until resupply commenced, the troops would have to make do with what they had in their packs. Supplies began arriving on the first afternoon but Dili airport was congested; some aircraft could not land, while others that did land were not unloaded. Water

was becoming scarce. But the 'logistic crisis', as Breen called it, eased by the second day, 21 September.⁶⁸ The port had been secured and was operating, and the 10th Force Support Battalion was landing stores from the array of ships waiting in Dili harbour. A lack of port facilities for transshipping and offloading stores, however, required helicopters to play an important role in getting material ashore.⁶⁹

The Australian CH-47 Chinook heavy-lift helicopters were inoperative at the commencement of operations and Australia therefore relied on the US for these functions. Initial US logistic support was provided by four CH-53 Sea Stallion helicopters from the 31st Marine Expeditionary Unit, based on the amphibious assault ship USS *Peleliu* in Dili harbour.⁷⁰ These helicopters enabled the rapid distribution of troops and supplies around East Timor and were particularly useful once patrols began pushing inland from Dili.⁷¹ In order to reduce its footprint in East Timor, the US eventually decided to contract this work out. In the three months that they operated (not all were operating at the same time or for the entire period), the two Mi-8 medium-lift and two Mi-26 heavy-lift civilian helicopters flew a combined 475 hours, transporting 6,400 people and 845 tons of cargo.⁷² According to one account, 'there was nothing the Mi-26s could not lift'.⁷³

The complexity of logistic distribution increased as the force moved away from Dili. To ease some of the strain on supplying various national elements, INTERFET tactical dispositions were influenced by logistics, with self-sufficient nations with similar equipment being grouped together, as were those reliant on ADF support.⁷⁴ In the absence of suitable roads, most of the supplies for units spread throughout East Timor were delivered by amphibious craft over the shore and, where possible, moved forward by vehicles.⁷⁵

This required vast quantities of fuel and created more logistic pressures. Sometimes there were blockages in the forward supply chain; 3rd Australian Brigade knew that items were arriving in Dili but not making their way forward to the units.⁷⁶ One of the reasons was that the IT system—indeed, dual and conflicting IT systems were actually operating—failed to keep track of supplies and their whereabouts, and there were insufficient people trained in how to operate either system.⁷⁷ Many of these problems continued beyond the INTERFET deployment. The UN failed to properly plan for the logistic needs of the follow-on UN peacekeeping force (UNTAET) and, as a result, logistics was not passed from INTERFET to UNTAET until six months after the rest of the responsibilities were handed over.⁷⁸

Logistically, the deployment to East Timor was 'as easy as it gets'.⁷⁹ INTERFET enjoyed control of the sea, and the sea lines of communication were secure. In spite of the tension, and the need to tread carefully, there was no opposed landing, there was sufficient equipment, and supplies could be offloaded and distributed without the need for fire support. Yet the system still struggled. As the CDF noted in his post-operational report, '[w]hile some aspects of the logistic system were found wanting, they were not detrimental to the operations'.⁸⁰ He was quite correct. The system did not break down. But the ADF—and INTERFET as a whole—was fortunate the situation did not escalate. In those first, worrying days, the undersupplied force of 1,500 INTERFET troops was greatly outnumbered by the well-supplied Indonesian troops and pro-Indonesian militias.⁸¹ The system did not collapse because the logisticians worked hard—but it was never truly challenged either.

Logistic lessons for Australia

Australian logistics has gone full circle. In 1999, Australia found itself in charge of its own logistics for the first time since its first amphibious operation at Rabaul in 1914. It also found itself wanting. Historically, Australia has been dependent on its allies, Britain and the US, in particular, to sustain and maintain any military operations to which Australian units have been committed. Combined with fiscal challenges and a winding down of amphibious doctrine following both world wars, this reliance on allies resulted in a lack of logistic capabilities in the ADF, as evidenced by the logistic problems encountered in East Timor.⁸² As David Horner notes, if East Timor had not occurred, the ADF would have continued to wither away its logistic capabilities.⁸³

Operating in the Asia-Pacific, the region of greatest strategic importance to Australia, brings its own challenges. Any future Australian amphibious force, like that currently being developed as part of Plan Beersheba, can learn from the lessons provided by history. No force can rely on the situation representing anything like that experienced at Rabaul in 1914, where the AN&MEF had the benefit of landing at a pier with no opposition to stop them or hinder resupply. By 1945, and largely as a result of US shipping, amphibious logistics was a finely-tuned machine but this had not been the case in 1943, as Australia struggled to cope with its interwar neglect of amphibious operations and a reliance on an imperial strategy.

Rather, the ADF of tomorrow is likely to face East Timor-like operations: conducted in haste, in our immediate region, with Australia taking a lead role and being responsible for its own, if not others' logistics. This will require the incorporation of logistic considerations into planning; the inclusion of logistics in training exercises; the delineation of responsibilities between the Services; and, in the absence of a working or friendly port, small craft and airlift capabilities to fill the void between the larger landing helicopter docks (LHDs) and the shoreline. Logistics is too important to not remain flexible, and history shows us that if the skills are neglected, a force can find itself wanting.

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Focusing the Army Reserve: force structuring as an operational rather than strategic reserve¹

Major Mark Smith, Australian Army

The end for which a soldier is recruited, clothed, armed and trained, the whole object of his sleeping, eating, drinking and marching, is simply that he should fight at the right place and the right time.

Carl von Clausewitz, *On War*²

In 2000, a Parliamentary inquiry stated that the ‘parlous state’ of the Army Reserve was the ‘single greatest concern for [the] committee during its enquiry into the Army’, which—considering the operational context at the time of this assessment—punctuates the significance of the Army Reserve’s issues.³ In the following decade, the Reserve has consumed roughly 20 per cent of the Army’s total budget, with its contribution largely related to sustaining small deployments overseas, supporting short-duration domestic contingencies and providing individual reinforcement.⁴ This assessment suggests that the Army Reserve costs a lot but, regrettably, delivers limited capability.

Since the creation of the Regular Army in 1948, Australia has wrestled with the strategic rationale of part-time soldiers, striving to manage the diminishing relevance of the militia in the presence of a full-time professional force.⁵ Numerous attempts at reform have been undertaken, such as the comprehensive 1974 Millar Review, which recommended structural reform to enhance capability and effectiveness.⁶ However, such recommendations have been consistently stymied by ‘government mismanagement, political game-playing [by] Reserve pressure groups and ... a Regular officer corps [seeking] exclusive control of the profession of arms’.⁷ Consequently, 40 years of virtual inaction has left the Army Reserve inappropriately postured to effectively deliver the capability required by Government.

The 2000 Defence White Paper re-roled the Army Reserve from a strategic reserve to an operational reserve, with significantly-increased deployments since 2000.⁸ Despite this change in strategic direction, the structure of the Reserve has remained largely unchanged, with the exception of the Regional Force Surveillance Units and units in Special Operations Command, which have been optimised to meet their specific requirements.⁹

Despite the Reserve’s tasks and rationale changing over time, its structure and posture have not followed suit and, far from being shaped by strategic and policy rationales, is instead maintained for other reasons—perhaps political economy—which permit legacy structures and postures that do not reflect the determinants of the broader Army-in-being.¹⁰ Consequently, it would seem that the Army Reserve provides limited options to Government at a relatively high cost.

In light of the Abbott Government’s promised ‘first principles’ review of the Australian Defence Organisation’s structure and processes, it is timely to examine how well the Reserve achieves the Government’s strategic requirements and to suggest possible opportunities to structure and posture more appropriately.¹¹ The article will discuss capability versus cost (in particular

challenging the accepted wisdom of the cost effectiveness of the Reserve), followed by a proposed model for a 'Focused Force' and consideration of its capability implications, risks and opportunities.

Capability – more than simply money

One Defence definition of capability is 'the capacity or ability to achieve an operational effect'.¹² Even more broadly, it might be described as value for money for the tax-payer in delivering viable military options as a 'public good' to meet possible strategic need and provide credible options to government.¹³ Acknowledging that capability is difficult to measure (and is more than just a simple financial equation), Defence evaluates capability through eight thematic elements known as the Fundamental Inputs to Capability (FIC).¹⁴ Total capability, therefore, is an assessment of the combined relative cost and benefit of the FIC to a strategic need.

The 2013 White Paper specified that Reserves were expected to provide operational reinforcement in three ways, namely:

1. providing individual specialists (such as medical practitioners) to support regular forces;
2. structurally integrating Reserves into full-time organisations (such the Regional Force Surveillance Units' permanent integration); and
3. integrating the Army Reserve into Army's new force-generation model (known as Plan Beersheba) to provide unit-level operational supplementation.¹⁵

In addition, the White Paper expressed a desire for 'Reserves [to] offer an expansion base for mobilisation in the event of a large-scale emergency'.¹⁶ However, this requirement seems dubious, particularly given that full-scale mobilisation would require 'the employment of national assets such as transportation systems, logistics capabilities, and hospital and health support services',¹⁷ in which a number of Reservists are employed in what would be 'protected' occupations.¹⁸

History would also suggest the expansion requirement is redundant, as Australia refrained from mobilising the Reserves for Korea or Vietnam, or other more recent contingencies.¹⁹ There is also an argument that the increasingly lethal and diffuse battlespace has broken the 'strict correlation between numbers and capability',²⁰ all of which suggest mobilisation should not be the force determinant and that the Army Reserve should focus on being an operational reserve rather than a strategic one.

While the Reserve was described in the 2013 Defence White Paper as being 'an integral part of ADF capability', this is disputed by the assessment that the Reserve had 'largely failed to fully achieve the higher readiness tasks set for [it] in the 2000 and 2009 Defence White Papers'.²¹ The Australian National Audit Office reported in 2009 that 'the Army Reserve force structure has fundamentally not changed since its inception ... [and] there is a need for the Army Reserve force structure ... to reflect its current role'.²²

Re-structuring the Army Reserve is not simply about saving dollars but about generating capability. Previous studies on the Reserve have focused on the efficiency with which tax-payer dollars are converted into military outputs. However, output is only capability when it is directed effectively at a strategic or operational need. This article contends that the Reserve is tethered to the stake of an outmoded strategic rationale and, for too long, has been trapped in a paradigm in which efficiency is substituted for effectiveness.

This problem is not new. The Army Reserve's strategic rationale was initially for homeland defence, with bases dispersed around Australia for the purpose of training and defence.²³ In 1974, the seminal Millar Report argued for a changed role for the Reserve, asserting the need for:

[a] reserve of partly trained army units and personnel ... [as] an essential component of the Defence of Australia ... prepared for integration with the rest of the Army in the event of a call-up. [Furthermore,] both Regular and Reserve components should be treated and act as part of a single force.²⁴

Millar's review was sweeping but important recommendations, such as amalgamating under-strength units or integrating them into a 'total force', were not achieved.²⁵ Not only were structural changes not realised but fundamental questions about task, cost and purpose of the Reserve went unanswered, reflecting a 'political economy' to protect existing force structures based on romanticised unit traditions and political affiliation rather than Australia's strategic interests.²⁶ These decisions have left the Reserve with hollow units in widely-dispersed locations, 'damag[ing] morale and retention ... and, in the final analysis, not provid[ing] useable capability'.²⁷

Many of Army's current operational concepts borrow from Millar's work, in particular his desire for an integrated 'total force'.²⁸ The 2000 Defence White Paper's 'fundamental shift in thinking ... chang[ed] the role of the Army Reserve from providing a trained resource base for the expansion of the Army to providing fully-trained personnel to support front-line forces deployed on operations'.²⁹ This reprises Millar's conclusions but reduces emphasis on the need to mobilise for national defence. Operationally, the Reserve has adjusted, deploying company groups to the Solomon Islands and later to East Timor. But it arguably has done so relatively inefficiently, without resolving its underlying force structure issues.

2 Division's contribution to ADF capability

2 Division—the single largest component of the Reserve—comprises some 10,000 Reserve personnel and nearly 900 Regular members, arranged into six brigades with combat, logistics, training and enabling functions as shown in Figure 1. Since 2006, 2 Division's increased operational role has been expressed in the provision of company-sized contingents for deployment overseas, and a requirement for each brigade to maintain a High Readiness Reserve (HRR) combat team and a Reserve Response Force (RRF) of company strength.

The HRR comprises Reserve personnel who volunteer to be available for deployment at short notice, and who possess the same level of training competency as their Regular counterparts. In addition, the RRF provides subunits capable of providing Defence Force assistance to the civil community for security or disaster assistance operations.

The strengths of the brigades vary but most units possess significant deficiencies. For example, according to an Australian National Audit Office report in 2009, HRR combat teams across the Division were on average only staffed to 45 per cent of strength, and 44 per cent of the entire Reserve had failed to parade for 20 days or more in the past year (thereby being 'ineffective' in terms of Army policy), although the same report concluded that 'a reduced yet credible level of capability was [being] maintained'.³⁰

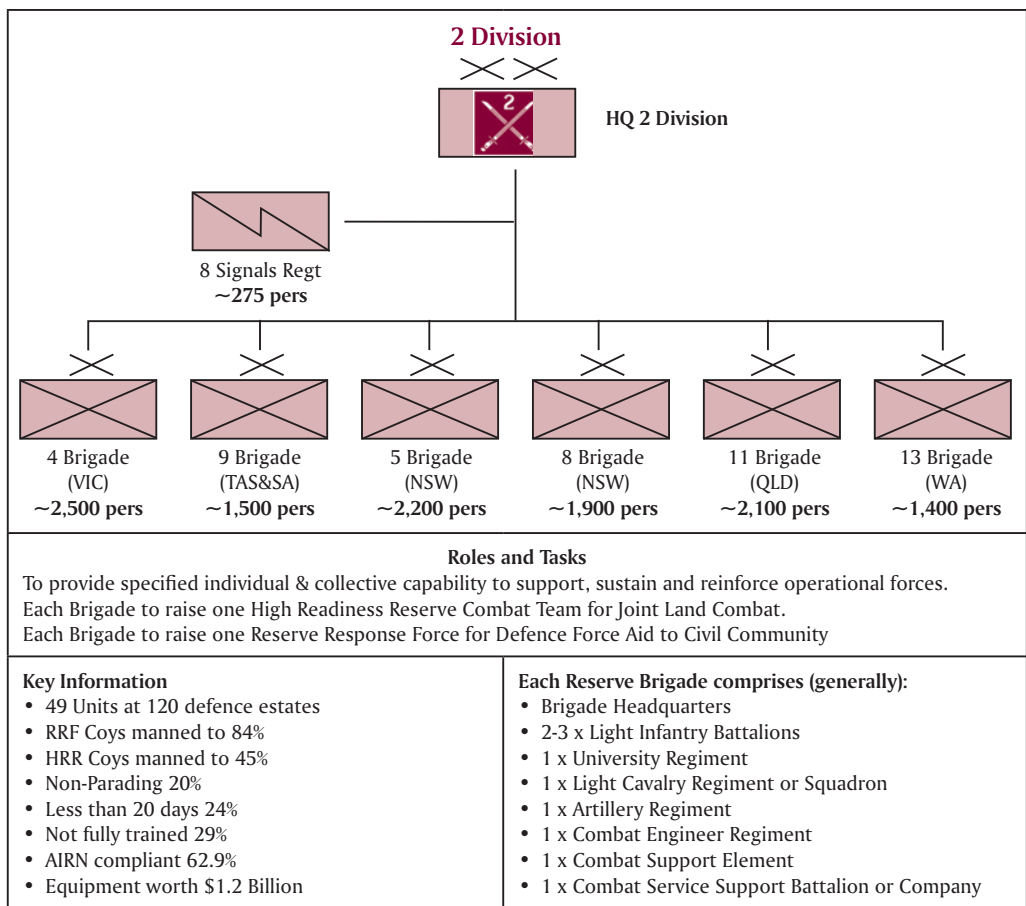


Figure 1. 2 Division organisation³¹

The 2013 Defence White Paper stipulated that Army must ‘integrate the roles of the Regular and Reserve components to realise the “Total Force” concept [to] allow multi-role combat brigades to be deployed or elements of these to deploy separately on discrete tasks’.³² To meet this requirement, Army has developed Plan Beersheba, a 36-month force-generation cycle comprising a ‘ready’, ‘reset’ and ‘readying’ phase of 12 months each.³³ And instead of maintaining specialist brigades (armoured, motorised and light infantry), the Regular Army has adjusted its force structure to create three ‘like’ multi-role combat brigades.³⁴

2 Division has not done similarly, seeking instead to generate a battle group by combining units in a ‘just-in-time’ approach.³⁵ However, Plan Beersheba requires the Army Reserve to provide one battle group to reinforce the ready brigade each year.³⁶ The battle group’s responsibilities include the conduct of rear area security operations and stability operations in support of the brigade.³⁷ Indicative of the Army Reserve’s ‘hollowness’—a product of its ill-suited force structure and posture—is that two Army Reserve brigades (doctrinally, a total of up to 5000 personnel but in reality about 3000 strong) are required each year to generate this battle group.

By not mirroring the Regular Army's approach of permanent force structure changes to achieve Plan Beersheba's objectives, 2 Division's 'ready' battle group will be an *ad hoc* organisation, with little ability to draw on previous experience and likely resulting in the same mistakes and errors being repeated by each battle group on a three-year cycle.

Is the Army Reserve actually cheap?

In 2008, defence commentators Andrew Davies and Hugh Smith assessed the Army Reserve to be 'cost effective', asserting that the average Reserve member costs \$30,000 while a Regular member costs \$130,000.³⁸ However, for reasons of force structure, posture and individual proficiency levels, a dollar invested in the Reserve delivers less capability than the same dollar invested in the Regular Army. Thus, a more appropriate, holistic consideration of the cost-effectiveness of the Reserve is to examine its total cost and the resulting capability that is delivered. When this approach is taken, the flaw in the logic of the 2008 report is revealed.

The annual cost of the Army Reserve in FY99/00, across a number of elements of FIC, is shown at Table 1.³⁹ Analysis reveals that the Reserve comprised 40 per cent of Army's personnel (working 45 days on average) and consumed 20 per cent of the total cost for Army. Therefore, when total costs are considered, the daily cost of a Reserve member was \$959 compared to a permanent member's cost of \$626.⁴⁰ Furthermore, once a Reservist meets certain training requirements, their civilian employer may be eligible for compensation under the Employer Support Payment Scheme, further inflating the cost of employing Reservists.⁴¹ Irrespective of that scheme, a Reservist is at least 50 per cent more expensive than a Regular, as well as being less trained and less prepared, undermining the argument that Reservists provide a 'bang-for-buck' capability contribution.

Some might argue that the comparison of a 'total cost per day' is unfair in that it does not compare 'like for like'.⁴² However, when we compare like for like, for example when a Reservist undertakes continuous full-time service, the Reserve member is on the same conditions of service as a Regular member, and potentially qualifies for employer support payments. Therefore, not only is a Reserve member more expensive per day of peace-time training but, once employed on full-time duty, when capability is actually delivered, is no cheaper and may even cost more by virtue of the Employer Support Payment Scheme.

Another criticism of the methodology of calculating a 'total cost per day' is that the Army Reserve budget is artificially inflated by a high proportion of fixed costs, such as infrastructure, land, materiel and stockpiles that are not fully utilised but provide expansion capability if required. This argument is based on the philosophy of infrastructure as a strategic deterrent, providing an expansion base for mobilisation. But as argued earlier, strategic mobilisation is no longer the primary rationale for the Reserve. Therefore, fixed infrastructure provides an illusory mobilisation potential and reflects an anachronistic legacy of continental defence of Australia by the militia.

Table 1. Financial cost of the Army Reserve FY99/00⁴³

ITEM	ACTIVE RESERVE (ARes)	TOTAL ARMY	TOTAL ADF	% of ADF (also % of Army)
Strength	17,301 ARes (parading an average of 45 days per year) 900 ARA (cadre staff)	42,617 (total) 25,316 ARA 17,301 ARes 15,000 Stand-by Reserve	89,451 (total) 51,027 (Permanent) 22,007 (ADF Reserve) 16,417 (APS)	19.3% (40%)
Personnel costs	\$188 million ⁴⁴	Not reported separately	\$4.96 billion	6%
Supply	\$123 million	Not reported separately	\$3.85 billion	3%
Repairs and Maintenance	\$25 million	Not reported separately	Not reported separately	N/A
Depreciation	\$101 million	Not reported separately	Not reported separately	N/A
Indirect Costs	\$275 million	Not reported separately	Not reported separately	N/A
Capital Usage	\$240 million	Not reported separately	Not reported separately	N/A
Total Annual Cost	\$952 million	\$4.58 billion (total) \$ 3.628 billion (less ARes budget)	\$18.36 billion	5% (20%)
Workdays per year	ARes @ 45 days ARA @ 240 days	ARA @ 237 days (25,316 less 900 cadre staff)		
Total workdays	991,845	5,786,592		
Cost/ workday	\$959	\$626		
Defence estates	\$1.117 billion (235 facilities)			
ARes training areas	\$75 million (17 rifle ranges)			
Equipment (principal items/ loan pool)	\$950 million			

This analysis reveals that the major cost of the Reserve is not personnel but the transactional cost of maintaining an extensive network of dispersed bases and associated infrastructure costs. While it is difficult to discern total Reserve costs today, due to changed Army reporting procedures since 2001,⁴⁵ the relationship between costs and capability output in Table 1 is likely to be suitably indicative, since no major institutional changes have occurred over that period.

When the FY99/00 figures are adjusted for inflation to 2013 dollars, the cost of the Army Reserve comprises an annual budget of \$1.3 billion, possessing \$1.2 billion of equipment (principal items and loan pool) and occupying Defence estate worth \$1.6 billion.⁴⁶

A 'Focused Force'

A suggested model, termed a 'Focused Force' by the author, would respond to the force determinants in the 2013 Defence White Paper and Plan Beersheba by adjusting the structure and posture of 2 Division to deliver three battle groups, each capable of fully integrating with a multi-role combat brigade. The model has been derived by linking the strategic requirements specified in the 2013 Defence White Paper with the capabilities of the force-in-being and the funding available. In this model, Australia's mobilisation base—its strategic reserve—would no longer be 2 Division but the Stand-by Reserve. The key elements of a Focused Force are as follows:

Key concepts

- Restructure 2 Division to become smaller, active, focused.
- Optimised to 'train as you fight' (in accordance with Plan Beersheba).
- Facilitates iterative learning and adaption (by not forming *ad hoc* arrangements during each force-generation cycle).
- Structurally embedded into multi-role combat brigades (allowing a regular brigade to administer/coordinate them).
- Additional Reserve positions established at Army training schools and headquarters to support training delivery to the total force, as well as additional staff to hollow Regular units, providing Reserve career progression.

Force structure

- Headquarters 2 Division and all brigades disestablished.
- Three high readiness battle groups established (manned to 150 per cent).
- Battle group headquarters located within parent multi-role combat brigade's garrison.
- Workforce adopts a fly-in/fly-out approach, attending individual and collective training four times a year at parent brigade's garrison or training school.
- ~600 ARA positions released.

Force posture changes

- Infrastructure and equipment collocated with multi-role combat brigades' garrisons.
- Significant reduction in Reserve depots.
- Increased readiness, with all members on employment contracts to increase surety of availability and that Regular competencies are held.
- Access to better training areas/opportunities, providing increased readiness.
- One battle group each year to be on Tier 1 readiness (30 days notice-to-move) for specified tasks (rear area security and stability operations).

Strategic need

- Achieves Defence White Paper requirements (with the exception of mobilisation base).
- Provides operational reserve with 'ready' battle group annually.
- Able to complement and/or supplement multi-role combat brigades.

Budget implications

- Potential savings of \$1.25 billion (one-off) and \$816 million recurring annually (in 2013 dollars).
- Decreases cost by shedding the most expensive part of the Reserve (duplicated infrastructure and equipment located in multiple, small-scale dispersed facilities) while leveraging the cheapest part (personnel).

The model force would increase the Reserve's contribution to capability through the provision of a smaller, more credible force. This would be achieved through structural reform that has eluded Army for 40 years. Not only would it increase effective military output and capability but it would do so efficiently, generating savings of 60 per cent of the Reserve's total budget. A saving of this magnitude would be sufficient to fund an additional Regular battalion or quadruple the total annual operating budget of the Army's combined helicopter fleet.⁴⁷ Moreover, when analysed through the prism of FIC (as shown at Table 2), a Focused Force would deliver far more capability than the status quo.

Table 2: FIC Implications of the Focused Force

Personnel (generated)	<ul style="list-style-type: none"> • 3 x battle groups (3000 personnel), over-manned by 150% • HRR contracted (or an equivalent scheme) to improve surety of attendance and skills • 75 day training commitment • Training competency to Regular standard • Individual training through Regular training schools to maintain 'trade' skills
Personnel (savings/reinvestment)	<ul style="list-style-type: none"> • Reduced requirement for manning (~6000 ARes = \$84 million + ~ 600 ARA = \$78 million in 2013 dollars) • Reduced individual equipment demand (~ \$9.3 million in 2013 dollars) • Reduced demand for ab initio training/courses (66%)
Organisational (generated)	<ul style="list-style-type: none"> • 3 x battle groups functionally organised • Structurally integrated to regular multi-role combat brigades and administered by that brigade • Structured to 'train as you fight' • Augmentation to training schools, headquarters provided by Reserve members
Organisational (savings/reinvestment)	<ul style="list-style-type: none"> • No requirement for: <ul style="list-style-type: none"> – Headquarters 2 Division – 6 x brigade headquarters – majority of units – training establishments (University Regiments) • Reduced equipment holdings (~\$282 million in 2013 dollars) • Reapportionment of other assets (notably vehicles, computers, radios and weapons) across Army
Collective training (generated)	<ul style="list-style-type: none"> • HRR contracts enhance attendance through incentivised attendance • Train with parent multi-role combat brigades • Conduct 4 x collective training block in battle group strength • Higher collective training level attained

Collective training (saving/ reinvestment)	<ul style="list-style-type: none"> • Reduction in overall training cost (smaller training audience) • Less demand on key enablers (protected mobility vehicles, aviation, ammunition, field firing)
Major systems (generated)	<ul style="list-style-type: none"> • Opportunity to share/use major systems on base or training areas • Practice interoperability with major systems • Concentration of mass in critical skills
Major systems (savings/ reinvestment)	<ul style="list-style-type: none"> • Reapportionment of excess systems across Army
Supplies (generated)	<ul style="list-style-type: none"> • Economy of scale through concentration of mass into smaller footprint • Leverage off existing supply chain to major bases
Supplies (savings/ reinvestment)	<ul style="list-style-type: none"> • Reduced friction in the supply and administration systems • Allows economies of scale to develop
Facilities and training areas (generated)	<ul style="list-style-type: none"> • Share training areas with Regular brigade • Increased rate of effective utilisation • Increased investment at major defence facilities at Robertson, Lavarack and Gallipoli Barracks (locations of multi-role combat brigades)
Facilities and training areas (savings/ reinvestment)	<ul style="list-style-type: none"> • Reduced demand for facilities around the country • Reduced facilities maintenance (~\$600 million in 2013 dollars) • Divest 110 defence estates and 17 Reserve ranges (~ \$753 million in 2013 dollars)
Support (generated)	<ul style="list-style-type: none"> • Reduced friction in the supply and administration systems • Allows economies of scale to develop
Support (savings/ reinvestment)	<ul style="list-style-type: none"> • Reduces duplication of support infrastructure
Command and management (generated)	<ul style="list-style-type: none"> • Command and control arrangements simplified • Collocated with parent brigade • Battle group administered/supported by parent combat brigade • Increase morale and professionalism
Command and management (savings/ reinvestment)	<ul style="list-style-type: none"> • Reduced span of command at Headquarters Forces Command (with 2 Division disestablished) • Decreased governance burden (less armouries, dispersed holdings of critical items, risk management of facilities)
Savings opportunity (2013 dollars)	<ul style="list-style-type: none"> • \$1.25 billion (one-off) • \$816 million (recurring annually, which includes ARA salaries)

Note – All values have been extrapolated by the author, based on the figures in Table 1, and are expressed in 2013 dollar values.

Source: Australian National Audit Office, *Audit Report 33: Australian Defence Force Reserves: Department of Defence*, Australian National Audit Office: Canberra, 200¹.

The elements of most significance in this proposal are the changes to the FIC elements of personnel, organisation and facilities. In terms of personnel, the Focused Force's three battle groups would be 'over-manned' to ensure a reliable generation of capability.⁴⁸ All members of the organisation would be on HRR contracts (or an equivalent program) to incentivise effective service and the requirement to attain Regular Army levels of employment competency. This would generate greater actual capability and also provide more meaningful employment, thereby increasing morale and a sense of relevance.

A consequence of this approach is that the Reserves would decrease in size by 6000 Reservists and 600 Regular members, resulting in not only an increase to the Stand-by Reserve but also allowing the reinvestment of Regular personnel to Regular units. This is likely to be welcomed as the Army seeks to grow an additional 935 full-time positions by 2015.⁴⁹ Therefore, despite the higher relative cost of HRR members, and the increased cost of adopting a 'fly-in/fly-out' work model, the Focused Force would generate a more credible contribution from the Reserve and realise a recurring saving of around \$198 million in personnel costs per year.⁵⁰

Organisationally, the Focused Force would mirror the structural integration achieved by Reserve units of 1 Commando Regiment and the Regional Force Surveillance Units. Each battle group would be permanently embedded with its multi-role combat brigade. This approach seeks to achieve structural integration rather than just habitual coordination (which is the philosophy underpinning the current Beersheba model). This would provide the opportunity for more effective and efficient sustainment, support and training by making the Regular brigade responsible for forecasting and allocating the resources needed for the Reserve battle group.

Because of the reduced personnel requirements of the Focused Force and anticipated higher retention (and therefore less demand for *ab initio* trainees), a flow-on effect would be a significant reduction in the need for Reserve training establishments. The Focused Force would thus diminish the requirement for separate career management agencies and career training establishments, with Reserves reinforcing existing Regular institutions, which ultimately would achieve better 'Total Force' personnel management outcomes. The disestablishment of 2 Division would also realise a significant reduction in equipment holdings. The indirect effect of consolidating equipment holdings is a potential reinvestment opportunity of \$282 million.

The combined effect of personnel and organisational changes would allow a consolidation of Defence facilities around Australia. Davies' and Smith's 2008 analysis of the Defence estate concluded that nearly 60 per cent of the Reserve's facilities supported just ten per cent of its personnel and, as facilities account for such a high proportion of expenditure in the Reserve budget, their disposal would represent a considerable cost saving.⁵¹ The increased use of existing facilities at major Defence establishments (for example, at Robertson, Gallipoli and Lavarack Barracks) would not only be a proportionally small increase to the facilities' existing dependency but any investment required for capital expansion would maximise the opportunities for economies of scale. Surplus facilities could be divested from the Defence portfolio, realising a one-off return of approximately \$753 million.

In addition, by not having to support dispersed depots, Defence would achieve a potential annual saving of \$600 million. The rationale underlying this proposal is not, however, primarily financial. The Focused Force's ability to use purpose-built collective training facilities would allow it to operate alongside major systems, such as tanks and other combined arms elements, which are impossible to replicate in dispersed depots.

Thus, the Reserves would benefit from accessing better facilities that are equipped to provide effective training to the Regular Army. The cost of this additional use would be marginal but effective rates of use would be increased. Concentrating the re-postured and re-structured Reserve in Regular facilities would allow for increasing efficiencies to be delivered in other elements of FIC. The cost of improving or enlarging any facilities would be a huge cost saving compared to the current practice of duplicating these facilities around the country in under-utilised Reserve depots.

Finally, collocating battle groups with parent multi-role combat brigades would achieve enhanced command and management outcomes. Not only would it permit well-defined command and control relationships to develop but conducting unit administration and support functions in facilities shared with Regular forces would reduce friction in the supply and administration systems and take advantage of Defence's current emphasis on centralising personnel and administrative support functions.

The cost savings are difficult to measure but efficiency would be improved and more effective capability outcomes realised. Furthermore, with many soldiers in the Army Reserve currently discharging before completing their training, the Focused Force would make a member's service more relevant and rewarding, potentially reducing separation rates. In addition, such a change would provide a better model for the alignment of Reserve service with Plan Suakin's desire to provide a more flexible, contemporary and sustainable employment model for all categories of ADF service.⁵²

Risks and opportunities

The Focused Force would achieve increased capability at a decreased cost and provide a greater range of more credible military response options to Government. However, such decisions obviously come with opportunity costs that must be considered and mitigated. Clearly, decisions regarding the Reserve are choices of political economy. The political backlash from serving Reserve members and Reserve and unit associations are likely to be considerable, particularly noting that these historical and political dimensions have traditionally been the principal obstacles to prior reform.⁵³

With a reduction in the Reserve's size, promotion opportunities and command roles for senior Reserve officers would be reduced. It has also been suggested that the number of 'secondary enlistments' (Reservists who subsequently transfer to Regular forces) may be expected to reduce due to the smaller numbers of active Reservists. However, this contention is not only unsupported by evidence but the converse is also possible—that with greater morale, increased experience and standardised training among those Reserve members who do serve, more secondary transfers per capita could occur.

The decision to close Reserve depots would address one of the most significant Reserve costs but potentially would sever an interface between Army and the local community. The closure of depots may have long-term implications on community connections but they are not easily quantifiable, nor is the exact role of community engagement articulated in Army's contemporary priorities. It can be argued that the presence of Reserve members in communities is of far greater importance than a depot which, apart from several hours on a Tuesday night and alternate weekends, is largely a padlocked empty building. Any decision to

rationalise and relocate Reserve facilities must be weighed against their value as an indicator of Army's presence in the local community, a base for future expansion or as a focal point for recruitment purposes.

The Focused Force would cease the current practice of maintaining Reserve elements to support the civilian community for humanitarian assistance/disaster relief, instead relying on the 'ready' multi-role combat brigade (including its Reserve battle group), supported by aviation and logistic elements. Such support is already coordinated by Joint Operations Support Staff cells located in each State. While, on occasions, the Reserve has been called on to supplement disaster relief operations, one questions the value of its employment.

The bulk of the combat and combat support elements of 2 Division which provide assistance do so as unskilled labour, albeit with good internal logistic support and command arrangements. More relevant skill sets are resident in the respective State Emergency Services and other emergency services. While the Reserve contribution provides a highly-visible commitment by the Federal government to a crisis, it arguably represents a poor return on investment for the Australian taxpayer compared to investment in specialist emergency services.

An analysis of Operation QUEENSLAND FLOOD ASSIST, the ADF's response to the flooding of over 78 per cent of Queensland is illustrative in this regard. The Reserve contributed 356 personnel of a total Defence commitment of 1976 personnel.⁵⁴ However, this number is dwarfed when compared to the State Emergency Service's commitment of nearly 7000 personnel and the volunteer 'Mud Army' of an estimated 55,000 people.⁵⁵ The permanent force's provision of specialist aviation and logistic support, and engineers capable of vertical construction and repair, was far more critical to the civilian community.

In addition to the aforementioned political risk, reducing the size of the Reserve might be seen as escalating national security risks by lowering the overall size of the military, resulting in reduced deterrence. This criticism is based on the belief that reducing the size of a partially-trained force-in-being lessens the nation's ability to mobilise for operations. Focusing the Reserve to produce a smaller but more capable force should improve operational effectiveness and capability, thereby enhancing deterrence. In contrast, preserving the status quo would perpetuate the current low levels of preparedness. This proposal echoes the sentiments of a 2000 Parliamentary inquiry that:

It consumes resources while not delivering capability in meaningful timeframes. It has created the paradox that the Army can actually increase useable capability by reducing its organisational size.⁵⁶

The greatest risk in this debate, however, is to continue deferring the decision about the strategic rationale of the Reserve itself. Forty years of indecision has resulted in 2 Division struggling to meet the strategic demands placed on it by Government. A Focused Force would create opportunities to achieve government intent—and do so efficiently, in a way that could finally realise Millar's 'total force' concept. The Reserve is not a special case and the Australian Army 'is, and always has been, too small to devote over half [of] its available combat power to second-tier tasking'.⁵⁷ The opportunity to generate savings from such Reserve reform would also allow significant reinvestment to better meet the strategic requirements of the nation in this time of financial austerity.

Conclusion

The greatest obstacle to the Reserve's provision of effective capability is its force structure and posture. Over the past 40 years, the numerous reviews of the Army Reserve have 'attained the status of a cottage industry' but largely have been stymied by political obstacles and romantic ideology.⁵⁸ This article has argued that the Reserve is struggling to meet the demands currently placed on it and is unlikely to meet the challenges of the future without reform.

It has argued that by changing 2 Division's force structure and posture, the Reserve can satisfy its part in Army's 'Total Force' and achieve the 2012 Force Posture Review's recommendation for a unified and integrated structure.⁵⁹ In an increasingly ambiguous and dynamic strategic environment, the Australian Government needs a credible, ready Reserve optimised to provide military response options to short-notice contingencies rather than a militia designed for mass mobilisation. To do so requires hard decisions about the role of the Reserve and emphasis on the needs of the nation rather than a perpetuation of inertia born of vested interests and a 'business as usual' approach.

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He has a Master of Military and Defence Studies, and a Bachelor of Legal and Professional Studies, as well as credentials in business, management, security and risk management. He graduated from the Australian Command and Staff College in 2013 and was the recipient of the Principal's Prize. In his civilian career, he is employed by the Queensland Police Service in its Public Safety Response Team and is also a member of the Department of Foreign Affairs and Trade's Australian Civilian Corps.

NOTES

1. This is an edited version of a paper developed by the author while attending the Australian Command and Staff College in 2013.
2. Carl von Clausewitz, *On War*, as edited by Michael Howard and Peter Paret, Princeton University Press: Princeton, New Jersey, 1976, p. 95.
3. Australian Government, Joint Standing Committee on Foreign Affairs Defence and Trade, *From Phantom to Force: towards a more efficient and effective Army*, Commonwealth of Australia: Canberra, 2000, p. 23.
4. James Brown, 'A leaner, more effective Army Reserve,' *Lowy Institute - the Interpreter*, 26 July 2012; Damien Patterson, 'Army Force Structure: what has gone wrong?,' *Australian Army Journal*, Vol. 3, No. 2, 2006.
5. Peter Young, 'What future for the Army', *The Bulletin*, 13 November 1971, p. 21.
6. Thomas Millar, *Committee of Inquiry into the Citizen Military Forces Report (Millar Report)*, Australian Government Printing Service: Canberra, 1974, pp. 48-54.; Alan Ryan, 'Back to the Future: the one-Army concept in a time of change,' in Peter Dennis and Jeffrey Grey (eds.), *A century of service - 100 years of the Australian Army*, proceedings of the 2001 Chief of Army's Military History Conference, Army History Unit: Canberra, 2001, p. 8.
7. Ryan, 'Back to the Future', p. 1.
8. Australian Government, *2013 Defence White Paper: defending Australia and its national interests*, Department of Defence: Canberra, 2013, p. 40.
9. Patterson, 'Army Force Structure', p. 181.
10. Brown, 'A leaner, more effective Army Reserve'.
11. Brendan Nicholson, 'Abbott government plans a review of defence deals', *The Australian*, 2 December 2013, available at <<http://www.theaustralian.com.au/national-affairs/policy/abbott-government-plans-a-review-of-defence-deals/story-e6frg8yo-1226772533359#>> accessed 10 January 2014.
12. Department of Defence, *Defence Capability Development Handbook*, Commonwealth of Australia: Canberra, 2011, p. 2.
13. Department of Defence, *Australian Defence Doctrine Publication 00.2: Preparedness and Mobilisation (Provisional)*, Defence Publishing Service: Canberra, 2004, pp. 1-11.
14. The eight fundamental inputs to capability (FIC) are personnel, organisation, collective training, major systems, supplies, facilities and training areas, support, and command and management.' See Department of Defence, *Australian Defence Doctrine Publication 00.2*, para 1.5.
15. Australian Government, *2013 Defence White Paper*, pp. 45-6.
16. Patterson, 'Army Force Structure' 128.
17. Australian Government, *Defence White Paper: defending Australia in the Asia-Pacific century: Force 2030*, Department of Defence: Canberra, 2009, paragraphs 10.23-24.
18. Mobilisation may be better suited to the Army's Stand-by Reserve, comprising some 15,000 former service personnel, which provides a lower cost but 'accessible pool of trained, competent former Regular Army and Active Reserve members'. See Department of Defence, *Reservist Handbook: support, services and programs*, Second Edition, Commonwealth Government: Canberra, 2011, p. 24.
19. The author acknowledges that there were legislative restrictions on deploying the militia to these operations. See Albert Palazzo, *The Australian Army: a history of its organisation 1901-2001*, Oxford University Press: Melbourne, 2001.
20. Malcolm McGregor, 'We need to fortify our Reserves,' *The Australian*, 10 August 2000.
21. Australian Government, *2013 Defence White Paper*, p. 45; Brown, 'A leaner, more effective Army Reserve'.

22. Australian National Audit Office, *Audit Report 31: Army Reserve Forces*, Australian National Audit Office: Canberra, 2009, p. 42.
23. Stephan Frühling, *A History of Australian Strategic Policy Since 1945*, Defence Publishing Service: Canberra, 2009, p. 28.
24. Millar, *Committee of Inquiry into the Citizen Military Forces Report (Millar Report)*, pp. 63-79.
25. Ryan, 'Back to the Future', p. 9.
26. 'Political economy' is a term used to describe the process in which groups with common interests and economic values use politics to effect changes beneficial to their interests. See Drew R. McCoy, *The Elusive Republic: political economy in Jeffersonian America*, University of North Carolina: Chapel Hill, 1980.
27. Australian Government, Joint Standing Committee on Foreign Affairs Defence and Trade, *From Phantom to Force*, p. 128.
28. Ryan, 'Back to the Future', p. 8.
29. Australian National Audit Office, *Audit Report 31*, p. 11.
30. Australian National Audit Office, *Audit Report 31*, pp. 58-64.
31. Constructed from data available on the Australian Army's website, available at <<http://www.army.gov.au/Who-we-are/Divisions-and-Brigades/Forces-Command/2nd-Division>> accessed 10 October 2013, and the 2009 Defence White Paper.
32. Department of Defence, *2013 Defence White Paper*, p. 85.
33. Department of Defence, *The Army Objective Force 2030 Primer*, Defence Publishing Service: Canberra, 2011, p. 38.
34. Department of Defence, *Annual Report 2011-2012*, Defence Publishing Service: Canberra, 2012.
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36. Department of Defence, *The Army Objective Force 2030 Primer*, p. 42.
37. J.E. Barry, 'Presentation by National President Defence Reserve Association: ADF Reserves Capability – Where to now?', Royal United Services Institute of Victoria Inc, Melbourne, 29 March 2012.
38. Andrew Davies and Hugh Smith, 'Stepping Up: part-time forces and ADF capability,' Australian Strategic Policy Institute (ASPI): Canberra, 2008, p. 17.
39. Unfortunately, the table reflects 1999-2000 data. However, this was one of the last times that Army Reserve costs were reported separately. See Australian National Audit Office, *Audit Report 31*, p. 42.
40. This costing was extrapolated by the author using figures contained in Table 1. It is acknowledged that this calculation favours production efficiency and does not take into account latent capability or the effect on the economy of those Reserve members not performing their 'normal' employment.
41. Department of Defence, *Employer Handbook: Everything you need to know about employing Defence Reservists*, Fifth Edition, Department of Defence: Canberra, 2013, pp. 5-9.
42. The author is indebted to Mark Thomson of ASPI for providing feedback on an early draft of this paper, and for raising a number of criticisms for debate.
43. This table has been constructed using Army Reserve specific figures provided by the Australian National Audit Office. Figures for the Australian Army and ADF have been obtained from the 1999/2000 Defence Annual Report. See Australian National Audit Office, *Audit Report 33: Australian Defence Force Reserves: Department of Defence*, Australian National Audit Office: Canberra, 2001, p. 121; and Department of Defence, *Department of Defence Annual Report 1999-2000*, Commonwealth of Australia: Canberra, 2000.
44. The Army Reserve is no longer reported as a separate entity in annual reports. Rather, its contribution is aggregated as a component of Army's total contribution to specific defence outputs. See Davies and Smith, 'Stepping Up', p. 17; and Australian National Audit Office, *Audit Report 31*, p. 15.

45. FY99/00 figures provided by Australian National Audit Office report have been adjusted using the Reserve Bank of Australia's official annual inflation rate of 2.9% (for the period 2000-2012).
46. The cost of an additional battalion is taken from Mark Thomson's work. See Mark Thomson, *The Cost of Defence : ASPI Defence Budget Brief 2013-14*, ASPI: Canberra, 2012, p. 105, and *The Cost of Defence : ASPI Defence Budget Brief 2012-13*, ASPI: Canberra, 2013, p.115. The alternate example, suggested by Major Simon Hompas, Brigade Major 7 Brigade, uses the total annual operating costs for 16 Aviation Brigade's helicopter fleet which consumes \$278 million.
47. Patterson, 'Army Force Structure', p. 178.
48. Thomson, *The Cost of Defence : ASPI Defence Budget Brief 2012-13*, p. 24.
49. This figure has been derived by calculating the savings of not employing 600 ARA members and 6000 ARes member annually; adding the additional cost of 3000 HRR contracts for members parading 85 days/year, and the cost of 8 flights from Melbourne to Darwin for training. The purpose of this figure is to establish a base-line for planning and does not suggest that all Reserves would be drawn from Melbourne.
50. Davies and Smith, 'Stepping Up', p. 19.
51. William Sowry, 'Reserve Reform: Plan Suakin', *The Australian Reservist*, Issue 19, October 2012, pp. 38-9.
52. Brown, 'A leaner, more effective Army Reserve'.
53. The author is indebted to Major Simon Hompas, Brigade Major 7 Brigade and Major Andrew Kirby, Staff Officer to Director General Modernisation-Army, for suggesting this frame of reference. See Queensland Floods Commission of Inquiry – Interim Report, available at <http://www.floodcommission.qld.gov.au/__data/assets/pdf_file/0010/7768/QFCI_Exhibit_338_-_Statement_of_Kevin_John_Paule_with_Attachments.pdf> accessed on 5 January 2014.
54. See <<http://www.theaustralian.com.au/news/nation/volunteer-mud-army-saluted-for-queensland-flood-recovery/story-e6frg6nf-1226244891476>> accessed 14 January 2014.
55. Australian Government: Joint Standing Committee on Foreign Affairs Defence and Trade, *From Phantom to Force*, p. 105.
56. Ryan, 'Back to the Future', p. 15.
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58. Allan Hawke and Ric Smith, *Australian Defence Force Force Posture Review*, Commonwealth of Australia: Canberra, 2012.

The Geostrategic Importance of India's Island Territories and Implications for National Security ¹

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Introduction

The possession or control of islands away from the mainland typically provides a strategic and economic advantage to a country, as evidenced in current tensions in East Asia over the Senkaku/Diaoyu islands. For India, the sovereignty of its island territories is not in dispute. Rather, their geostrategic importance is somewhat akin to pieces in a high-stake game of chess,² being played as the world's major powers compete militarily, diplomatically and economically for influence in the Indian Ocean region (IOR).

The Indian sub-continent is an integral part of this region and its maritime security perimeter extends from Aden in the west to the South China Sea and Western Pacific in the east. In the IOR, India is endowed with the Lakshadweep islands in the Arabian Sea, and the Andaman and Nicobar Islands at the juncture of the Bay of Bengal and the Andaman Sea, to the west of Indonesia. These islands are the 'chess squares' held by India, with the potential to play a pivotal role in India's economy and overall development in the region. This article analyses their geostrategic importance, the challenges and opportunities they provide, and the implications for India's national security.

Background

Andaman and Nicobar Islands. The Andaman and Nicobar Islands comprise some 572 separate islands, occupying an area of 8250 square kilometres (see Figure 1). They extend some 700 kilometres in a north-south alignment, with the widest island less than 60 kilometres across. To the north and west, they are separated from the South Asian sub-continent by the Bay of Bengal, with the Indian mainland some 1200 kilometres to the west. They are separated from Indonesia by the Andaman Sea, with Aceh some 150 kilometres to the east. Only 38 of the islands are inhabited, with a total population just under 380,000 at the 2011 census.³

The islands have been inhabited for several thousand years, with the population divided into distinct linguistic, cultural and territorial groups. In 1750, the islands first came into contact with European traders and became a colony of the Dutch East India Company. In 1809, they became a British possession. During the Second World War, the Indian National Army, with assistance from Japanese troops, took over these islands. Later in 1943-1944, they were regained by British troops. In 1946, the British announced their intention to resettle all Anglo-Indians and Anglo-Burmese on these islands to form part of their own nation. However, the initiative failed with the independence of India and Burma in 1947.⁴ The islands became part of India in 1950 and, together with the Lakshadweep and Minicoy Islands, were declared as 'Union Territories' in 1956.

Lakshadweep and Minicoy Islands. The Lakshadweep and Minicoy Islands are a group of small islands in the Laccadive Sea, several hundred kilometres off the southwest coast of India. The islands are the northernmost among the Lakshadweep-Maldives-Chagos chain of

islands, actually being the tops of the vast Chagos-Laccadive undersea mountain range in the Indian Ocean. The Lakshadweep group comprises some 39 islands and islets. The largest is Lakshadweep Island, some 32 square kilometers in area, with a population of 64,000 people at the 2011 census. Minicoy Island, the second largest, is located at the southern end of the archipelago. Over the centuries, control of the islands resided with various Indian rulers, as well as the Portuguese and British until the time of India's independence.

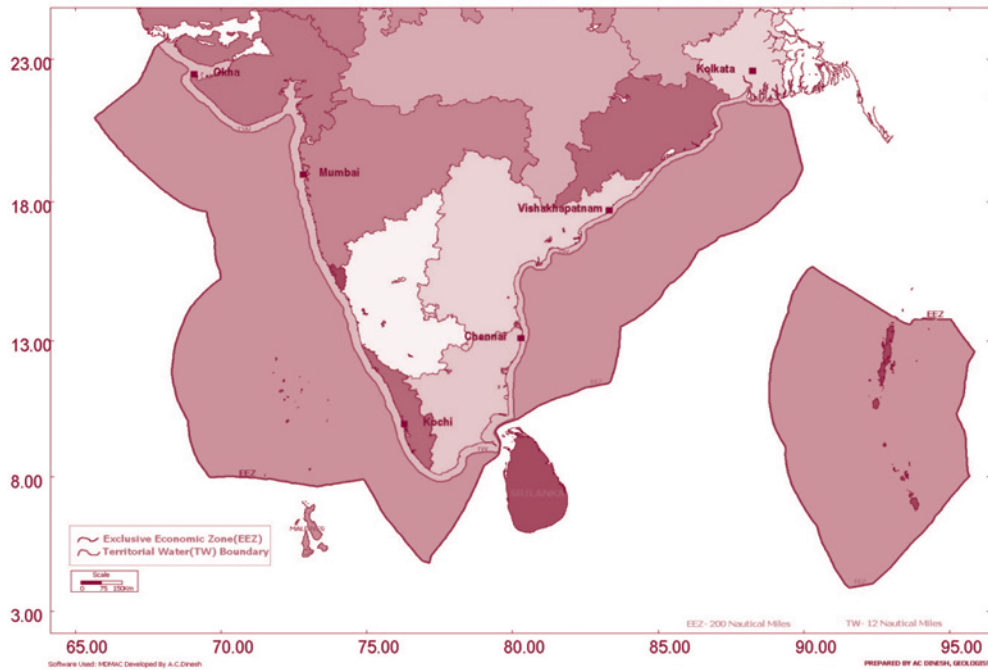


Figure 1. India's extended exclusive economic zone

(source: Geological Survey of India Scientific Officers' Association website, available at <http://www.gsisoa.in/index.php?view=detail&id=22&option=com_joomgallery&Itemid=40&lang=en> accessed 28 January 2014)

Geostrategic importance

In the early years after independence, these islands received low priority in India's strategic planning. During this period, neither comprehensive hydrographic survey information nor even navigational data of the islands was readily available within India. In 1960, the Indian Navy's 'Expedition Survival'—involving the cutter *Kala Rani* sailing from Vishakhapatnam to the Andamans, and returning to Madras—usefully highlighted the existence of these isolated islands to the world.⁵ From the 1980s, the strategic importance of these islands was reaffirmed when an increasing number of reports emerged of shore-based pirates attacking merchant vessels transiting the narrowing straits adjacent to these territories.⁶

More broadly, the Lakshadweep and Andaman and Nicobar Islands are strategically important for the following reasons:

- a. They extend the strike radius of India's military capabilities by their potential use as a 'launch pad' during symmetric and asymmetric conflicts.
- b. The Andaman and Nicobar Islands abut the main entry/exit points between the Pacific and Indian Oceans, while the Lakshadweep Islands similarly sit astride the western approaches to India from the Arabian Sea.
- c. They considerably extend India's mainland-derived exclusive economic zone (EEZ), with significant implications for access to the accompanying natural resources.
- d. They have the potential to dominate key 'choke points' in sea lines of communication (SLOCs) critical to world trade,⁷ notably:
 - i. **The Six Degree Channel**, which is a 200-kilometre wide passage leading from the Indian Ocean into the Strait of Malacca, located between the southernmost point of the Nicobar Island group and Aceh on the Indonesian island of Sumatra, and arguably one of the most important shipping lanes in the world; and
 - ii. **The Nine Degree Channel**, which is a 200-kilometre wide passage straddled by the Lakshadweep Islands chain, similarly being the most direct route for ships sailing between the Persian Gulf or Red Sea and East Asia.

The impact of the UN Convention on the Law of the Sea

Prior to 1956, when the UN held its first Convention on the Law of the Sea (UNCLOS), the jurisdictional extent of a country's adjoining seas was generally regarded as extending 3 nautical miles from the coast, based on the 17th century concept of the maximum distance that a cannon ball could be fired (and hence the extent to which a country could exercise physical control over its seas from the land). Further UN conferences were held between 1960 and 1982, progressively amending the treaty and putting in place the necessary measures to ensure consensual agreement to its provisions. The Convention came into force in November 1994, being duly ratified by 60 nations, including India.

For India (and others ratifying nations), the Convention provided that:

- a. 'Territorial waters', extending up to 12 nautical miles from a coastline (or baseline), could be designated around all mainland and island territories, over which the respective country would be free to set laws to regulate the use of any resources.
- b. For countries consisting in whole or part of archipelagic islands (such as Indonesia and The Philippines), Part IV of the Convention provided specific guidance on how their territorial borders could be drawn.
- c. All countries could claim an 'exclusive economic zone' (EEZ), extending 200 nautical miles from both its mainland and island territories, in which the claimant nation would have sole exploitation rights over all natural resources.
- d. For countries with 'continental shelves' (defined as the natural prolongation of the land territory to the continental margin's outer edge, up to a maximum distance of 350 nautical miles), coastal states would have the right to harvest mineral and non-living material in the subsoil, to the exclusion of others, as well as exclusive control over living resources 'attached' to the continental shelf but not to creatures living in the water beyond the EEZ.

UNCLOS also provided guidelines for defining the ‘median line’ of the EEZ between bordering maritime states, which obviously are relevant and important in India’s bilateral relationships with Pakistan, Bangladesh and Sri Lanka, in particular.

For India, its sovereignty over the Andaman and Nicobar Islands provides an EEZ 75 times larger than the islands themselves. The area is rich in natural resources, including marine life, with considerable reserves of oil and natural gas. India’s Oil and Natural Gas Corporation Limited, for example, recently announced plans to explore six deepwater blocks in the Andaman basin, which is estimated to contain as much as 180 million tonnes of hydrocarbons.⁸ In the west, the Lakshadweep and Minicoy Islands add an area of 400,000 square kilometres to India’s EEZ, similarly rich in marine and seabed resources.

India’s ‘Look East’ policy and its relations with Indian Ocean rim countries

In the early 1990s, the Indian Government initiated a ‘Look East’ policy, aiming to exploit the growing markets of the Asia-Pacific region.⁹ As part of that policy (and its subsequent iterations), India has been expanding and reinforcing its earlier initiatives in building defence and economic ties with countries in the Asia-Pacific region, not least in recognition that its proximity to Southeast Asia makes India as much a part of that region as of Asia more broadly.

Traditionally and for the foreseeable future, the main communication line between India and the Southeast Asian nations is the sea route through the Six Degree Channel and thence the Strait of Malacca.¹⁰ The Nicobar and Andaman Islands clearly play a pivotal role in this transport network, as well as providing a projection point for India in the furtherance of its ‘Look East’ policy. Importantly, the presence of Indian security forces in these islands enhances the stability and security of the region, as an integral aspect of India’s ‘Look East’ policy.

More broadly, India—with its strong maritime traditions—has attempted to play an instrumental role in establishing stability and peace in the region, which increasingly has become ripe for geostrategic rivalry. However, to date, mutual distrust between a number of rim countries has prevented the creation of an overall regional security architecture, despite similar priorities and the converging interests in maritime affairs of the key players.

India is working to continue developing binding relations with rim countries, notwithstanding that several multilateral forums, like the Indian Ocean Rim’s Association for Regional Cooperation, formed in March 1997, are effectively moribund. Similarly, the Indian Ocean Naval Symposium, formed in 2008, has still not achieved its stated aim ‘of increasing maritime cooperation among navies of the littoral states’.¹¹ More encouraging has been the work of the Bay of Bengal Initiative for Multi-Sectoral, Technical and Economic Cooperation (BIMSTEC), involving a number of South Asian nations, together with Thailand, working to improve regional- and bilateral-level engagement along with sub-regional initiatives for revitalising joint ventures.¹²

Simultaneously, India has also been attempting to strengthen its bilateral relations by improving economic and politico-military relations with countries like Singapore (with the two countries recently celebrating 50 years of diplomatic relations), Indonesia, The Philippines and Myanmar. The Indian Government is also seeking to strengthen its diplomatic relations with Bangladesh,¹³ which traditionally has been a troubled relationship, and improve its ties with several other Southeast Asian nations, including Vietnam, with which it already has a ‘strategic partnership’ dating from 2007.¹⁴

Moving further westward, India has also been strengthening its economic, security and diplomatic relationships with Iran and a number of countries in the Arabian Peninsula and Horn of Africa, with tacit agreement for forming-up various task forces to safeguard seaborne trade from the threat of piracy.¹⁵ India is also collaborating strategically with other important IOR nations, notably Australia, South Africa and Indonesia, towards greater development of the region.

The interests of extra-regional powers

The demise of the Soviet Union and the shrinking of Europe's geopolitical significance since the 1990s have resulted in a refocusing of global geostrategic attention from the Atlantic to the Indian and Pacific Oceans. As appreciated by the maritime strategist Alfred Thayer Mahan, the Indian Ocean in particular has emerged as the centre of 21st century power dynamics and trade activity, affirming his prediction that 'whoever controls the Indian Ocean will dominate Asia'.¹⁶ In recognition of this strategic change, a number of key extra-regional powers are increasing their presence and interest in the region.

United States

The US is a key external actor in the IOR. It has a significant military presence in the region through its commitments in the Persian Gulf, Arabian Sea, Afghanistan, Pakistan, East and Northeast Africa, Singapore and Diego Garcia. The concerns of the US include international terrorism, religious extremism, energy security and also the expansion of Chinese influence in this region. In addition to its major military base on Diego Garcia, the US is reassessing its strategic focus on the Indian Ocean, reflecting that:

With the publication of the 2010 Quadrennial Defense Review and the impending release of the National Security Strategy and the new Unified Command Plan, the Indian Ocean region has risen to the forefront of US strategic planning.¹⁷

The prime importance for the US is to protect the SLOC through the Strait of Malacca. As part of its strategy, the US is working to develop a closer relationship with India and a number of Indian Ocean littoral states. Although the US is not a member of the Indian Ocean Naval Symposium, the US Navy has participated in a number of annual 'Malabar' series naval exercises with the Indian Navy, most recently in 2013.¹⁸ The main objective of these exercises is to increase interoperability between the two navies.

China

China is carrying out various activities at the military and diplomatic levels to secure its interests in the IOR. It has established a complex 'soft-power' web of diplomacy, trade, humanitarian assistance, arms sales, port construction and even strategic partnerships with many countries in the region.

A somewhat controversial issue is China's so-called 'String of Pearls' network of ports in the IOR, together with a proposed canal across the Kra isthmus in Thailand, which would link the Indian Ocean to China's Pacific coast. There has been some conjecture that the 'String of Pearls' is intended to constrain Indian influence in this region.¹⁹ However, the more likely purpose of this strategy is to maximise China's access to resource inputs and trade during

peacetime (although its enhanced potential to interdict Indian Ocean SLOCs in times of crisis cannot be discounted).

Japan

Japan is very keen to ensure the security of the Indian Ocean's SLOCs, since it is extremely reliant on the free flow of oil supplies from the Middle East via the Indian Ocean. In this respect, Japan has initiated diplomatic talks with a number of littoral states of the IOR with the aim of developing cordial relations, including an increasingly closer relationship with India.²⁰ In 2012, Japan and India participated in their first ever bilateral naval exercise, JIMEX 12 (Japan-India Maritime Exercise 2012), held in the western Pacific off the coast of Tokyo.²¹

Israel

Israel is also taking increased interest in the IOR and has reportedly established a covert logistic naval base on the island of Dahalak, off the coast of Eritrea.²² From this location, Israel can monitor seaborne traffic into the Red Sea, particularly aimed at arms transfers from Iran to the Middle East. It likely also has the ability to monitor electronic communications in the southern Arabian peninsula.

The threat to India's national security,

The prevailing situation in the IOR poses the following challenges to India's national security:

Rivalry for natural resources. Continuing global population growth seems destined to create increased rivalry for the steadily declining supply of natural resources. This, in turn, seems likely to focus attention on those nations with claims over large expanses of the world's oceans and their associated resources. India, with its considerable EEZ—based in large part on its offshore territories—may come into increased dispute with neighbours and other littoral states of the IOR over access to its marine resources. The isolated island territories of the Nicobar and Andaman Islands, and the Lakshadweep and Minicoy Islands, would be relatively soft targets should any such disputes spiral into actual conflict.

Religious and sub-national fanaticism. The islands in question have a history of religious and sub-national fanaticism, compounded by their physical distance from the mainland and their isolation from the mainstream population of mainland India. Underdevelopment of the islands and their perceived alienation from the mainland, particularly in terms of the allocation of resources by the central government for development programs, has further fuelled a degree of resentment and disaffection, especially among the younger population.

Certain local inimical elements are active and willing partners in fanning such fanaticism, which tends to manifest in support for separatism or at least a challenge to the central authority. In the event of heightened tensions within the region over disputed territorial claims, it could be expected that disputing states would see benefit in further destabilising the situation by providing assistance or support to local groups already opposed to the central government.

Terrorism, piracy and illegal activities. Several of the littoral states of the IOR are synonymous with internal instability or their state-sponsored support of terrorism, while many of the world's concerns regarding nuclear proliferation emanate from the region. While the islands

in question are unlikely to become a base for any serious-scale terrorist activities, they can and possibly do play some role in facilitating the undetected movement of terrorists and other criminals within and through the IOR.

The Nicobar and Andaman Islands have also traditionally provided bases for pirates operating in the approaches to the Strait of Malacca. They have also facilitated the movement of illegal immigrants from South Asia to Indonesia or Malaysia. And there are numerous reports of arms and narcotics being smuggled to and from East Asia via these islands, while poachers have for centuries plundered the islands' resources, notably targeting fish stocks and timber.²³

The response of the Indian Government

In 2001, the Indian Armed Forces established a Joint Services Command, titled Andaman and Nicobar Command (ANC), located at Port Blair in the Nicobar and Andaman Islands. It has been described as 'the sentinel post for the East and South', while its charter includes 'safeguarding the islands, as well as the nation's maritime boundaries and air space, and search-and-rescue at sea, as well as anti-poaching operations'.²⁴ Reflecting the maritime importance of the islands, the command of ANC was changed from a rotational basis between the three Services to Navy in November 2013.²⁵

In the Lakshadweep and Minicoy Islands, there has been a small detachment of Indian Armed Forces based at Kavaratti (on Lakshadweep Island) from around 1980. In December 2010, in part because of the Mumbai bombings but also because of increased piracy in the region, India established a Coast Guard headquarters at Kavaratti, as well as a Coast Guard station at Minicoy.²⁶ The following year, it added a further Coast Guard station at Androth Island. In April 2012, the Indian Government established a new naval base at Kavaratti, named *INS Dweeprakshak* (the sixth in India), aimed at significantly upgrading coastal surveillance and defence capability in the southwestern approaches to the Indian mainland.²⁷

The way ahead

While the ownership of these islands is not currently in dispute, it has been challenged by several regional and extra-regional powers in different periods of India's post-Independence existence. In 1965, for example, during the war between India and Pakistan, Indonesia laid claim to the Andaman and Nicobar Islands and contested their status as Indian territory.

There is no suggestion that Indonesia's earlier claim will be revived. However, given the broader uncertainties in the geo-strategic environment of the Indo-Pacific region, it is important that India plays carefully its 'oceanic chess game' in the IOR by reorienting its thinking on these islands.

In the first instance, it is essential that there be an overall increase in the allocation of resources to both island group communities, not only to facilitate increased development but also to deter the potentially deleterious influence of external actors on a disaffected population. At the same time, India needs to send a clear message to neighbouring countries that India regards the islands as integral elements of its sovereign territory, is committed to improving local conditions and infrastructure on the islands, and that it would expect regional collaboration in deterring any external or non-state influences intent on subverting the local populations.

Militarily, it is not enough that the islands are merely defended. India needs to develop these islands as a 'strategic strongpoint' from which it can, should the need arise, project power in whatever direction it needs to defeat threats against India's sovereignty. To that end, this article recommends that the following measures should be considered:

Upgrade the combat efficiency of both island groups

India needs to exploit the military potential of these islands as follows:

1. From a strategic planning viewpoint, the island territories need to be included in the 'inner ring' of India's maritime security perimeter.
2. The naval forces at the Andaman and Nicobar Islands need to be upgraded to include Landing Platform Docks (LPDs) by 2020, to provide an enhanced power projection capability.
3. For conventional deterrence, ship-based nuclear strike and missile defence systems need to be part of the Andaman and Nicobar Command.
4. A joint brigade-sized force, with amphibious capability and special forces, needs to be permanently stationed at INS *Dweeprakshak* in the Lakshwadeep Islands.

Maritime surveillance grid

India also needs to develop a stronger surveillance grid in and around these island territories to preserve the security and stability of the region. In 2012, India's Space Research Organisation launched the first-ever satellite dedicated for use by the Indian Navy, providing surveillance cover over 1000 nautical miles of the Indian Ocean, stretching from the east coast of Africa to the Strait of Malacca.²⁸ However, it would obviously be in India's interest to press for a maritime intelligence-sharing agreement with like nations, especially to provide even more detailed surveillance in the Arabian Sea.

Conclusion

India needs to exploit the geo-strategic advantages of its offshore territories to enable her to play an increasingly pivotal role in the Indo-Pacific strategic setting. India can ill afford to ignore the lessons of history or contemporary strategic imperatives because doing so would severely limit its political, diplomatic and military options in the IOR. A well-orchestrated use of the Andaman and Nicobar Islands, as well as the Lakshadweep and Minicoy Islands—as outlined in this article—would further India's foreign and strategic objectives and enable India to start rediscovering its great maritime and political influence in the region.

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NOTES

1. This is a revised version of the essay which won First Prize in the United Service Institute (USI) of India's 'Gold Medal Essay Competition 2012 - Group B', which is open to officers with up to 10 years' service. The essay was published in the *USI Journal*, Vol. CXLIII, No. 593, July-September 2013. This version, which has been revised in collaboration with the author, is published with the kind permission of USI India.
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The Application of Complex Adaptive Systems Concepts to Contemporary Special Operations

Captain Andrew Maher, Australian Army

We can't solve problems by using the same kind of thinking we used when we created them.

Albert Einstein¹

Introduction

In 2006, the Australian Army enthusiastically embraced 'Adaptive Campaigning', a concept based on work being undertaken by the Defence Science and Technology Organisation (DSTO) that applied complexity science to the military arena.²

This article acknowledges these origins but argues that implementation and utilisation of the concept has somehow failed to become institutionalised during the ensuing five or so years. This failure has occurred during a time of considerable 'strategic-level' discussion within the ADF, reflecting the inherently complex military environment that it and similar militaries now operate within—but also perhaps overstating the complexity of contemporary military operations compared to previous eras. All warfare is complex.

Despite this strategic driver of complexity that manifests through 'strategic corporals', 24/7 media cycles and interlinked cultural/ethnic human terrain, the ADF has arguably failed to institutionalise the very intervention designed to evolve the Australian Army in-step with this globalised, interconnected environment, seemingly demonstrating that it is not adaptive at all.³

In response, efforts have been made at the Special Forces Training Centre (SFTC) to provide instruction that can account for the seemingly-incomplete understanding of complexity science within Army's training establishments. It has done this in concert with DSTO and the Directorate of Army Research and Analysis (DARA), leveraging the special forces community as a test-bed for innovative concepts. This article outlines the journey undertaken over the last 2-3 years to prepare instructional materials, deliver tangible products, and assess outcomes through practical scenarios and operational performance.

Background

The theory of complex adaptive systems (CAS) is a relatively new, cross-domain field, which draws on complexity problems encountered in biology, economics, physics and other fields. As early as 1973, Rittel and Webber had written about 'Dilemmas in a General Theory of Planning', which directly addressed issues of complexity.⁴ Although this conception for what has become known as 'wicked problems' did not enter mainstream consciousness until many years later, it is clear that Rittel and Webber's conclusions had identified the applicability of complexity science to contemporary problems.

Since that time, the popular media has been instrumental in publicising certain aspects of complexity science, such as ‘chaos theory’ and the so-called ‘butterfly effect’.⁵ However, the practical ‘so whats?’ resulting from an understanding of such concepts have rarely been discussed in any detail. Indeed, the simplistic conclusion of the ‘butterfly effect’ is that we cannot possibly know everything about a system’s causal influences and extremely-sensitive initial conditions, leading to the assertion that posturing for a flexible response is the most appropriate course.

From this perspective, the fact that a number of Western militaries are expanding their budget allocations to intelligence agencies at exponential rates would seem erroneous, particularly when expensive platforms are countered by the resultant systemic adaptation of adversaries utilising low-cost, generally low-tech practices to remain below the discrimination threshold within urban clutter. We intuitively grasp the utility of complexity science, however, we struggle cognitively to naturalise its application.

The tipping point in realising the potential for CAS within the military domain is generally regarded as the work of Andrew Ilachinski at the US Center for Naval Analyses, published in 1996.⁶ At that time, complexity was becoming clearly apparent as a result of the unforeseen consequences of the collapse of the Soviet Union, the rise in non-state actors in seemingly inconsequential places like Columbia and Somalia, and concern about state fragmentation and ‘ungoverned spaces’ being occupied by little known organisations such as Al Qaeda.

In the post-9/11 environment, the focus shifted to discussion of ‘network analysis’, drawing heavily from policing lessons from combating organised crime, in an attempt to understand how nefarious actors were proliferating high-technology, Soviet-bloc weapons systems, how Columbian cartels were threatening state sovereignty, and how the 9/11 cell managed to operate and plan its attacks.⁷

Of course, the military application of network analysis is not a new concept. In World War 2, the US Army-Air Forces placed considerable focus on precision strategic bombing, targeting specific nodes of the German industrial effort, as identified by a committee of operational analysts and articulated in the ‘Pointblank Plans’ of 1943.⁸ Allied targeting initially focused on ball-bearing component manufacture, before transitioning to railyard junctions and finally the German oil industry.

The mixed success of this campaign arguably undermined the network approach, yet nonetheless its rationale endured and evolved into the concept of ‘Warden’s Rings’, reflecting the conceptual work of air power theorist and former US Air Force Colonel John Warden.⁹ Despite Warden’s approach enjoying apparent success in Operation DESERT STORM, it has been contended that both Warden’s conception and the Pointblank Plans failed to sufficiently account for human behaviour,¹⁰ as well as dynamic systemic responses to targeting efforts—exemplified that with each targeting effort against German industry, the Germans adapted by dispersing factories, increasing their air defences and/or disguising industrial areas.

Complex systems theory may offer utility to air power by virtue of its conceptualisation of the human factor of self-organisation and emergent behaviour. Likewise, in the naval domain, history has paved an understanding of nodal identification, link analysis and system flows (though rarely explicitly) as far back as Mahanian doctrine of the late 19th century.¹¹ For example, emphasis on the control of chokepoints (or critical nodes) to effect embargos on an

adversary seems as relevant then as it does now to discussions of the strategic importance of the Straits of Malacca or Hormuz.

Similar to the US Army-Air Forces example above, geostrategic analysis—while useful in identifying such chokepoints—fails to account for the human dimension. Human adaptation in turn generates unexpected effects, as has been evidenced by Somali pirates, evolving to their newly-contested environment, utilising ‘motherships’ to strike as far afield as the Maldives and Seychelles in order to overcome their geographic limitations. Indeed, the international community likewise demonstrated ‘systemic emergence’ through the explosion of private security contractors hired to secure maritime commerce transiting these waters.

This background of nascent systemic thinking across law enforcement, air power and naval domains is critical context for Special Operations Command (SOCOMD), which is inherently joint and inter-agency orientated, to the lowest tactical levels. Returning to the earlier mention of chaos theory, the requirement for SOCOMD to attempt to prepare for and defeat future 9/11 events or ‘black swans’,¹² perpetrated by non-state or irregular actors, further highlights the utility of a CAS-centric approach to understanding our contemporary operating environment.

An inherent problem with a complex system is that causality is opaque, with important consequences for organisations seeking to identify the next ‘black swan’. For example, a review of professional journals and papers (such as *Foreign Affairs*, *RUSI Journal* and *Parameters*) for January 1992, August 2001 and November 2010, being respectively only one month before the Yugoslav Wars, September 11 and the Arab Spring (all key international events precipitating Western military action), discloses no timely discussion of systemic vulnerabilities to Yugoslav state fragmentation, American vulnerability to terrorist threats, or fragility in the Arab world. Noting that strategic policy is generally driven by a certain ‘weight of opinion’, it should not come as a surprise that in the three cases cited, Western governments were strategically unprepared.

The ‘so what?’ factor is significant in that if our recent track record in prediction is so poor, why would or should Western militaries and their associated intelligence agencies invest so heavily in attempting to predict at all?¹³ Perhaps a more appropriate approach would be to adopt a mindset that we will inevitably be surprised by the operational requirements presented to the ADF and that we will need flexibility to respond quickly, with a weight of effort directed towards adapting rapidly to the specific challenges presented. It is these conclusions that drove the development of systemic thinking instruction within SFTC.

The requirement

The global community has become irreversibly interdependent, with the constant movement of people, ideas, goods and resources. In such a world, we must combat terrorism with an infectious security culture that crosses borders—an inclusive approach to security based on solidarity and the value of human life.

Dr Mohamed ElBaradei, Director General International Atomic Energy Agency, 2004¹⁴

As a cursory review of joint operational concepts has demonstrated, the concept of systems-thinking holds potential for visualising and supporting operational planning. However, this article will not attempt to cover CAS theory in detail, as this work has been covered elsewhere, most significantly by writers such as Anne Marie-Grisogono, Alex Ryan and Andrew Ilachinski,¹⁵ and a number of recent articles in the *Australian Army Journal*.¹⁶

This article focuses instead on the next step, that is, if we conclude that a systemic approach is appropriate for today's globalised complexity, how does this manifest operationally, and how do we train our soldiers and officers to plan in such a non-linear environment? A key assumption guides such questions, that being an expectation of greater complexity than the present, extrapolating into the future. This assumption will be explored briefly by reflecting on the recent past, with several key observations.

According to Jacob Kipp, the Bolshevik military theorist Alexander Svechin had in the early 20th century:

... specifically called attention to the growing complexity of warfare since the wars of the French Revolution and noted that the conduct of military operations had become 'more complex and profound'. [He asserted that] strategic foresight was necessary for the conduct of successful operations ... [which] involved a commander's assessment or 'working hypothesis' against which he evaluated the phenomena of war.¹⁷

Complexity theory closely mirrors this working hypothesis approach. Reflecting on the Vietnam War and El Salvador insurgencies, General John Gavin, then Commander US Southern Command, noted in 1986 that:

It is that form of war, a synthesis of conventional and guerrilla warfare, with greater importance accorded the societal dimension, that appears a likely model for the future.... Military men, however, feel uncomfortable with warfare's societal dimension and tend to ignore its implications.¹⁸

In 1997, Yaneer Bar-Yam expanded on General Gavin's identification of interconnections, noting 'the increasing interdependence of the global economic and social system, and the instabilities of dictatorships, communism and corporate hierarchies'.¹⁹ He further observed that with increasing environmental complexity, organisational evolution is necessary to deconstruct hierarchical rules into more networked structures.²⁰ This conception was validated when US General Stanley McCrystal concluded in 2011, in relation to his command experience in the Middle East area of operations, that 'it became clear to me and to many others that to defeat a networked enemy we had to become a network ourselves'.²¹

More recently, the Australian foreign affairs commentator Greg Sheridan noted that:

Mali shows us how complex and unpredictable the security environment remains. Remove a dictator in Libya, entirely a good thing in itself, and you empower terrorists to take over Mali.²²

Similarly, commenting on the situation in Syria, the influential US strategic analysis firm STRATFOR Global Intelligence asserted in 2013 that:

States wishing to support Syria's rebels face a complex reality. These states want to ensure that the weapons they supply end up in the hands of secular-minded rebels and not in the possession of the many radical Salafist-jihadist fighters that have made their way to Syria. But the more the rebels become disillusioned with Western support, the more influential the Salafist jihadist fighters become, since they at least produce results on the battlefield.²³

At the time of writing, the US Government had announced its intention to resource those opposing President Bashar al-Assad, not least because of the employment of chemical weapons by the Syrian Government,²⁴ further highlighting the 'wicked problem' of the Syrian

conflict, with the potentially nightmarish prospect of weapons of mass destruction falling into the hands of non-state actors. Based on this trend, it seems reasonable to conclude that lethal complexity will increase in warfare and conflicts generally, thereby encouraging decentralisation, increased networking, and erosion of the so-called Westphalian norms of inter-state violence in a vicious, evolutionary cycle.²⁵

In responding to the planning challenges of increasingly complex environments, DSTO efforts have thus far espoused an ‘adaptive stance’, a simple mindset orientation that attempts to risk-manage the pitfalls of complexity through several ‘open-mindedness’ objectives.²⁶

These efforts have subjected numerous ADF officers to the seemingly-innocuous task of operating a chocolate factory in a computer-based simulation. The use of such simulations, pioneered by Dietrich Dörner,²⁷ demonstrates that surprisingly few can intuitively operate within a complex system and that the majority of participants will fail and fail badly. Dörner’s work concluded that one of the key variables proven to influence positive performance and success in operating within a complex system was experience, a generally disheartening result for a Western culture typically seeking a ‘quick fix’.

Efforts undertaken by SFTC, therefore, have focused on the necessity for improving the ability to teach people how to operate within a complex system, as operational and practical experience may not necessarily be readily available to officers and soldiers called on to intervene in some form of complex system. This ability to teach has sought to complement DSTO efforts in codifying the ‘adaptive stance’ by focusing on the contextualisation of subject matter within a frame of reference familiar to junior officers.

The application

During a recent rotation in Afghanistan, Special Operations Task Group applied CAS theory to practical case studies of complex behaviour in the Afghan environment in an effort to better conceptualise the systemic behaviour. This work drew parallels to in-theatre efforts by the US Asymmetric Warfare Group, which likewise attempted to couch counterinsurgency observations in similar language to existing doctrine (such as targetable critical vulnerabilities, lines of operation, and the like).²⁸ The case studies focused on the ‘understand’ aspect and did not attempt predictive analysis, due simply to the time constraints of concurrent operations, which is acknowledged as a limitation of the overall study.

Key examples drawn from the coalition environment in Afghanistan, which demonstrate emergent systemic behaviour, are as follows:

Case study 1

The Afghan Local Police/village stability operations program was a US Special Forces initiative, which demonstrated dynamic non-linear responses to coalition competition within a previously ‘ungoverned’ space, similarly to David Kilcullen’s ‘immune response’ described in *Accidental Guerrilla*.²⁹

We can rationalise this response by understanding that an adversary will challenge a new competitor to its power base and, hence, that an intervention in a given area will bring an increase in violence, rather than the predicted decrease.

It is the misuse of metrics over maligned timescales (perhaps only 3-4 weeks before review) which typically might lead general staff to conclude a particular location represents a failing course of action, suitable for abandonment, rather than a system close to tipping point, which could yield the desired outcome with minor additional resources or simply by allowing more time for an adversary to realise that this new government checkpoint is there to stay. This dynamic was seen repeatedly during 2011. On this basis, it would seem reasonable to predict a significant upsurge of violence during the summer of the coming years, as the Taliban seeks to re-exert control by contesting the 'low-hanging fruit' of certain regions.

Case study 2

A number of targeting actions in recent years have been criticised in the media and open forums, including so-called 'decapitation strategies' which inevitably result in the replacement of a recently-deceased or captured leader by his or her subordinate. A further criticism is that the replacement could in fact be worse than the original target—as was the case with Al Zarkawi—demonstrating a form of emergent system behaviour. However, by conceiving the adversary as a system, additional nuances become readily apparent.

Operational adaptation led to the concept of 'network shock' through simultaneous or near simultaneous actions to remove several key personnel at once, which was shown to have a catastrophic effect on adversary systems. Developing network shock, sometimes indirectly through attacking finances, in turn has led to cascading success as networks and sub-networks shut down or have been forced above detection thresholds, thereby becoming targetable. Conceptualising operations in such a law enforcement-like paradigm has almost no other rationale than CAS theory.

Case study 3

In 2011, sufficient data was available to demonstrate the strategic impact of the 'night raids' directive, issued by General McChrystal in relation to coalition operations in Afghanistan.³⁰ The research showed there was a significantly lower statistical difference between the number of civilian casualties sustained during night raids, compared to daylight raids. Intuitively, this makes sense. At night, less civilians are active and, consequently, are less likely to be mistaken for a combatant or hit in cross-fire.

Conversely, during the day, longer adversary engagement distances may encourage more liberal use of fires as a means of self-preservation. However, despite proving that the execution of night raids works to the strategic intent of minimising civilian casualties, the implementation of the 'night raids' directive effectively hamstrung many forces into operating solely by day, exacerbating the strategic problem of civilian casualty sensitivities and arguably ceded the night to the adversary. In this example, complexity was clearly evident wherein our best intentions undermined our desired operational outcomes.

The instruction

After this deployment, these and other case studies were utilised as a key component of CAS theory instruction at SFTC. Training delivery focused on three key concepts:

1. The application of theory to an operational context is critical to the assimilation of information, as opposed to hard theory alone. This point is key. In 2006, Army adopted 'Adaptive Campaigning', yet seemingly has not assimilated the underpinning logic of understanding CAS nor the 'adaptive stance'.³¹ Notwithstanding some understandable organisational resistance to change, one must conclude that current training materials insufficiently connect with military practitioners, supporting the need for contextualised training packages.
2. The delivery of basic decision-making skills has formed a basis for instruction of CAS theory. Brain-storming, stakeholder analysis, de Bono's lateral thinking tools,³² and other related concepts have received popular attention in management textbooks and articles for several decades, and have proven themselves useful to support problem solving. Indeed, a significant premise in CAS planning is recognising that some sub-components are relatively simple, and can accept a simpler response, with relatively low risk. To do otherwise may result in decision paralysis through the over-analysis of problems.
3. A series of tactical exercises without troops (TEWTs) have been delivered which emphasised the 'act-sense-decide-adapt' process and illustrated principles of systems thinking. The design principles of these TEWTs were as follows:
 - a. **Decisive action** (relative superiority). With Clausewitzian origins, 'relative superiority' originally referred to the 'massing of superior forces at the decisive point'.³³ Admiral William McRaven (current Commander US Special Operations Command), in his seminal work *Spec Ops: case studies in special operations warfare - theory and practice*, expanded this term to encapsulate how a markedly inferior number of Special Forces operatives could succeed in taking the offensive to a prepared adversary through the principles of a simple plan, repetition and operational security in rehearsals, surprise, speed of action on target, and a sense of purpose.³⁴ The application of these considerations, in acting with incomplete information, has been a key learning outcome for planning actions in a context of ambiguity.
 - b. **Sense**. As we stimulate the system, we expect to elevate targets above the detection threshold. Consequently, planned posturing of intelligence, surveillance and reconnaissance (ISR) must be sequenced to understand how the adversary system responds to stimulus, while developing target information for future raids. Accordingly, planning has been encouraged to consider branches and sequels that exploit forces already in location in order to action emergent systemic behaviour.
 - c. **Enable decision**. The retention of flexibility, to exploit branches and sequels, demands a clear conception of criteria for decision points, and the switching between lines of operation. Considerations have encouraged planning beyond holding a simple reserve to include pre-planning, pre-positioning and resourcing potentially emergent branches or sequels in sufficient detail to comfortably ensure flexible decision making is enabled at the lowest tactical level.
 - d. **Interlinked TEWT scenarios**. Each scenario has concluded with actual adversary actions, thereby permitting an emergent scenario to develop over several TEWTs. This has allowed for individual adaptation to previous adversary actions, and learning and applying adversary tactics to subsequent operations. It has rewarded memory of adversary reactions during previous operations, and anticipation of likely adversary evolution in defensive responses.

The results

The results are difficult to quantify. Performance in operational tasks is naturally subjective, and individual ability may be the deciding variable rather than any intervention provided during training, as alluded to by Dörner's work with complex decision making. In describing systemic thinking, it is also the case that a long time-scale is appropriate³⁵ and that positive evidence may well not be demonstrated until such training is assimilated with experience. Alternatively, one must be honest in accepting that with limited resources, the delivery of instruction may not have been as effective as the design envisaged.

Nevertheless, the intervention has been regarded as having provided a positive means to conceptualise and prepare for future complex operations. Senior officers have also been very supportive, and that these concepts have accorded with the writings of a number of influential commentators has offered further validation.

From an organisational perspective, the application of CAS theory to special operations has been conducted with the shortest possible learning loop to the foundational level of capability. The expansion of CAS theory into a range of additional contemporary case studies represents the next step in preparing appropriate materials to teach these concepts. Indeed, if such materials can influence an organisational cultural shift toward adopting the 'adaptive stance'—primarily by posturing for learning—this may well be one of the more significant lessons of the Afghan campaign.

What next?

The greatest danger in times of turbulence is not the turbulence; it is to act with yesterday's logic.

Peter Drucker, 1980³⁶

The future operating environment has been described as an 'era of persistent conflict' or an 'era of persistent engagement', depending on one's orientation.³⁷ Such views are a manifestation of the global linkages that have multiple-order effects when countering violent extremist networks. This paradigm must be approached with caution, as engagement will entail interaction with multiple systems, with likely negative repercussions. Linear planning models have less of a role against such threats, due to feedback loops and emergent behaviours, and can be seen as representing yesterday's logic.

Development of tools within a 'crawl-walk-run' progression that can teach a new logic are essential. What has been described in this article represents perhaps a 'walk' level of detail—challenging for inculcating ideas, yet insufficient for the contemporary challenges that lay ahead. Whatever these tools happen to be, the 'journey of learning' described herein demonstrates the utility in anchoring such materials to operational vignettes and reflections for contextualising the complex behaviours demonstrated by our adaptive adversaries.

Summary

According to Hew Strachan in *The Evolution of Operational Art*:

The (British) army had not proved fleet of foot before 1989: it took the first year of the South African War, the first two years of the First World War, the first three years of the Second World War, and the first four years of the Malayan Emergency before it shaped itself and its way of thinking to the war in hand.³⁸

If one considers that the US and NATO took approximately five years after 2001/02 to implement organisational counterinsurgency practices in Iraq and Afghanistan, a poignant conclusion could well be that our current doctrinal foundations are failing us—and that we are less adaptive than ever before.

The axiom ‘to meet complexity with simplicity’ is a key lesson a CAS conceptualisation has provided in responding to networked threats. Additional lessons may become apparent through utilising complexity science to understand contemporary military problems. By understanding that heuristics (rules of thumb) have inherent risks, intuitive decision-making styles can be applied that account for non-linear behaviour, a key characteristic of contemporary operating environments. Thus far, a process based on contextualising operational experience, with appropriate decision-making tools and a practical application component, has yielded positive outcomes for instructing future Special Forces operators.

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NOTES

1. As quoted, for example, in Jo Confino, ‘Changing mindsets is key to preventing social and environmental disasters’, *The Guardian* website, 29 October 2013, available at <<http://www.theguardian.com/sustainable-business/changing-mindsets-prevent-environmental-disaster>> accessed 5 February 2014.
2. See, for example, the description of the concept on the Australian Army’s website <<http://www.army.gov.au/Our-future/Publications/Concepts/Adaptive-Campaigning>> accessed 3 February 2014.
3. Such a conclusion resonates with Brigadier Michael Krause, ‘Square pegs for round holes’, Working Paper 132, Land Warfare Studies Centre: Canberra, June 2007, p. v, who observed that ‘Western militaries are moving too slowly to adapt to the needs of future warfighting’.
4. Horst Rittel and Melvin Webber, ‘Dilemmas in a General Theory of Planning’, *Policy Sciences*, Issue 4, 1973, pp. 155-69.
5. The ‘butterfly effect’ describes extreme sensitivity of a system to initial variable disturbances. This concept has been popularised by work in weather forecasting software, which theoretically describes a butterfly in the Amazon potentially causing a hurricane in the Caribbean. See, for example, <http://en.wikipedia.org/wiki/Butterfly_effect> accessed 5 February 2014.

6. Andrew Ilachinski, *Land Warfare and Complexity, Part II: an assessment of the applicability of nonlinear dynamics and complex systems theory to the study of land warfare*, Center for Naval Analyses: Alexandria, Virginia, 1996.
7. Work conducted by Valdis Krebs in mapping the September 11 terror network is notable for this discussion. See, for example, Valdis Krebs, 'Connecting the Dots: tracking two identified terrorists', OrgNet website, 2007, available at <<http://www.orgnet.com/tnet.html>> accessed 5 February 2014.
8. See, for example, the discussion in Tami Biddle, *Rhetoric and Reality in Air Warfare: the evolution of British and American ideas about strategic bombing, 1914-1945*, Princeton University Press: Princeton, 2004, pp. 214-32.
9. 'Warden's Five Rings' represent a theory of military strategic attack, based on five levels of system attributes. Each level of system or 'ring' was considered one of the enemy's centres of gravity. The idea was to attack each of the rings to paralyse enemy forces. To optimise a strike attack, the attacker would engage as many rings as possible, with special emphasis on taking out the centre ring, which is the enemy's leadership. See, for example, <http://en.wikipedia.org/wiki/Warden's_Five_Rings> accessed 5 February 2014.
10. As discussed by Robert Spulak and Jessica Turnley, *Theoretical Perspectives of Terrorist Enemies as Networks*, Joint Special Operations University: Tampa, Florida, 2005, pp. 18-22.
11. Brian O'Lavin, *Mahan and Corbett on Maritime Strategy*, Naval War College: Newport, Rhode Island, 2009.
12. A term coined by Nassim Taleb: 'I will never get to know the unknown since, by definition, it is unknown. However, I can always guess how it might affect me, and I should base my decisions around that': Nassim Taleb, *The Black Swan*, 2nd Edition, Random House: New York, p. 210.
13. A further 'so what?' is that there were individuals who warned of the systemic vulnerabilities to the events which ultimately occurred. Cognitive diversity, to view problems in a different light and thereby see the potential implications of the current system, is a valued attribute for organisations engaging with complex systems. Consequently, tapping into a mature 'think tank' network, encouraging workplace diversity outcomes and encouraging reflective analysis, all become valued outcomes.
14. Mohamed ElBaradei, 'Saving Ourselves from Self-Destruction', op-ed essay as published in the *New York Times*, 12 February 2004, available at International Atomic Energy Agency website, <<http://www.iaea.org/newscenter/statements/2004/ebnyt20040212.html>> accessed 3 February 2014.
15. Ilachinski, *Land Warfare and Complexity, Part II*.
16. A good starting point is Alex Ryan, 'The Foundation for an Adaptive Approach: insights from the science of complex systems', *Australian Army Journal*, Vol VI, No. 3, 2009.
17. Jacob Kipp, 'The Tsarist and Soviet Operational Art', in Jacob Kipp, *The Evolution of Operational Art*, Oxford University Press: Oxford, 2011, p. 66.
18. General John Gavin, 'Uncomfortable Wars: toward a new paradigm', *Parameters*, US Army War College, 1986.
19. Yaneer Bar-Yam, *Complexity Rising: from human beings to human civilisation, a complexity profile*, New England Complex Systems Institute: Cambridge, Massachusetts, 1997, p. 1.
20. 'In recent years human organizations that emphasized central control have changed or given way to other structures with greater distribution of control.... Many of these changes result in systems where collective behaviors arise from partially independent subgroups of the system and lateral "networked" influences.... The progressive historical increase of complexity means that organizations that do not change do not survive': Bar-Yam, *Complexity Rising*, p. 19.
21. Stanley McChrystal, 'It takes a network: The new frontline of modern warfare', *Foreign Policy*, March/April 2011 available at <http://www.foreignpolicy.com/articles/2011/02/22/it_takes_a_network> accessed 5 February 2014.

22. Greg Sheridan, 'Mali must keep us on our toes', *The Australian*, 31 January 2013.
23. STRATFOR Global Intelligence, 'The Complex Nature of Arming Syrian Rebels', 15 March 2013, Stratfor website, available at <www.stratfor.com> accessed 18 March 2013.
24. Karen DeYoung and Anne Gearan, 'US, citing use of chemical weapons by Syria, to provide direct military support to rebels', 14 June 2013, *The Washington Post*, available at <<http://www.washingtonpost.com>> accessed 16 June 2013.
25. See, for example, 'What is meant by the "Westphalian System" – and has it ever existed?', 17 May 2012, available at <<http://kmaerz.wordpress.com/2012/05/17/what-is-meant-by-the-westphalian-system-and-has-it-ever-existed/>> accessed 5 February 2014.
26. See Anne-Marie Grisogono, 'The Adaptive Stance', presentation at the 8th Asia-Pacific Complex Systems Conference, 2-5 July 2007, Surfers Paradise, Queensland, available at <www.complex07.org/online-edition/files/433.pdf> accessed 2 June 2013.
27. Dietrich Dörner, *The Logic of Failure: recognising and avoiding error in complex situations*, Metropolitan Books: New York, 1996, p. 18.
28. See Assymmetric Warfare Group, 'Attack the Network Part I: Oil-spot methodology', 2010, available at <<http://www.scribd.com/doc/39309170/Asymmetric-Warfare-Group-Attack-the-Network-Counterinsurgency-Methodology-Part-1>> accessed 10 June 2013.
29. David Kilcullen, *Accidental Guerrilla: fighting small wars in the midst of a big one*, Oxford University Press: Oxford, 2011.
30. See International Security Forces in Afghanistan (ISAF), 'ISAF issues guidance on night raids', media release, 5 March 2010, available at <<http://www.isaf.nato.int/article/isaf-releases/isaf-issues-guidance-on-night-raids-in-afghanistan.html>> accessed 5 February 2014.
31. A key factor seems to be a misunderstanding of the roots of CAS theory at senior levels, to a paradigm which articulates that the Army is 'to be adaptive'. This is apparent within the article by Lieutenant General Ken Gillespie, 'The Adaptive Army Initiative', *Australian Army Journal*, Vol VI, No. 3, 2009, where he outlines how the Adaptive Army's initiative postures Army for learning, which arguably is at odds from an organisational behaviour perspective with the command and control structure of 1 Division, Forces Command and Special Operations Command. Instead, an organisational structure that facilitates learning, information flow, and the emergence of solutions etc would be 'flatter', closer to chaos, and perhaps instead based on brigade-sized entities.
32. See <http://edwdebono.com/> accessed 2 June 2013.
33. Carl von Clausewitz (edited and translated by M. Howard and P. Paret), *On War*, Princeton University Press, Princeton, 1984.
34. William McRaven, *SpecOPS: case studies in special operations warfare: theory and practice*, Presidio Press: Novato, California, 1996.
35. Indeed, retired General Peter Leahy spoke of such timescales in 'New weapons in the fight against terrorism in this 9/11 century', *The Australian*, 4 February 2013, saying 'We and our allies are engaged in a global campaign against an implacable, resilient and adaptable enemy who speaks of God's time when it measures the duration of the fight.... Any bets of a 9/11 century?'
36. Peter Drucker, *Managing in Turbulent Times*, Harper: New York, 1980.
37. Clark Chadwick and Richard Kiper, 'Strategic thinking in an era of persistent conflict', *Military Review*, Vol. 92, Issue 3, May/June 2012.
38. Strachan, 'Operational Art and Britain: 1909-2009', p. 131.

A Theory-based Framework for Critical Thinking in Defence Planning and Assessment ¹

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If we are to be confident in our mission and our prospects, we must be also accurate in our assessment of progress.

General Stanley McChrystal, former Commander International Security Assistance Force
Afghanistan, 2009²

Introduction

This article describes how military planning and assessment processes can benefit from adopting the methodological principles of 'Program Theory', which broadly specifies how activities will lead to outcomes, and the contextual conditions that may affect the achievement of results. It will argue that modifications to these processes—inspired by Program Theory and realised by means of a 'theory-based framework' (TBF)—will significantly improve their intellectual rigour and support better-informed decision making in a time-sensitive manner.

The argument presented in this article builds on the findings of recent research conducted under the auspices of a Secretary of Defence Fellowship, and the practical application of TBF to campaigning and assessment at Headquarters Joint Operations Command (HQJOC). It highlights the rationale for further dissemination of logic-based methodologies into military practices. The discussion of an application of the framework is linked to potentially significant benefits from utilising this methodology within a broader spectrum of contexts.

Military planning and Program Theory

Planning

Planning is fundamental to military activities. As stipulated in current ADF planning doctrine, 'effective planning is a prerequisite for the successful conduct of military operations', although a good plan is not 'a fixed succession of steps ... but a solid foundation for adaptation to changing circumstances'.³ It also involves 'projecting thoughts forward in time and space to influence events before they occur'.⁴

Planners, therefore, develop hypotheses or theories about the outcomes they think will be achieved by the proposed actions. Adaptation to changing circumstances involves plan revisions and adjustments as the operation unfolds. Plan revisions, in turn, are informed by continuous assessment of the operation's progression. Military assessments, therefore, are closely linked to military plans and, in order to successfully conduct the former, it is essential to have a full grasp of the latter.

Assessment of a military operation serves a dual purpose: it is a key component of the commander's decision cycle and a mechanism that informs and supports policy-making

decisions related to the resourcing of operations to accomplish strategic objectives.⁵ Conducting assessments and informing decision making in counterinsurgency campaigns are particularly challenging because the missions are complex and typically involve a broad range of stakeholders, likely including both inter-agency and multinational partners.

A number of recent studies have attempted to tackle these challenges.⁶ Their resulting recommendations demonstrate that while different methods were employed, they commonly targeted a more systematic and comprehensive approach to assessments. While pursuing similar goals, this study employed an alternative method, based on the premise that in order to facilitate effective assessments and timely adjustments to plans, one should draw from the suite of models, techniques and methods, and the range of decision-support tools available for this purpose.

The challenge is to identify the most suitable and most ‘fit-for-purpose’. These can broadly fall into two categories: (1) those tools that planners are well familiar and comfortable with, such as the joint military appreciation process (JMAP) and (2) those that may be available and applied elsewhere but, for whatever reason, are less familiar. The method adapted in this study fits into the latter category.

Program Theory

Program Theory is a well-developed and widely-applied method that builds on surfacing the logic that underpins planning. As defined by the UN Population Fund, it:

[E]ntails systematic and cumulative study of the *links* between activities, outputs, outcomes, impact and contexts of interventions. It specifies upfront *how* activities will lead to outputs, outcomes, and longer-term impacts; and identifies the *contextual conditions* that may affect the achievement of results.⁷

A more laconic definition stipulates that it is ‘an explicit theory or model of how an intervention such as a project, a program, a strategy, an initiative or a policy contributes to a set of specific outcomes through a series of intermediate results’.⁸

The methodological steps of Program Theory constitute:

- Capturing and representing the underlying logic, including assumptions, for how planners think an intervention will lead to specific outcomes. This forms the initial ‘theory’ of the plan.
- The logical links between the elements of the plan and all assumptions initially made are then continuously monitored as the project evolves.
- The logical links are revised to ensure that they are up-to-date with real-life changes.
- The original plan is then modified, as necessary, to reflect real-life changes, in preparation for the next assessment cycle.

The application of Program Theory

Owing to its generic nature, Program Theory is a highly-adaptive method capable of being tailored to the specifics of any particular application—and is especially relevant in elucidating understanding in a world of increasingly-complex (adaptive) systems. Simple methods such as Program Theory are finding increasing application. In a recent article in *Parameters* titled ‘The Complexity Trap’, its authors described the following paradigm:

[T]he central consequence of subscribing to today’s narrative of complexity is a failure to design and implement true grand strategy. Entranced by the notion of complexity, the United States responds with paralysis, ‘bet-hedging’, and repeated calls for new conceptual paradigms. Too often, the national security community seems content to accept the analytical trepidation—or paralysis—that is the natural by-product of believing in unprecedented complexity.⁹

The inferred paralysis imposed by complexity can be unpackaged with Program Theory which, over the past 20 years, has earned the reputation of an elegantly simple but powerful concept, providing ‘a multi-stakeholder and collaborative experiential exercise that encourages the development of the flexible logic needed to analyse complex processes’.¹⁰

Numerous examples of its successful application can be found in literature and across a wide range of organisations, including those involved in conflict prevention and peace-building activities,¹¹ the evaluation of social change processes in both developed and developing countries,¹² improving program planning and management processes,¹³ and informing the evaluation of engagement of international aid agencies with civil society organisations in developing countries.¹⁴

Many government and non-government organisations around the world now encourage or require its use for planning, monitoring and evaluation. It is important to note, however, that the vast majority of documented applications to date have taken place in the civilian domain.

The benefits of Program Theory

Researchers and practitioners in the field of Program Theory have identified a range of benefits from utilising this concept. For example, it is suggested that articulation of the logic that underpins planning leads to enhanced communication and mutual understanding between stakeholders, which is particularly useful for projects conducted within multi-agency settings.¹⁵ This finding is particularly relevant and significant for the whole-of-government approach to planning campaigns adopted by the Australian Government.¹⁶

Another finding stipulates that the situational understanding of decision-makers is increased because the monitoring and revision of assumptions and logical links between the elements of a program are ongoing. This provides early feedback about what is working and what is not, and explains *why*, thereby allowing the early correction of problems.¹⁷

In addition, Program Theory assists in setting realistic objectives and developing meaningful performance indicators, which is imperative in dealing with the complexities of modern campaigning.¹⁸ Unintended outcomes from actions can also be identified as being at ‘odds’ with the original theory. Furthermore, Program Theory highlights the linkages between assessment and planning by constant feedback loops to the original theory, identifying where and why unsuccessful programs are failing and what makes successful programs work. This supports identifying lessons from the past and avoiding similar mistakes in the future.

The limitations of Program Theory

A number of civilian applications have also revealed some limitations of theory-driven planning and evaluation.¹⁹ For example, constructing a program theory can be challenging if the project contains multiple theories of change and requires support from a team of experts trained in this method. It is suggested, however, that this limitation can be offset in military planning where the construction of a program theory is driven by a planning method such as the JMAP. If the methodological principles of Program Theory are incorporated into the JMAP stages, then the military planning processes stipulated in JMAP can provide a sound context for constructing a program theory specific to a given operation.

Another limitation is the possibility of multiple theories within one project extending into multiple sets of measurement indicators across different lines of operation.²⁰ For example, a theory of how military activities may contribute to security in an operating environment may also demonstrate how the same activities can support governance and development outcomes. Multiple lines of operation within a military campaign are not uncommon,²¹ and the associated sets of measurement indicators developed by planners may demonstrate correlation across these. The challenge is therefore to 'wash out' the correlation to try to determine causality within a particular line of operation. Program Theory can assist in this by establishing hypotheses (logic statements or assumptions) about causality which provide a foundation for following research and analyses.

Program Theory generally also requires significant resources for data collection and analysis.²² Campaign assessments are mostly based on analysing operational and intelligence reporting, varied governmental assessments, other non-defence sector reporting, and open-source reporting for contextual analysis, that is, on secondary data sources. Program Theory applied in military contexts, therefore, is well supported by a data collection plan that articulates the source of the data, reliability and other characteristics that support alignment with the metrics and effects they are assessing.

The preceding discussion suggests that utilising Program Theory for military planning may result in significant benefits to planning and assessment processes. Furthermore, there are many similarities between planning and assessment processes across civilian and military domains.²³ Nonetheless, to date, the applications of Program Theory to military planning have been limited. It should be noted, however, that Program Theory has been informally adopted at HQJOC for all planning and assessment, and training is being delivered to planning and assessment staff to support its implementation. Intertwining civilian and military approaches to planning and evaluation remains an emerging field.²⁴

Theory-based framework

Its application to Defence planning

The aim of the recent Fellowship study conducted was to investigate whether the incorporation of the Program Theory method into military planning could support decision making within Defence. The scope of the study was limited to campaign planning and assessment processes conducted at HQJOC, with the focus on a current ADF operation.

The study revealed many similarities between Program Theory and the JMAP, as two logic-based planning methods. This determined the complementary role of Program Theory in its 'fusion' with the JMAP. Importantly, the study highlighted the capacity of Program Theory to assist in identifying optimal approaches to resolve complex problems related to contemporary military campaigning. The 'generic' Program Theory method was tailored to the specifics of current planning and assessment processes, and the resulting decision-support framework (TBF) ensures the 'perfect fit'.

Figure 1 illustrates that the methodological grounding for TBF is sourced from Program Theory. The framework is tailored to enhance the military planning methodology (JMAP), providing a foundation for intellectually rigorous campaign planning and assessment. The integration of the framework into JMAP can result in a number of benefits, namely:

- Incorporation of the framework into planning processes can improve the structure of a campaign plan, and support its monitoring through life, which will add rigour to ongoing planning and assessment.
- More rigorous assessments can lead to better-informed and time-sensitive decision making.
- Increased transparency of planning and assessment processes, facilitated by the framework, can enhance understanding of the rationale behind plans. At the strategic level, this may support communication between stakeholders across portfolio boundaries within whole-of-government forums. At the operational level, this may also contribute to improved interoperability, defined as the ability and willingness of individuals to work together effectively between campaign assessment stakeholders.²⁵
- In addition, the enhanced methodological robustness of JMAP can contribute to revisions of the planning doctrine.

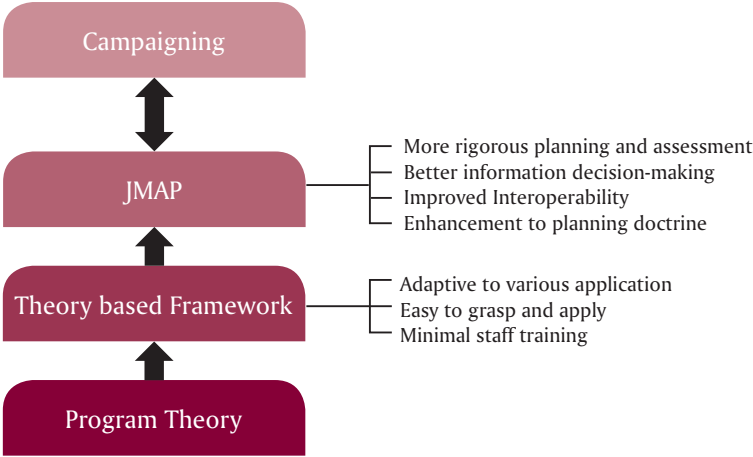


Figure 1. Program Theory and campaigning

TBF provides a practical, comprehensive and systematic theory-oriented method for articulating the logic, program components, critical links, uncertainty (risk), and assumptions that underpin campaign planning. Consequently, this understanding provides a robust framework for multiple stakeholders for interpreting change, clarification of effects and objectives, and organisational adaptation in complex operating environments. The framework is a decision-support tool tailored for providing ongoing support throughout the life-cycle of a campaign by incorporating Program Theory into each stage of campaign planning and development, from initial planning to final evaluation.

Logic as a central tenet of TBF

Central to the framework is the capture of logic that underpins planning through the JMAP stages. This logic, including assumptions made during the planning process, may be obvious to planners in the first instance but become less obvious as time goes by and the planned operation progresses, particularly if the planning teams have been rotated. Hence, the logical links between the elements of the plan need to be explained to the new participants or planners.

For example, it is important to explain why the planners assumed that the achievement of certain effects stipulated in the plan will lead to corresponding decisive points. Otherwise, these links can become unclear to campaign assessment teams, making assessments more challenging. Logic models can represent the logical links in diagrammatical form in an ‘if ... then’ format (that is, *if* this activity is conducted, *then* this outcome will be achieved). The narratives can then explain *why* the planners believe that this activity will lead to this result.

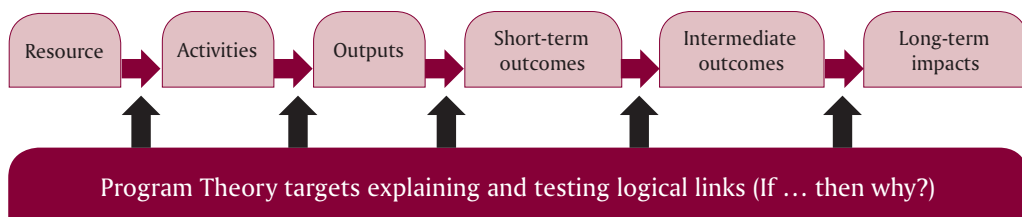


Figure 2. The progression of explaining and testing logical links

TBF itself is designed in a way that makes it adaptive to various applications. It is simple in both conceptual and practical terms, and is therefore easy to grasp and apply. It requires minimal staff training before implementation. In the following paragraphs, we will provide a demonstration of how the framework improves critical thinking—an essential element of good planning and assessment—and how it is being applied at HQJOC.

Critical thinking

Hall and Citrenbaum describe critical thinking as ‘an intellectual process that examines assumptions, discerns hidden values, evaluates evidence, and assesses conclusions’.²⁶ The strength of TBF is that it directly supports the above requirements for critical thinking. By defining the logic behind relationships and causation, articulating assumptions, identifying risks and prescribing key information requirements for the decision-maker, the framework provides an opportunity for analysts to uncover hidden values, evaluate all the evidence and test conclusions through a simple framework.

Hall and Citrenbaum continue by describing the characteristics of critical thinking as ‘deep think, introspection, thinking like the adversary, and nonlinearity’.²⁷ The connection between all these characteristics of critical thinking is the ability to define the ‘golden thread of logic’ that brings understanding—which is even more critical and challenging in complex adaptive systems. In addressing the importance of logic, Hall and Citrenbaum offer ‘twelve errors of logic’,²⁸ and Table 1 below outlines how TBF can assist in mitigating those errors and contribute to more coherent and logical understanding.

Table 1. The utility of TBF demonstrated against critical thinking errors

Errors of logic	The utility of TBF
Mirror imaging	Making assumptions about how the other side may act based on your own behaviour is mitigated by forcing articulation of planning logic, acknowledgement of bias, and revisiting assumptions with each cycle of assessment.
Faulty assumptions	Suppositions or presumptions are articulated while planning, and the framework ensures that they do not remain untested; moreover, they are continually reviewed for validity.
Expert testimony	‘Experts’ are held accountable with the framework, promoting the dialectic discussion of facts, opinions and beliefs. Acknowledgement that seniority does not always equate to superior intellect in all areas ensures that expert testimony is also tested.
False cause and effect	Effects in war rarely result from a single cause. The framework creates a structure to articulate cause-and-effect within a ‘systems of systems’ framework.
ad hominem (attack on the person making a statement rather than dealing with the facts and arguments at hand)	The framework detracts from ‘attacking the person’ and structures reasoning around a simple, logical framework that demands contribution from all specialists.
Circular reasoning	Regardless of how ‘right’ any person may presume to be in their argument, their logic is captured in the framework and therefore on record, which is then tested thereby pre-empting circular reasoning.
Oversimplification	A bias to simplification can be overcome by encouraging staff to think critically about their logic, as well as the varied assumptions and risks inherent in their understanding of the problem.
Hasty generalisation	By obliging all staff to elucidate their thinking, the framework holds all planners and assessment staff accountable for their reasoning, thereby pre-empting hasty generalisation.

Errors of logic	The utility of TBF
<i>post hoc, ergo propter hoc</i> (after this, therefore because of this)	The framework does not blindly accept cause-and-effect relationships. The regular audit of logical frameworks, assumptions and risks, as well as active reviews of information requirements, mitigates simple generalisations of cause-and-effect.
False dilemma (characterising a strident distinction between parts of a complex whole, when the facts show shades of grey among those parts)	One of the serious criticisms of the JMAP from campaign planners at HQJOC ²⁹ is that it is developed around the construct of a single centre of gravity—which is simply not proven in complex adaptive systems. Similarly, ‘course of action’ development assumes a most dangerous and most likely course of action, which is also typical of a false dilemma. The framework forces thinking into the ‘grey’ areas that may be disposed to more critical outcomes.
Historical analogy	Historical similarities that presume similar contemporary outcomes are tested by the framework by examining complex and dynamic present-day characteristics of the operating environment.
<i>non sequitur</i> (it does not follow)	Incongruous thought processes are refocused through a deliberate technique of directing thinking through TBF.

Critical thinking is also supported by the dialectic method. When staff hold more than one opinion about a subject or activity, the dialectic method of reasoned argument in a continual cycle of thesis (opinion) to antithesis (contradictory proposition) forces staff to not only consider opposites but also alternatives.³⁰ By applying theoretical models of causality and encouraging a dialogue and introspection that overcomes the ‘errors of logic’, TBF also facilitates the dialectic argument. Deconstructing conventional understanding and then articulating alternative understanding becomes a powerful way to critique present conditions and create the prospect of alternative futures which may represent the goals or Phase 0 conditions of any campaign plan.

TBF in support of campaign assessment

The case-study nature of the research project described in this article provided an opportunity to apply TBF to support and enhance campaign assessment processes for a current ADF operation. It was suggested that the application of the framework could significantly increase the utility of campaign assessment to decision-makers, particularly by means of:

- validating the logic behind the planning and assessment metrics,
- identifying the assumptions and risks that have the potential to cripple the plan if not monitored, and
- providing more assessment on potential future conditions in the operating environment.

The framework was developed in collaboration with the Plans Branch of HQJOC and deployed operations analysts who conducted assessments in the operating environment. It was introduced into campaign assessments at HQJOC in the second quarter of 2012 and used for seven consecutive campaign assessment cycles, being revised on each cycle in consultation with relevant stakeholders. The pragmatic approach adopted by the authors was complemented by a supportive stakeholder audience which provided the opportunity to link theory to practice.

Building on the core principles of Program Theory, TBF is designed to provide ongoing support throughout the life-cycle of a campaign from initial planning to final evaluation, as shown in

Figure 3. The ultimate goal of the framework is to assist the JMAP in realising its full potential as one of the key military planning methods, and to provide a rigorous framework for assessing progress against plans.

As Figure 3 depicts, TBF provides a foundation that underlies all stages of planning and assessment where these stages are supported by a framework, which is also a ‘living system’ that keeps evolving with the campaign. TBF is implemented through a series of steps. First, the underlying ‘theory’ of the plan is captured and represented during the initial planning process. This application of the framework is aligned with the JMAP stages. The ellipse on the left hand side of the diagram shows the phase where the ‘theory’ that underpins the plan is ‘born’.

Then, the campaign assessment method is developed. Campaign assessment is an activity that ascertains the progress of related major operations within a given time and space toward achieving a desired strategic and operational end-state (outcome).³¹ The framework facilitates this activity by promoting systematic monitoring and revision of the logical links between the elements of the campaign plan; for example, the logic between military objectives, effects and decisive points is captured in an assessment matrix for every measure of effectiveness. A concept model of this matrix is provided in Table 2.

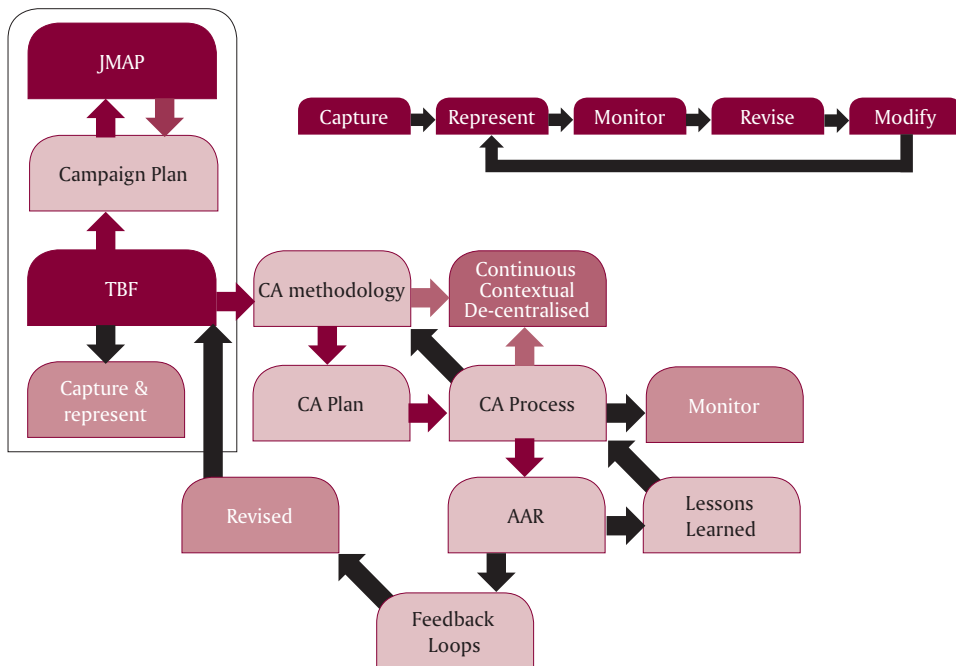


Figure 3. TBF supporting campaign assessment

The logic connecting the measures of effectiveness and the effects is articulated, which helps all stakeholders across government to understand how the derived measures of effectiveness support understanding of progress against the varied effects, as well as subsequent decisive points and operational/campaign objectives. All assumptions and risks are also monitored by ongoing data reduction and analysis, with cyclical campaign assessment updates that may, depending on the nature of the campaign, be prioritised by theme, country, lines of operation or objectives. This approach is articulated in the campaign assessment plan.

Campaign assessment processes are designed as continuous, contextual and decentralised. Collecting and analysing data against measures of effectiveness is at the heart of the process. The best practice approach to campaign assessment requires a balance between quantitative and qualitative data analysed within the context of where those data sets were collected.³² This approach supports ongoing monitoring of both the campaign progression and the underlying theory of the campaign plan, which in turn increases situational awareness and leads to better-informed decision making at both operational and strategic levels.

At the end of each assessment cycle, after-action reviews facilitate feedback loops to the logic that underpins the campaign plan. All logical links are revised and modified as necessary, according to campaign assessment findings, as a part of campaign plan revision. Finally, lessons identified are captured during each assessment cycle and translated into adjustments to future planning and reporting in a cycle of continuous improvement to the assessment processes. Recommendations for such improvements are reflected in campaign assessment methodology for the next assessment cycle.

Table 2. The assessment matrix

Objective	
<ul style="list-style-type: none"> • Security in district enables continuing expansion of development and governance programs. <p>The above objective may be supported by a <i>line of operation</i> that is defined by a number of contributing effects and decisive conditions/decision points.</p>	
Effects-Based Approach	Effects
	<ul style="list-style-type: none"> • The police are capable of exercising their security responsibilities. <p>The above effect may be one of a number of effects that will contribute to achievement of the above objective. Other effects may relate to the input of other security-related agencies, governance or development programs, or other activities targeting sources of instability/insecurity.</p>
Application of Theory Based Frameworks	Measures of effectiveness
	<ul style="list-style-type: none"> • Police are operationally viable. <p>This effect is accompanied by a range of detailed criteria to define ‘operational viability’. For example, criteria may address factors defining viability, such as leadership effectiveness, operational (policing) outcomes, enabling support, maintenance of law and order (metrics may include incidences of crime or public reporting of criminal activity), funding, training and development, technical maintenance, infrastructure, workforce planning, indicators of community support, cooperation across agencies, and a host of other metrics.⁸</p>
Better understanding of the effects framework and assessment variables	Logic
	<ul style="list-style-type: none"> • Police capacity to exercise effective constabulary roles will contribute to the security environment necessary for ongoing development and governance activities in the district. • Successful law enforcement outcomes will build confidence in the local population to foster development through safe access to markets and liaison with district governance.
	Assumptions
	<ul style="list-style-type: none"> • Police forces cooperate with local government—goals are consistent. • Police have sufficient capacity and capability to exercise effective constabulary roles. • Police have sufficient access to remote regions in order to influence security outcomes.
	Risks
	<ul style="list-style-type: none"> • Lack of funding leads to reduced policing effectiveness. • Weak leadership diminishes will and capability of policing forces. • Policing priorities are divergent to local governance security goals. • Corruption undermines the local population’s confidence in police forces.
Application of Theory Based Frameworks	Information requirements
	<ul style="list-style-type: none"> • Information requirements prescribe information that may not be directly addressed in the criteria but has been identified by the decision-maker as necessary for a comprehensive understanding of what has changed, or not, during any cycle of assessment. These requirements may often relate to a monitoring requirement that is not directly addressed within the assessment framework. An example, in this instance, may relate to a strategic funding decision by the host government or an election result that may impact on security outcomes.
	Data
Better understanding of the effects framework and assessment variables	<ul style="list-style-type: none"> • Sources may include intelligence and operational reporting, coalition and agency reporting, other government reporting, publicly-sourced information, or any other data source that will serve to provide some knowledge of change, or not, against an effect. • Describes data sources and how they inform assessment against each measure of effectiveness, including characteristics of data, such as source, location, classification, type (for example, .doc, .pdf, .xls, etc), reliability, validity⁹ and frequency.

Program Theory application

The application of Program Theory in the civilian domain serves a triple purpose: (1) as a planning tool at the beginning of a program or intervention, (2) as a monitoring tool throughout its stages, and (3) as an evaluation tool for project revisions until completion. It is argued in this article that TBF can play a similar role in the military domain. It can:

- enhance JMAP (or other like methodologies) during the planning stage;
- provide a foundation for a robust framework for campaign assessments and plan revisions;
- support decision making at all levels;
- provide a mechanism for capturing lessons learned; and
- support the development of staff training programs.

The study described in this article demonstrated that Program Theory can be incorporated into military planning and assessment processes, and proposed a systematic and methodologically robust mechanism, in the form of TBF, that can support decision making throughout the life-cycle of a campaign. This approach is being captured in an upcoming 'Joint Doctrine Note for Campaign Assessment', and will be worth considering for ongoing revisions of planning doctrine. The Australian Command and Staff College curriculum, for example, should also be enhanced by including Program Theory and TBF in its studies.

Conclusion

This article has highlighted the reasoning for applying the principles of Program Theory to military planning methodologies. The TBF described provides an example of how Program Theory can be tailored to the specifics of military planning and assessment processes. As a decision-support tool, TBF adds robustness to these processes, complements military planning methodologies, and promotes a simple, pragmatic and systematic approach to assessments that can improve understanding and, ultimately, result in better decisions.

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Mark Jobst is a former Regular Army Infantry Lieutenant Colonel with warlike, non-warlike, and domestic operational experience, who graduated from the US Naval Postgraduate School in 2005 with a Master of Science (Distinction) degree and a faculty 'Outstanding International Student' award. He commenced employment as a DSTO operations analyst at Headquarters Joint Operations Command in 2011.

NOTES

1. This article is based on the findings of the Secretary of Defence Fellowship undertaken by Dr Mazourenko in 2012. The full study has been published as a Commander's Paper on the Australian Defence College website, titled 'Supporting Military Decision-Making: an investigation into the integration of Program Theory into campaign planning and assessment processes' and dated March 2013, albeit only accessible via the Defence restricted network, as the paper is classified as 'for official use only'.
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28. Hall and Citrenbaum, *Intelligence Collection*, pp. 368-76.
29. Discussion with J50 staff at HQJOC 16 December 2013.
30. Hall and Citrenbaum, *Intelligence Collection*, p. 378.
31. Military Operations Research Society, 'Assessments of Multinational Operations: from analysis to doctrine and policy', report of proceedings of conference held at MacDill Air Force Base, Tampa, 5-8 November 2012. This definition was derived during working sessions of the special meeting.
32. Connable, *Embracing the Fog of War*.
33. There are always a range of metrics that may be suitable for assessment; however, data may not always be readily available so there are a number of alternatives such as the use of 'proxy' metrics, key sensitive variables (using a systems approach) or qualitative judgments of progress. Whatever method is used, it is important to qualify any assessment with an acknowledgement of assumptions and any identified weakness with that selected metric which the theory-based framework supports.
34. Criterion-related predictive validity. Measuring predictive validity requires that a process is established whereby the measures that are used (for example, the assessment criteria) accurately measure the respective effects.

Capability Enhancement not Governance Burden: integrating work health and safety legislation

Peter Fleming, Department of Defence, and
Dr Adam McKinnon, Sirota Consulting (UK)

Nothing is easy in the acquisition world.

Lieutenant General Chris Bogdan, US Air Force F-35 Program Office, 2013

Introduction

On 1 January 2012, the *Work Health and Safety (WHS) Act* and its associated regulations came into effect. The main objective of the legislation is to provide a balanced and nationally-consistent framework to secure the health and safety of workers and workplaces. Under the legislation, Defence has an ongoing responsibility to identify and manage WHS risk to people prior to, during and after capability has been introduced into operational service.

Accordingly, Defence must consider how it manages and benefits from the *WHS Act*. This is of particular importance in the context of the Capability Systems Life Cycle (CSLC). This article identifies ways in which WHS considerations can be realised throughout the CSLC, specifically through the application of processes, tools and techniques associated with risk management, safe design and human systems integration. The benefits of a comprehensive approach to WHS in capability development are identified, as are the current state and future challenges of WHS integration in the CSLC.

What is capability development?

The CSLC is the basis for Defence's strategy-led capability development process. It is used to visualise the life of capability systems within Defence, from the identification of a need (an existing or arising capability gap) to the acquisition of a physical capability system, which is operated and supported until disposal.

In accordance with the Capability Development Group's 2011 handbook, the CSLC is comprised of five key phases:

1. **Needs:** when a capability gap is identified and a materiel solution is required. It may occur when a system needs to be introduced, improved or replaced.
2. **Requirements:** defines the requirements, including operational support concepts and specifications.
3. **Acquisition:** the process of procuring an appropriate materiel system to meet the identified requirements, while achieving the best value for money over the life of the system.
4. **In-service:** begins when the capability system achieves initial operational capability and extends to the disposal phase. In this phase, the individual 'fundamental inputs to capability' that make up the capability system are operated, supported, modified as necessary, and managed by the capability manager. The in-service phase begins when the capability system achieves initial operational capability and extends to the planned withdrawal date.
5. **Disposal:** marks the end of the materiel system life.

How can WHS be addressed during the life-cycle?

Defence can address its obligations under the *WHS Act* by employing processes, concepts, tools and techniques associated with the following areas of safety and human factors-related activities:

- **Risk management** is fundamental to WHS and is best characterised by a four-step process that includes:
 - i. **the identification of hazards** – finding out what could cause harm;
 - ii. **assessing risks** – understanding the nature of the harm that could be caused by the hazard (for example, severity and likelihood of occurrence);
 - iii. **controlling risks** – implementing the most effective control measure that is reasonably practicable in the circumstances; and
 - iv. **evaluating controls** – reviewing control measures to ensure they are working as planned (Safe Work Australia 2012a; Standards Australia 2009).

Risk management is the primary method of addressing WHS issues in the *Act* and has an established history of effective practice in Defence (Gaidow et al 2006).

- **Safe design** refers to the integration of control measures early in a design process to eliminate or, where this is not reasonably practicable, minimise risks to health and safety throughout the life of the structure being designed. Safe design is relevant in the design of structures, particularly for anyone making decisions that influence the design outcome. Consequently, it has direct relevance to leaders in both Defence and Defence industry involved in the CSLC (Safe Work Australia 2012c).
- **Human systems integration** is a process employed to inform the design and development of systems to ensure the effective and affordable integration of human capabilities and limitations (US Department of Defense 2011b). The process is characterised by integration of the domains of manpower, personnel, training, human factors engineering, system safety, health hazards, and survivability into each stage of capability development (Booher 2003). It is an enabler of safer design through comprehensive consideration of human requirements in the design, provision and management of capability.

While the above areas are not an exhaustive list of health, safety and human factors, they do highlight the more mature fields that have been included in military capability development internationally (Anderson et al. 1997; Burgess-Limerick 2012; Malone et al. 1998; UK Ministry of Defence 2010; US Department of Defense 2009, 2011b, 2011a). Consequently, all further references to WHS in this article are considered inclusive of the processes, tools and techniques associated with risk management, safe design and human systems integration. Commonwealth guidance materials suggest that Defence duty holders can address many of their due diligence obligations under the *WHS Act* by employing these three knowledge domains, and their associated tools and techniques.

Figure 1 depicts the conceptual integration of CSLC phases with the *WHS Act*, risk management, safe design, and human systems integration. It demonstrates that the *Act* regulates all stages of the CSLC. Similarly risk management, as a fundamental tenet of the *Act*, has relevance throughout the CSLC. In contrast, safe design and human systems integration have particular relevance at specific phases of the CSLC, as denoted by the black (high relevance) and grey (lesser relevance) tick boxes. This select relevance is due to the respective strengths of these processes and their associated tools and techniques.

CLSC Phases	WHS Act 2014 (Cth)	Risk Management	Safe Design	Human Systems Integration
Needs	✓	✓	✓	✓
Requirements	✓	✓	✓	✓
Acquisition	✓	✓	✓	✓
In-Service	✓	✓	✓	✓
Disposal	✓	✓	✓	✓

Figure 1: Integration of the CSLC with the *WHS Act*, risk management, safe design and human systems integration

Why integrate WHS and the CSLC?

Comprehensive consideration of WHS in the context of the CSLC is a legal requirement (Australian Government 2006; Safe Work Australia 2012a, 2012c, 2012b; Sheriff and Tooma 2010) that has the potential to yield considerable capability benefits (Burgess-Limerick 2012). These include the following.

A considerable return on investment

The US Air Force estimates that approximately 40-60 per cent of capability life-cycle costs are associated with manpower (the number of human resources required), personnel (skill and aptitude requirements) and training (the instruction and resources required). Consequently, integration of human factors in capability development is considered crucial at the earliest stages of project conception (US Department of Defense 2009).

The US Air Force also estimates that the cost of comprehensively integrating human factors during capability development is between 2 and 4.2 per cent of total acquisition costs. The estimated return-on-investment is between 40 to 60 times the initial investment (US Department of Defense 2009). Examples of international military projects that have demonstrated a quantifiable return-on-investment through a comprehensive application of safety considerations include:

- 1:43 cost-benefit ratio for the Comanche helicopter (investment of \$74.9m, cost savings of \$3.29bn);
- 1:33 cost-benefit ratio for the Fox NBC (nuclear, biological and chemical) reconnaissance vehicle (investment of \$60k, cost savings of \$2-4m); and
- 1:21 cost-benefit ratio for the Apache Longbow helicopter (investment of \$12.3m, cost savings of \$268.8m) (Booher 1997).

Better decisions during capability design

Safety activities can influence design decisions early, before costly commitments have been made during capability development. Integration of health, safety and human factors considerations during capability design can facilitate optimal design decisions that in turn optimise performance, reduce the need for redesign efforts, and reduce longer-term in-service costs (Bruseberg 2008).

Ericson (2005), in his seminal work on hazard analysis techniques, emphasises that it is only during these early development stages that safety of the system can be designed into the product for safe operational use. After all, it is ultimately about saving lives.

Indeed, with regard to usability testing (testing of products by users), a 1:10:100 rule-of-thumb is historically suggested by case studies. This rule suggests that if it costs \$1 to fix a usability problem during design, it will cost \$10 to fix once the system is developed, and \$100 once it is operational (Pressman 1992). Examples of military capability design enhanced by safety considerations include:

- The design of DD21 ships, through application of human systems integration techniques, reduced manning levels from 188 sailors to 44. This represented an annual cost saving of \$9.4m and, assuming 40 ships and 30 years life, a total saving of \$11.3bn (Anderson et al. 1997).
- Through the introduction of technology, greater automation and human systems integration analyses, the manning levels for Fast Sealift Ships reduced from 47 to 12. This resulted in considerable cost reductions associated with system manpower, training time, system downtime, and accident rates (Malone et al. 1998). A similar process and result (increased efficiency and decreased manning) was achieved with the JCC(X) (joint command and control) ship (Malone et al. 2003).
- Development and evaluation of a bridge design mock-up in scenario tests assisted in the identification of several design deficiencies in the DDG-1000 program. It was suggested that a \$20k investment achieved a cost avoidance of approximately \$20m (Hamburger 2008).
- In contrast, Cockshell and Hanna (2006) cite the Seasprite helicopter cockpit design as an example of poor integration of WHS considerations, specifically human systems integration, resulting in an estimated cost of \$100–200m to rectify (noting that in 2009, the Australian Government elected to cancel this program after questions arose about its suitability to meet Australia's requirements [*Australian Aviation Magazine* 2013]).
- The F-111 Reseal Deseal Board of Inquiry investigated the exposure of over 400 Air Force maintenance workers to hazardous chemicals associated with F-111 fuel tank maintenance. The inquiry recommended that '[o]ccupational health and safety should be integrated into the engineering change management process. This means, in particular, that designs should undergo a risk management process' (Royal Australian Air Force 2001).

Better consultation during capability design

Safety and its associated tools and concepts require user involvement, a central tenet that contributes to project success (Bruseberg 2008). User consultation is a fundamental Defence requirement under the *WHS Act* (Safe Work Australia 2012b). While consultation is a legal

requirement of Defence, Hendrick (1996) posits the importance that user validated insight contributes through more efficient design decisions by reducing options and increasing outcome efficiency.

Reducing the risks associated with technology complexity

The risk of human error increases as the complexity of systems increases (Bruseberg 2008). The increasing complexity of technological-related warfighting developments is exemplified by the remote operation of unmanned aerial vehicles (UAVs) (Hopcraft et al. 2006). Up until 2004, the US Department of Defense had recorded the following mishap rates across UAV programs—Air Force’s RQ-1 Predator, 32 mishaps per 100,000 flight hours; the Navy/Marine’s RQ-2 Pioneer, 334 per 100,000 flight hours; and the Army’s RQ-5 Hunter, 55 per 100,000 flight hours. In contrast, general aviation across the same time period recorded 1 mishap per 100,000 flight hours (US Department of Defense 2004).

Tvaryanas and Constable (2005) reviewed UAV accident causes over a 10-year period and concluded that organisational factors (acquisition policies and processes) were attributable to two-thirds of US Air Force UAV accidents. The authors suggested that human system integration considerations are critical in UAV capability development, and that further research is required to address optimal operator selection and training needs, human factors engineering deficiencies in current ground control station design, and the collective impact of manpower shortfalls and shiftwork-related fatigue on performance (Tvaryanas et al. 2006; Tvaryanas 2006). The integration of safety considerations in the development, operation and disposal of technologically-complex capability is critical to success.

Human error may occur during maintenance, which contributes to operator error. Consequently, safety concerns also need to be addressed in the context of capability maintenance (Bruseberg 2008; Tvaryanas and Constable 2005). Costs associated with human error include not only the costs of the damage itself but also substantial legal, insurance, maintenance, redesign and liability expenses (Bruseberg 2008; Burgess-Limerick 2012). As stated by General John P. Jumper, a former Air Force Chief of Staff:

We’ve ... got to have some respect for the fact that because these are unmanned, they are neither expendable nor disposable. They cost a lot of money (Butler 2005).

Mitigating the risk and minimising costs associated with the health and safety of personnel

Injuries and illnesses not only require recovery and rehabilitation costs but covering for lost time, insurance expenses and a premature loss of corporate knowledge and experience. Loss of personnel due to either survivability issues or fluctuation requires expensive re-recruitment and training (Bruseberg 2008). In 2011/12, Defence spent \$9.8bn on employee costs, which represented 38.8 per cent of the Department’s \$25.4bn operating costs (Australian Government 2012).

In recognition of such substantial personnel investment, it would seem only fitting that health, safety and human factors considerations be comprehensively integrated into the CSLC to ensure the identification and management of safety risks to personnel resources and subsequent operational capability.

Facilitating Defence's duty of care to mitigate risks

The primary duty of care under the *WHS Act* (s.19) requires a person conducting a business or undertaking to ensure the health and safety of workers, so far as is reasonably practicable (Australian Government 2011). This law seeks to ensure that the collective benefits associated with comprehensive integration of WHS considerations in the CSLC are realised. In addition, ensuring that Defence personnel return home from work safe and unharmed is a moral imperative—a commitment to the families that support Australian service personnel (Hackitt 2012). However, it is critical to note the intent of WHS is not risk aversion, as this is not realistic in the context of warfighting, but rather the identification and effective management of risks within levels of acceptable tolerance (Gaidow et al. 2006).

Beyond the primary duty, the *WHS Act* imposes a range of specific duties on certain categories of businesses, colloquially referred to as 'upstream' duties. Businesses in these categories (which include Defence) will owe both the primary duty under section 19 and to the relevant 'further' duties, which typically relate to the life cycle of work-related activities, notably to provide systems of work that are, so far as is reasonably practicable, safe and without risks to the health of people.

Within the notion of upstream safety, WHS management is more likely to be effective when organisations give preference to eliminating or minimising risks using safe-place measures that design out hazards or control risks at the source. Likewise, the adoption of a 'cradle to grave' approach to hazard identification and risk control across the life-cycle of work processes and environments, plant and equipment, substances, structures and other aspects of work further strengthens the argument for their design and construction to be intrinsically safe from the outset (Johnstone et al 2012).

The challenge associated with upstream safety is the difficulty attached with foreseeing some safety risks during capability development. Defence duty holders must take all reasonably practicable steps to identify (including to foresee) and address risks to worker safety during all phases of capability development, acquisition and sustainment.

The current situation

In mid-2012, Defence agreed to an integration of the *WHS Act* and the CSLC, including provision, operation, support, disposal and stewardship of capability systems. The following range of initiatives has since commenced:

- identification of the respective roles and responsibilities for each relevant Group and Service across the CSLC;
- establishing a Defence-wide position (including in the Defence Materiel Organisation) on the interpretation of the *WHS Act* as it applies to the CSLC;
- identifying the organisation which is to take the lead on internal communication, coordination and consultation on the respective CSLC WHS risks, issues and obligations;
- agreement on the allocation of appropriate resources, including the relevant skill sets and potential resource shortfalls required to eliminate or minimise risks to health and safety from the work carried out by and for Defence;

- development of appropriate assurance and reporting methods and mechanisms that demonstrate Defence's compliance; and
- development of compliant 'systems of work' across Defence, and within Groups and Services.

Capability Development Group is the organisation responsible for developing capability proposals, consistent with strategic priorities, funding guidance, legislation and policy, for consideration and approval by Government. From a safety perspective, the work of the Group focuses on ensuring that capability development proposals conduct risk assessments that identify reasonably foreseeable hazards and risks during the requirements phase, and identify and document the appropriate controls.

In mid-2013, the Group was tasked with the development of a high-level document giving direction to, and promulgation of, the roles and responsibilities of all Groups and Services across the life-cycle in terms of the acquisition and management of Defence capability systems. Direction and guidance for the associated tools and techniques that identify safety risks and issues in all 'fundamental input to capability' systems have recently been approved within the Capability Development Group.

The development of the safety risk matrix and safety risk assessment—used by the capability community—supports the demands for such high-level expectations surrounding the roles and responsibilities. Early safety risk elimination (or treatment), so far as is reasonably practicable, including identifying any safety assurance actions (modelling, simulation etc) and assigning project development funds, human resources and timeframes to ensure those actions are completed prior to final operational capability is paramount.

The Defence Materiel Organisation and other key Groups and Services are also currently reviewing and updating their respective due diligence framework requirements under the *WHS Act* to align with these broader implementation initiatives.

Future challenges

WHS requires early involvement in the CSLC, and needs to be applied and resourced as a complete process (Hamburger 2008; UK Ministry of Defence 2010; US Department of Defense 2009). This is challenging in the Australian Defence environment, which is characterised by a developing appreciation of the benefits of WHS integration in the CSLC, diffuse and unclear organisational responsibility for WHS integration in the CSLC, and maturing WHS knowledge and experience.

A key challenge for comprehensive integration of WHS in the CSLC is the difficulty in accurately quantifying the benefits, specifically:

- direct (for example, medical costs associated with injury and compensation reductions);
- indirect (for example, design process savings, methods and tools established, and organisational processes improved);
- tangible (for example, useful system function included, or inefficient or un-needed system function removed); and
- intangible (for example, morale enhancements, enhanced safety culture and improved mental health).

Unfortunately, no comprehensive approach currently exists to track the broad range of benefits associated with the effective integration of WHS concerns across the capability life-cycle. In part, this difficulty is due to the fact that human factors are not always clearly and objectively measurable (Bruseberg 2008). As the tools and methods associated with WHS mature, additional benefits will be realised, both in development and impact measurement.

Consequently, when decisions regarding budget allocations for capability projects are made, health, safety and human factors may not always be afforded the resourcing and consideration they warrant. Therefore, at concept initiation, generic arguments and historical references (US Department of Defense 2009) may be required to scope WHS considerations, as benefits for correcting problems cannot be quantified until they have been identified and investigated (Bruseberg 2008).

Additional work is required by Defence to formally integrate WHS management in the CSLC, describing formal responsibilities, authorities and accountabilities. Such work is essential to ensure that the CSLC reflects the organisational structures, roles, responsibilities, processes, tasks, metrics and enabling resources to ensure Defence and its senior leaders address their obligations under the *WHS Act* (Australian Government 2011).

Safety must become second nature. This reflects the direction that international military organisations with more mature approaches to the integration of safety in capability development have adopted (UK Ministry of Defence 2010; US Department of Defense 2009, 2011b). While initial work has been performed in this area within Defence, further activity is required to ensure operational maturity and cultural change.

Defence requires stronger guidance material to provide program managers, Defence leaders, and Defence industry leaders with sufficient guidance and technical resources to achieve the comprehensive integration of WHS into CSLC decision-making. Expertise and knowledge may be difficult to justify and resource when quantification of the impact is difficult to establish. As has been the case in more mature safety-conscious environments, cultural change may be required through a strong and clearly-articulated organisational mandate and internal expertise to effect tighter integration of WHS in the CSLC.

Conclusion

This article has argued that the successful integration of capability development with the *WHS Act* can be achieved within Defence through the utilisation of processes, tools and techniques focused on human factors (that is, risk management, safe design and human systems integration).

While the comprehensive inclusion of safety in the CSLC may include additional work, safety has the potential to yield considerable benefits. This article has highlighted that safety has historically been acknowledged to facilitate:

- better decisions during capability design, resulting in more efficient and effective operational outcomes;
- comprehensive consultation with end-users during capability design, and better analysis of technology complexity and the way in which human users interact with proposed systems;
- enhanced risk mitigation and cost avoidance; and
- observance of the legal and moral obligations to mitigate risks to personnel.

Historical data from international military organisations suggests that the comprehensive integration of safety into capability development is between 2 and 4.2 per cent of total capability acquisition costs, while the return-on-investment is between 40 to 60 times the initial investment (US Department of Defense 2009).

In 2011/12, Defence spent 38.8 per cent of its budget on operating costs. This investment, when coupled with the historical benefits of safety integration in capability development, suggests that the systematic attention to health and safety risks by those that design, produce, import, supply, install, manage or otherwise contribute to risks arising throughout the life-cycle must be a Defence priority.

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Opinion piece

The East Asian Tinderbox: no rules of the game? ¹

Dr Evan N. Resnick, Nanyang Technological University, Singapore

Introduction

Geopolitical tensions in East Asia have ratcheted up considerably in recent months. In late November 2013, the Chinese Government announced the creation of an 'air defence identification zone' (ADIZ) in the East China Sea, covering the contested island chain that China refers to as the Diaoyu, and rival claimant Japan calls the Senkaku. A week later, the Obama Administration authorised the flight of two unarmed B-52 bombers through the ADIZ without previously informing Beijing. In early December, the US guided-missile cruiser *Cowpens*, which was shadowing China's sole aircraft carrier, the *Liaoning*, in the South China Sea, nearly collided with a Chinese warship that was accompanying the *Liaoning*.

Although it is possible that all concerned parties in the region will be sufficiently jarred by this spate of sabre-rattling and near-misses to refrain from future acts of brinkmanship and settle their differences at the negotiating table, this is not a safe bet. Rather, the hair-raising events of late last year are almost certain to keep recurring and continue raising the risk of an accidental or unintended war. This more ominous prediction is based on five distinct yet mutually reinforcing factors.

Five factors of war risk

The first factor is China's relative ascent. Since it began to open itself up to foreign trade and investment in the late 1970s, China's economy has skyrocketed to become the world's second largest and its GDP appears set to eclipse that of the US (on the basis of purchasing power parity) within the next decade. Chinese military spending has kept pace with the country's fast-growing wealth. Between 2001 and 2011, China's military budget has risen at an average annual rate of 10.3 per cent and, in 2012, exceeded US\$100 billion for the first time.

It is almost a truism in international politics that rising great powers seek to maximise their security by expanding their influence and control over their immediate neighbourhoods and, in many cases, far beyond. China's adoption of expansive sovereignty claims and its increasingly brazen efforts to bully its local rivals into accepting those claims must be understood in this context.

Second, the Obama Administration has embarked on a more assertive policy towards East Asia, dubbed the 'rebalance'. Under its aegis, the White House has not only ramped up military deployments to Australia, South Korea, The Philippines and Singapore but has also sought enhanced defence relations with a host of regional partners, including India, New Zealand, Indonesia, Malaysia, Vietnam, Cambodia and even Myanmar.

Notably, the Administration has also adopted a more robust position in the ongoing maritime dispute between China and several of its neighbours regarding the Spratly and Paracel islands in the South China Sea, and has declared that the US defence alliance with Japan applies to the fiercely-contested islands in the East China Sea.

Mutual deterrence more difficult

Even in the absence of the rebalance, it is almost certain that China would have still exhibited considerable insecurity, rising to great power status in a region that is not only militarily dominated by the US but is also replete with US allies and strategic partners. The rebalance will only compound such anxieties, even as the Chinese armed forces become increasingly capable.

Third, existing US security commitments to its regional allies have emboldened those allies to harden their bargaining positions toward Beijing. The most recent crisis over the Diaoyu/Senkaku was sparked by Japan's provocative September 2012 decision to 'nationalise' three of the disputed islands by purchasing them from a private owner. Meanwhile, in the South China Sea, The Philippines has adopted a highly-adversarial posture towards China, even filing an unprecedented arbitration case against Beijing with the UN's International Tribunal of the Law of the Sea.

Fourth, although the military balance of power in East Asia strongly favours the US, the balance of interests in the region strongly favours China. On the one hand, the US continues to field the most lavishly-funded, highly-trained and technologically-advanced fighting force in the world, one which dominates East Asia's skies, sealanes and even its outer space. On the other hand, the various diplomatic and territorial quarrels roiling East Asia are of much greater salience and concern to China than to the US, as their outcomes more profoundly affect the national security of the much closer China than the more distant US.

This asymmetry renders mutual deterrence more difficult because in any test of wills, the governments in Washington and Beijing will both believe that they possess dominance *vis-à-vis* the other. Consequently, each side will be sorely tempted to call the other's perceived bluff.

No rules of the geopolitical game

Fifth, to date the US and China have failed to elaborate a set of explicit or tacit rules of the game that would help moderate their geopolitical competition. By contrast, during the Cold War, the US and Soviet Union developed an array of both implicit and explicit norms of mutual restraint that helped prevent the superpower rivalry from boiling over into a third world war.

These factors are especially pernicious because each one exacerbates the others, producing a positive feedback cycle. For example, China's continued rise fuels the US urge to rebalance which, in turn, further emboldens America's allies and enhances US military capabilities in the region, thereby compounding China's insecurity and resolve to prevail in local territorial disputes. The lack of any clear rules of the game lends additional volatility to this dangerous dynamic by adding an element of unpredictability to it.

Although the rise of a newly-assertive China in a region long dominated by the US is bound to engender a certain amount of instability and tension, policymakers in both Beijing and Washington will be unable to begin reducing both until each accepts certain uncomfortable realities. Decision makers in Beijing must accept that the regional balance of military power remains strongly tilted against China, which means that the Chinese will suffer disproportionately from any war that its counterproductive muscle-flexing may spark.

At the same time, US decision makers must accept that China's growing power and acute insecurities necessitate a more circumspect and less heavy-handed US approach to the region that reflects a more refined conception of America's vital interests there.

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NOTES

1. This article was published by the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University, Singapore as RSIS Commentary No. 004/2014 dated 6 January 2014 (see <http://www.rsis.edu.sg/publications/commentaries.html>). It is reprinted with permission of RSIS, with minor editing.

Book reviews

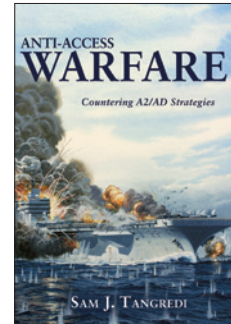
Anti-Access Warfare: countering A2/AD strategies

Sam J. Tangredi

Naval Institute Press: Annapolis, Maryland, 2013

ISBN: 978-1-6125-1186-3

Reviewed by Commander Robert Woodham, RAN



Although the term ‘anti-access warfare’ is relatively new, the concept is a very old one. This book makes this clear early on, through a discussion of Xerxes’ attempted conquest of Greece in 480 BCE, in the context of the Greeks’ anti-access strategy to prevent it. What we are really talking about, it seems, are the old concepts of sea denial, sea control and control of the air. The terminology can get clumsy at times (perhaps inevitably, the term ‘counter-anti-access’ is used frequently) but the author explains the origins of the various terms, which mostly reside in the post-Cold War transition to expeditionary warfare and in US inter-Service rivalries.

The book identifies five fundamental elements of an anti-access strategy, namely: the perception of the strategic superiority of the attacking force; the primacy of geography; the predominance of the maritime domain; the criticality of information and intelligence; and the impact of extrinsic events in other regions. Four supplementary factors are also identified: strikes against existing regional bases; pre-emption; innovation; and cross-domain synergy. As well as discussing these elements in detail, the book applies them to a range of historical campaigns and to some hypothetical future conflicts.

The book emphasises the need for a coordinated approach across all warfare domains, in order to effect a systematic dismantling of anti-access ‘walls’. The US military’s ‘AirSea Battle’ concept, which seeks to achieve synergies between the Services in order to combat anti-access strategies, also takes this approach. As a result of this all-encompassing approach, however, the book contends that AirSea Battle seems to be somewhat too generalised, and lacking in detail, at least in its publicly-accessible form. It will be interesting to see how it develops—and particularly how it affects procurement decisions—in the coming years.

A recurring theme in the book is a hypothetical conflict between the US and the People’s Republic of China (PRC). Indeed, this is depicted dramatically on the cover of the book, which shows a ballistic missile hit on a US Navy aircraft carrier. An anti-access strategy would be likely to include not only ballistic missiles, capable of targeting moving vessels, but also advanced surface-to-air missiles, anti-satellite weapons and cyber attacks. The PRC’s developing submarine arm would also, of course, play its part. In this context, the book sees the anti-access strategy taking on an almost psychological aspect, as an authoritarian state attempts to keep out not only combat forces but also dangerous, foreign ideas.

The historical case studies include three successes and three failures of the anti-access approach. The analysis of Operation SEA LION, the Nazi invasion of Britain planned for the latter months of 1940 (an anti-access success), is somewhat simplified in my opinion, because it overlooks the importance of strikes against German troop concentrations in the Channel ports. Instead, it portrays the campaign as a fighter-centric air defence of the UK mainland.

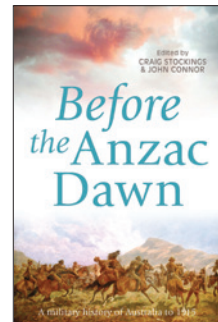
Yet attacks by light naval forces, intense and highly-effective bombing by the RAF of ports along a broad stretch of coast from Antwerp to Boulogne, and even cross-channel bombardment by heavy guns, caused extensive damage and prevented the Germans from concentrating their invasion force. On 19 September, Hitler ordered further assembly of the invasion fleet to be halted and for shipping already in Channel ports to be dispersed, in order to reduce the losses from bombing. Once this decision had been taken, SEA LION could not succeed. This does not invalidate the book's argument but merely emphasises one of the supplementary factors of an anti-access strategy, which the book identifies.

This book provides a thorough theoretical treatment of the subject but if (like me) you prefer a more practical, less abstract approach, it also offers a range of fascinating case studies. Its readable style and logical layout make it an accessible commentary on a highly-topical subject.

***Before the Anzac Dawn:
a military history of Australia to 1915***

Craig Stockings and John Connor (eds.)
University of NSW Press: Sydney, 2013
ISBN: 978-1-7422-3369-7

Reviewed by Dr Noel Sproles



A cursory glance at this book's title may give the impression that this is yet another book on Anzac but this would be a false impression. Yet, in a way, it is also a correct impression. In telling the story of Australia's naval and military forces from the beginning of European settlement up to 1915, the reader can better understand how well Australia was prepared for Gallipoli. That such a relatively large force was able to be raised and deployed in such a short time, while still being provided with its basic equipment and light weapons, illustrates a degree of preparedness. That the force had few heavy weapons and lacked the mastery of the military skills it was to demonstrate so well on the Western Front is another matter again. The background as to how this came about is well explained by this book although that was not really its aim.

The stated aim of this edited collection of 12 chapters by ten authors is to tell stories of how 'Australians experienced war and thought about war before the landing at Anzac Cove'. In so doing, the stories of frontier conflict, through to the capture of German New Guinea in 1914, are covered. In between are chapters on familiar events, such as the Eureka Stockade, the war in the Sudan and the Boer War. Perhaps less familiar stories are there concerning the New Zealand wars, the establishment of the rifle clubs and the army cadet movement. In each instance, the story is presented as the politicians and public of the time would have seen it as against being viewed through the eyes of today's reader.

I was given this book to review on the weekend of the Fleet Review in Sydney Harbour, honouring the centenary of the RAN. In my opinion, the chapter on 'Australian Naval Defence' explained the background to the original event far better than any article I read in the newspapers or stories seen on television. The development of small naval forces in each of the colonies is described in some detail, as are the agreements made between the fledgling Commonwealth government and the British government to maintain a Royal Navy squadron in Australian waters. The construction and manning of the original RAN squadron are well covered. It also explains how the RAN became so well prepared and equipped by the outbreak of war that even the German East Asiatic Squadron considered it a force to be reckoned with and one to be avoided.

When I reviewed *Redcoat, the British soldier in the age of horse and musket*, (ADF Journal No. 170, 2006), I lamented that the story of the British Army in colonial Australia was not covered. I was happy, therefore, to see a chapter in this book devoted to just that period. As the author notes, it is strange that the story of the 25 regiments and approximately 30,000 troops of the British Army who served in Australia from 1810 to 1870 is so little known. I recall how *Redcoat* described the adaptability of the British soldiers in fighting the Indians during the siege of Quebec in 1759, by breaking into small groups to engage them in guerrilla warfare and to defeat them. It is of interest that a century later, they were doing the same thing in Australia against aborigines and bushrangers.

The chapter on the Eureka Stockade presents an interesting view of the nature and background of the fighting there, as does the chapter on the participation of Australians in the New Zealand wars. For those who argue the merits or otherwise of citizens possessing firearms as a contributory element to national defence, then the chapter on rifle clubs will be of value.

The copy reviewed was soft-covered without illustrations or diagrams. While each topic is not, by necessity, covered in great depth, ample footnotes with references are provided for the reader who may wish to pursue a particular topic further. Each chapter is relatively short and may be easily read in one sitting if so desired. The editors have done well in establishing a uniform style of presentation over the book making an imperceptible transition from one author to the next. An added bonus is that the book has been well proofed and I did not notice any typographical or grammar errors. This all made for an enjoyable and most informative read.

At the outset of this review, I noted how the book helped lead into the story of Anzac and gave an insight into Australia's preparedness for war at its outbreak, although this was not the editors' aim in producing the book. While everyone approaches a book differently and takes from it what they will, I do feel that the editors achieved their aim in explaining how people felt about military issues at particular points in our nation's history.

As a result, I gained a lot for having read this work. It addresses a period in our history that it seems is not often written about. It makes a real contribution in presenting the story, without apologies, from the viewpoint of the people of the era. The background that *Before the Anzac Dawn* provides would be useful to anyone interested in Australian defence policy. There are lessons to be found in these chapters that are still relevant and worthy of being heeded. I would have no hesitation in recommending this book.

***Hell on Earth:
Sandakan – Australia’s greatest war tragedy***

Michele Cunningham
Hachette: Sydney, 2013
ISBN: 978-0-7336-2989-1

Reviewed by Lieutenant Colonel Gavin Keating, Australian Army



The Japanese treatment of POWs during the Second World War was characterised by its extreme brutality. The fate of the Australian and British POWs transported to Sandakan, in Borneo, marked a particularly tragic example of this behaviour. Of the approximately 2,500 personnel held at Sandakan at the start of 1945, only six survived. Most perished when they were force-marched over a 256-kilometre route through the interior of Borneo, between Sandakan and Ranau.

The ‘Sandakan Death March’, as it is remembered, has been the subject of a number of previous studies. Michele Cunningham’s *Hell on Earth* seeks to add new insights into the experiences of those who were sent to Sandakan. In particular, she makes extensive use of the evidence given by their Japanese captors during the post-war trials and the more general experience of Japanese soldiers on Borneo to ‘bring a different perspective to the story’. Her motivation for writing is very personal—her father, Lieutenant Tom Earley, was held at Sandakan for 15 months and only escaped the fate of many others because he was transferred to Kuching in 1943.

The book covers several distinctive areas associated with the Sandakan experience. The initial transportation of the prisoners from Singapore, establishment of the Sandakan camp, construction of nearby airfields and the gradual deterioration in conditions are outlined in the first chapters. Of particular interest was the early establishment of an extensive clandestine network, controlled by Captain Lionel Matthews. This linked the prisoners with nearby European civilian internees and the local population. The activities of this resistance movement, and its ultimate betrayal, are covered in subsequent chapters.

The clandestine network facilitated the construction of a secret radio receiver by the prisoners, the stockpiling of small quantities of weapons outside the camp, the gathering of intelligence on Japanese activities, liaison with Filipino guerrillas and the development of contingency plans in the event that liberation seemed likely. The links with the Filipino guerrillas ultimately allowed three prisoners to escape and return to Australia. Unfortunately, the network was compromised in mid 1943 and the Japanese were ruthless in routing out the ringleaders. Matthews and eight others were subsequently executed in March 1944. He had already been awarded a Military Cross for his conduct during the Malaya campaign and was subsequently awarded a posthumous George Cross for his leadership at Sandakan.

The second half of the book covers the actual conduct of the death marches between Sandakan and Ranau, the possibility of whether the Allies could have staged a rescue of the prisoners before these commenced, and the extensive post-war searches to find the remains

of the prisoners scattered along the route. Despite some believing that the main purpose of these marches was to simply exterminate the prisoners, post-war investigations revealed that the marches were motivated by a desire to move the captives away from what the Japanese perceived as an Allied invasion threat to the Sandakan area.

In late 1944, senior Japanese commanders ordered the general consolidation of their forces on the west coast of Borneo, which involved the construction of an overland track from the east coast. Interestingly, the difficulty of traversing this route was well known to the Japanese—in one instance only 200 out of a group of 800 Japanese soldiers who commenced the journey in January 1945 survived. It is believed that as many as 8500 Japanese died during the moves from the east to west coasts in 1945. As one post-war reported cited by Cunningham noted, 'the Japanese, therefore, were well aware of the strain which the march would impose on half-starved, malaria-ridden men, some of whom were suffering acutely from beriberi and dysentery'.

The POW marches occurred in three waves, with groups departing from Sandakan in January, May and June 1945. What emerges from the post-war trials of the Japanese guards is less a picture of organised extermination than a grim portrait of already starving and sick prisoners succumbing mostly to exhaustion but aided by the brutality and neglect of the Japanese. The circumstances surrounding the marches make it difficult to be completely accurate about the time, place and cause of many of the deaths. It is suffice to say, however, that the few who survived to arrive at Ranau were dead by August, either through starvation, illness or Japanese execution. The same combination accounted for the 200 prisoners, too weak to move, left at Sandakan after the departure of the June group.

The book looks at some length about the possibility that the Allies could have rescued the Sandakan prisoners. This was discussed at various levels in 1944 and 1945. Gathering the prerequisite intelligence to inform feasibility planning became one of the objectives of a Services Reconnaissance Department operation codenamed 'AGAS'. Unfortunately, a multitude of difficulties, particularly a heavy reliance on reports from the local agents, meant that the required information was gathered too late and was too unreliable to support even planning for such a rescue, let alone an actual attempt. Furthermore, the prevailing strategic circumstances were not conducive to supporting an operation of this sort.

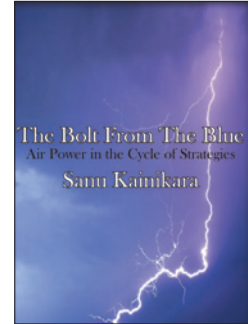
The complexities of recovering the remains of the prisoners who had fallen between Sandakan and Ranau are recounted in the final section of the book. Australian War Graves Units made several searches of the relevant areas, with the last occurring in the first half of 1947. One individual, who features in this section and in the chapters touching on the post-war trials, is Warrant Officer Bill Sticpewich, one of the six who survived the period of the marches. He played a critical role in the trials related to Sandakan and the death marches after the war. In many cases, he was the sole prosecution witness. Perhaps not surprisingly, Sticpewich emerges as a highly-traumatised and angry survivor, fixated on seeing his former captors harshly punished for their actions.

Hell on Earth plays a useful role in increasing our understanding of the Sandakan experience. It is a story with few heroes, many villains, many more victims and only a handful of survivors. If the book has one weakness it is that in attempting to reconstruct a series of events made very complex by the absence of reliable documentary evidence or witnesses, Cunningham has produced a narrative that at times is somewhat disjointed. While there is no doubt that

the book covers a horrific POW experience, its subtitle, *Sandakan – Australia’s greatest war tragedy*, is overstated. War by its very nature is tragic, and Australians have suffered in a great many conflicts. Twenty-two thousand Australians were captured by the Japanese during the Second World War. Of these, 8031 died in captivity. The real tragedy is that they were the ones fated to pay the price for unsound Australian strategic policy developed during the interwar years. Lest we forget.

***The Bolt from the Blue:
air power in the cycle of strategies***

Sanu Kainikara
Air Power Development Centre: Canberra, 2013
ISBN: 978-1-9208-0094-9



Reviewed by Group Captain Phil Edwards, RAAF

Dr Sanu Kainikara is the air power strategist at the RAAF’s Air Power Development Centre. He is the author of 11 books and has published numerous papers on national security, military strategy and air power in a number of professional journals, including the *ADF Journal*.

Arguably, one of the most over-used words in the modern English language is ‘strategy’. It seems that most sections of the community, particularly the commercial sector, have jumped onto the bandwagon and have used ‘strategy’ or ‘strategic’ in every conceivable context. In his latest publication, Kainikara has returned ‘strategy’ to its military roots by analysing a spread of military strategies aligned to national objectives with an emphasis on air power. He argues that with the national interests of a country no longer stopping at physical boundaries, countries of influence that have cutting-edge air power technology as a resource are best placed to utilise these strategies in support of the overall ‘grand strategy’ of the nation.

Air power is one element of a whole-of-nation approach to serving the national interest, and Kainikara addresses four strategies that are aligned to national objectives. These are ‘influence and shape’, ‘deterrence’, ‘coercion’ and ‘punishment’. While not new concepts, Kainikara provides a fresh perspective that explores the growing trend of governments to merge the threat or actual application of air power in order to expedite a diplomatic solution in an international crisis, in preference to the longer-term commitment of an occupying force. However, he also makes the point that in order to undertake these strategies, a government must have credible air power assets and the political will both to commit to a strategy and, when necessary, to follow through with another should an escalating situation demand further commitment.

Although these strategies are both hierarchical and cyclical in nature, their employment does not necessarily mean that government must go through each phase before resorting to the next step. In addressing each strategy, Kainikara outlines the opportunities and challenges they represent in order to gain an acceptable political outcome. In weighing up the considerations, he argues that the employment of air power through the application of these strategies offers a more precise and less complicated ‘tool’ for a diplomatic outcome that furthers a nation’s interests.

Dr Kainikara's monograph debunks many of the critics of air power by providing common-sense, practical measures on how a highly-capable air force can be employed in various roles in support of diplomatic measures. It is recommended reading for anyone who is either associated with or has a general interest in air power. He highlights that the cycle of strategies is not exclusive to air power but that—to achieve success in the higher end of conflict where sea and land power forces are engaged—air power sits as a key element in all environments.

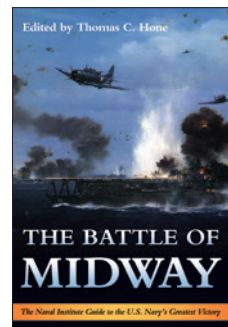
Dr John T. Farquhar, from the Department of Military and Strategic Studies at the US Air Force Academy, who as part of his course program examines how international air forces approach the challenges of applying modern air power, has commended the monograph as 'insightful fine work'. He cites its high-quality, theoretical work, from an international perspective, and notes that it has been recommended for inclusion in the Academy's curriculum.

In summary, Dr Kainikara has provided an international standard by which air power can be assessed against strategies aimed at promoting the interests and security outlook of a nation. Overall, it is well written and follows a line of argument that provides a practical guide on how air power can be applied in the national interest.

The Battle of Midway: the Naval Institute guide to the US Navy's greatest victory

Thomas C. Hone (ed.)
Naval Institute Press: Annapolis, 2013
ISBN: 978-1-6125-1126-9

Reviewed by Squadron Leader Travis Hallen, RAAF



Battle histories play an important role in the military: they are a source of pride and a foundation for a military's *esprit de corps*; they are the defining events in the biographies of Service heroes; and, more practically, they are a key source of lessons learned. Yet despite their importance, a Service's defining battles can be poorly understood both in their detail and their enduring relevance by those for whom they hold significance. This is both unfortunate and dangerous for, in the absence of understanding, history can soon give way to mythology.

For this reason, well-edited anthologies focused on key battles are welcome and important additions to any military member's professional library. Thomas C. Hone's well-structured compilation that draws on the US Naval Institute's extensive catalogue of research on the Battle of Midway Atoll, billed as 'the greatest battle in American naval history', definitely falls into this category.

The Battle of Midway Atoll is an exemplar of how the 'mythologising of history' can obscure the lessons it should teach. Credited as the turning point in the war in the Pacific, the air and sea battle that occurred between 4 and 6 June 1942 involved a heady blend of vision, luck, skill, determination and courage on both sides. However, despite the multitude of factors that shaped the battle's outcome, the belief that it was American code-breakers who enabled visionary Admirals to position their forces to pounce on the Japanese carriers at the moment of their greatest vulnerability persists in the popular memory. While there is some validity in

this view, the simplicity of such an understanding belies the complexity that defines this most significant of battles. This complexity is readily apparent in the works selected by Hone.

The scope of Hone's examination is impressive. The book's 53 chapters provide a wide-ranging narrative that stretches across the strategic, operational and tactical levels on both American and Japanese sides. Moreover, within each level, Hone has selected works that examine the people, plans and equipment involved in the battle.

The strategic contest between Admirals Nimitz and Yamamoto that lies at the heart of the Battle of Midway's enduring interest is necessarily examined but it is not the book's sole focus. The perspectives of individual combatants are afforded a surprisingly large share of the book's chapters. This includes personal perspectives on some of the Battle's iconic moments, such as Lieutenant Commander Yahachi Tanabe's detailed description of how the submarine he commanded, I-168, approached and eventually sank the USS *Yorktown*.

On the American side, the post-action report of Lieutenant (Junior Grade) H. S. Parker Jr., US Navy Reserve, the Executive Officer of Motor Torpedo Boat Squadron One, provides an insight into the little-discussed role played by the Midway-based PT Boats in the air defence of Midway Atoll, and rescue and recovery operations for downed airmen. The closing sentence of Parker's report succinctly and with powerful simplicity captures the human dimension of the battle: 'On June 6, 1942, eleven casualties of marine [sic] detachment defending Midway, killed in air raid of June 4th were buried at sea from PT boats'.

Such diversity of perspectives in the articles selected by Hone offers the reader a broad appreciation of the human dimension of the battle, its planning, execution and aftermath. It is this human dimension that provides the common thread to the book's diverse range of articles. Excerpts from the works of Mitsuo Fuchida and Masatake Okumiya (both wartime aviators in the Imperial Japanese Navy), and John B. Lundstrom (an award-winning American historian of the Pacific War) highlight the role personalities played in the planning and conduct of the battle. Fuchida and Okumiya draw on personal knowledge of the Japanese commanders and their planning for the Midway campaign (referred to as Operation MI by the Japanese) to identify causal factors in Japan's ultimate defeat.

Admiral Nagumo's passivity in accepting Operation MI with indifference, Rear Admiral Ugaki's manipulation of pre-operation wargaming, and Admiral Yamamoto's 'uncompromising insistence upon the Midway operation in the face of all cogent arguments against it' are portrayed, in the reviewer's view accurately, as key contributing factors to Japan's apparent bad luck during the battle. In stark contrast, the pragmatism, professional judgment and willingness to ask for and heed advice displayed by Admirals King, Nimitz, and Fletcher allowed US forces to plan for and adapt to the inherent complexity of carrier-centric battle. This flexible and innovative planning was the principal factor that enabled a numerically but, in many respects, technologically-inferior force to emerge victorious and begin to turn the tide of the Pacific War.

The technological aspects of the battle are also infused with the influence of human agency. Extracts from Mark Peattie's seminal work on the rise of Japanese air power draw the reader's attention to how the Zero's technological edge over early-war US fighters was augmented by the skill of the Japanese airmen. However, Peattie also draws attention to how deficiencies in Japanese command and control hampered the realisation of the aircraft's full potential during the battle.

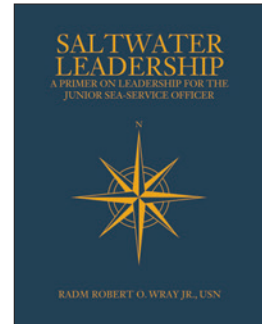
American tactical creativity also contributed to mitigating the threat posed by the technology gap. Admiral Jimmie Thach's first-hand description of the genesis and employment of his eponymous *weave*, a formation manoeuvre that enabled US airmen to overcome the Zero's superior performance, is an enlightening reminder that effective military innovation is more than the development of new hardware and software. In this respect, Midway provides a cautionary tale as to the perils of relying on technology as the decisive factor in modern warfare.

Overall, *The Battle of Midway* is an excellent guide to a defining battle of modern history. The reader will not come away with an in-depth understanding of the battle but will appreciate its significance and, more importantly, its complexity. The diversity of the anthology means that this large collection of short articles provides an excellent starting point for new researchers and a handy reference for those with existing knowledge. But, more importantly, its focus on the importance of the human dimension at all levels in complex warfare should see this book enter the professional reading list of every military member, irrespective of his or her rank or role.

Saltwater Leadership: a primer on leadership for the junior sea-service officer

Rear Admiral Robert O. Wray, Jr., USN
Naval Institute Press: Annapolis, Maryland, 2013
ISBN: 978-1-6125-1212-9

Reviewed by Brigadier Chris Field, CSC, Australian Army



Hereafter, if you should observe an occasion to give your officers and friends a little more praise than is their due, and confess more fault than you can justly be charged with, you will only become the sooner for it, a great captain.

Benjamin Franklin, American minister to France,
letter to his friend Captain John Paul Jones, 1780.

It is amazing how much you can accomplish if you do not care who gets the credit.

President Harry S. Truman

In describing a basis for Australia's maritime strategy, the 2013 Defence White Paper, *Defending Australia and its national interests*, makes clear (p. 28) that it requires all elements of the ADF to operate and fight within a maritime strategy, namely:

Australia's geography requires a maritime strategy for deterring and defeating attacks against Australia and contributing to the security of our immediate neighbourhood and the wider region. Our ability to generate a joint force for this strategy critically depends on the Royal Australian Navy, the Australian Army and the Royal Australian Air Force, supported by the full range of defence capabilities.

Underlining the evolution of Australia's maritime strategy, the 2013 Defence White Paper notes on 40 occasions the importance of amphibious capabilities to Australia. In addition,

it emphasises (p. 63) the nexus of amphibious capabilities to Australian strategic thinking, stating:

The ADF's joint amphibious capability will be a central plank in our ability to conduct security and stabilisation missions in the region.

Importantly, the 2013 Defence White Paper articulates ADF requirements for the implementation of amphibious capabilities, noting (pp. 37, 84 and 97) that:

The challenges for training and institutional culture involved in developing the capability to conduct amphibious operations will be significant.... Amphibious operations are joint by nature, requiring contributions from across the ADF.... Sustained effort across the [three ADF] Services will be required to build a capacity for ADF amphibious operations over time.

These strategic requirements for Australia make Rear Admiral Wray's book, *Saltwater Leadership: a primer on leadership for the junior sea-service officer*, a timely addition to the professional libraries of junior leaders in the ADF. Rear Admiral Wray has written for 'junior officers at sea, regardless of service type or agency'. He acknowledges that this primer is not intended as a great leadership text but a short, simple book that can be read in five-minute snippets by a busy young officer at sea. It is not an academic text. It is a book encouraging inquisitive leaders to undertake further professional study of leadership.

Originally a surface ship nuclear engineer, Rear Admiral Wray is fond of lists. These lists mean, as the author intends, that *Saltwater Leadership* may be frequently and repeatedly read in short sessions in order to provide junior leaders with the ideas they may apply in their hectic appointments.

The author gathers ideas from the sea Services (US Navy, Marine Corps, Coast Guard and Merchant Marine), other Services, business and academic books. Importantly, the lists seek to describe the qualities and attributes of leaders; leadership competencies; leadership advice and principles; and models for leadership. His essential message is that junior leaders should provide their people 'an honest, hardworking team-mate'.

The book is divided into ten simple and relatively stand-alone chapters with four appendices. In keeping with the simplicity of the book, Rear Admiral Wray writes chapters using leadership lists, leadership stories, leadership advice, and advice from senior leaders. He concludes with advice on '[b]ecoming the leader you want to be', followed by appendices detailing study-practise-observe-mentor techniques, recommending 35 leadership books, and describing leadership traits, attributes, advice and rules.

Rear Admiral Wray defines his views on leadership early in the book. He then uses thoughts and ideas from well-known military and civil leaders to emphasise his views, which are:

1. **Leadership matters.** Everything in the world happens because of leadership.
2. **Leadership is definable.** Leadership can be described and defined. It can be measured.
3. **You can be a leader.** You don't have to be born a leader. You can learn to be a leader. Whatever you are today, you can become a leader, if you choose. You can make things happen.

One section of *Saltwater Leadership* addresses one challenging area of leadership, namely delegation. This is an area where many ADF leaders, junior or otherwise, struggle to perfect with confidence or finesse. Under the title ‘Delegate “til it hurts”’, Rear Admiral Wray emphasises three points on delegation that may act as useful pointers for junior leaders in the ADF:

1. **You’ll feel uncomfortable.** You will wonder if your people can do the task as well as you can.
2. **There will be mistakes.** But if you aren’t delegating enough so that your people occasionally make mistakes, then you aren’t delegating enough. The key is to make sure that mistakes are small and caught in time. Mistakes are the result of people learning and doing new things.
3. **You will be envious.** There will be times when the task is a fun or exciting one, something you would like to do. But if it’s more appropriate for one of your people to do it, accept the fact and delegate.

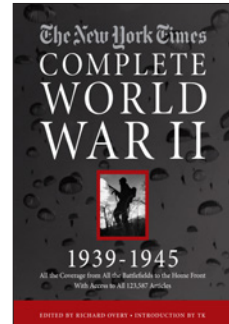
Finally, RADM Wray has captured a thought on leadership that many ADF leaders could aspire in asserting that ‘[t]he only time a leader should raise their voice is to save a life, either others or their own’. Ultimately, *Saltwater Leadership* provokes even the most senior leaders to reflect on their own leadership, while simultaneously helping to guide young leaders as they enter a career in the ADF.

On-line book reviews

The New York Times Complete World War II: 1939-1945, all the coverage from all the battlefields to the home front

Richard Overy (ed.)
Black Dog & Leventhal: New York, 2013
ISBN: 978-1-5791-2944-6

Reviewed by Dr Noel Sproles



The sheer size and scope of this book makes it one that is not easy to pass over without closer inspection. Printed on high-quality paper a little larger than A4 size and comprising over 600 pages, it weighs a hefty 2.5 kilograms. Inside are reproduced nearly 100,000 articles submitted to the *New York Times* by journalists covering World War 2, from 1939 to 1945. Supported by maps and photographs, in both black-and-white and colour, it is a journalistic *tour de force* of one of the more tumultuous periods of the 20th century.

However, once having got past this positive first impression, doubts set in. It looks good but what possible use could it be? Surely the articles it contained would have been censored and, when the need was felt necessary, truth would have been sacrificed to expediency. What value is to be obtained from reading articles of events seen through the fog of war when, with the hindsight of nearly 70 years, we already know so much about them? What could it tell us that we don't already know?

It was, therefore, a pleasant surprise when it became apparent that there is value still to be found in these old articles, with much that the general reader will find of interest. Certainly, there is plenty of evidence of the censor's pen in protecting what were on-going operations. Some reporting, such as the program to introduce the B-29 Superfortress strategic bomber into service, is quite clearly vague. Disinformation is also to be found in a Japanese report that only one aircraft carrier was involved in the attack on Pearl Harbor. But there is much else that was openly discussed and even of current interest, such as the effect on the health of women working in war industries

It has gossip such as General Marshall's fondness for reading *The Three Musketeers*. There are opinions that run contrary to some current revisionist views, such as that the landings at Arnhem were worth the try. There is intelligence that may well have influenced Allied thinking on how to end the war in the Pacific, such as the result of an opinion survey carefully carried out among Japanese civilians on recently-captured Saipan. This indicated that they still believed that Japan would win the war, as they were 'spiritually stronger' than the Allies.

One poignant article detailed the events surrounding the battlefield death of the popular journalist, Ernie Pyle. There is an insight into the views of the time in a report of an address by General Blamey in 1942 to Australian troops in New Guinea. A modern-day general would consider it unthinkable to express the sentiments that he did concerning the enemy. And there

are little gems that a reader may come across by happenstance, such as when I found a report on an action carried out by my father's RAAF squadron in 1943.

There is also hard data to be found. Less than three months before his death, there is an editorial supporting the sacking of General George S. Patton from his position as military governor of Bavaria. Back on the home front, the amount of money being spent is barely credible, even without conversion to current values. For example, the cost of aircraft manufacture in the US alone reached an annual rate of \$20 billion. There are details to be found on the production of raw materials, such as metals and food and clothing that are rarely to be found in military history books covering the period. Buried deep in the archives somewhere there is no doubt a record of Australia sending much of its wool clip to the US early in the war to be held in storage for the British. Finding that and similar records may not be easy but here it is in this book for all to see. And there are numerous other examples.

A CD, with an associated search engine, is provided with the book. This makes discoveries such as those described less a case of hit-or-miss as it would be if the reader had to rely on the text of the book alone. For example, I gained the impression that little was to be found about the Australian war effort in the book. However, using the CD and its search engine, I found instead that coverage of the Australian effort was proportionate and positive. A search is made by entering key words and then it can be refined further by year, month and even day. While the book contains only selected articles, some of which are edited, I suspect that the CD has a wider coverage. With practice, it should be possible for a researcher to carry out quite specific searches.

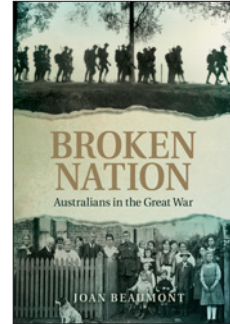
So far, I have only just started to explore this book. I doubt that I will ever get to read it all as there is so much to be found here. But I am enjoying the attempt so far. It is full of facts detailing minor actions and events that seem to escape military history books. Here are the very reports that people living at that time relied on for news. Here too are glimpses of the world views of those same people. It has the taste and smell of the 1940s and is a valuable guide for anyone attempting to make a judgment on the merits of their actions.

My expectation was that price could be a deterrent for the general reader and that I would be recommending it for the reference section of libraries or as a present for those interested in World War 2 history. I was surprised then to see how inexpensively it can be purchased through online booksellers, where it is being sold for what seems to be a give-away price. Therefore, I have no hesitation in recommending this book to anyone interested in gaining a perspective of World War 2 perhaps a little different from that usually found in military histories.

Broken Nation: Australians in the Great War

Joan Beaumont
Allen & Unwin: Sydney, 2013
ISBN: 978-1-7417-5138-3

Reviewed by John Donovan



Professor Beaumont has written a broad narrative history of Australia's part in the Great War. Although it seems aimed principally at the general reader, it is fully referenced, enabling interested readers to delve deeper into the subject. The manner in which she links events in Australia with events overseas at around the same time is particularly useful. The book is well produced, and places events in their correct context. For example, the reality that the Charge at The Nek supported the Australian/New Zealand attack on Sari Bair Ridge, not the British landing at Suvla Bay (as was suggested in the film *Gallipoli*) is highlighted.

Professor Beaumont writes about the Great War with an understanding of the ethos of the times, acknowledging, for example, the influence of their Christian culture on the attitudes of many soldiers serving in 'Palestine ... so steeped in biblical history'. Some 'post-modernisms' do come through, although—in an era of multiculturalism in which dual loyalties are celebrated—it seems strange to criticise, even implicitly, those who in 1915 considered themselves to be both Australians and 'sons of the Empire'.

The discussion of the conscription referenda and the long-term problems they caused for Australian society is particularly well set out, as are the racial issues that underlay much of the 'No' case. However, Professor Beaumont does not highlight that the demand for conscription arose at least in part because the AIF was expanded beyond Australia's capacity to maintain on a voluntary basis. It became a force larger than the Canadian Expeditionary Force, which drew on a population more than 50 per cent higher than Australia's. The reality of over-expansion is well demonstrated in the book's graphic comparison of enlistments against battle casualties between 1916 and 1918, and by the frequent references to battle fatigue and over-used units.

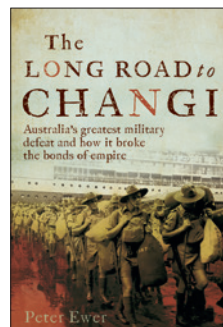
Professor Beaumont notes that each of Australia's five infantry divisions chose to construct its memorial at the site of a victory (however bloody), rather than commemorate its losses in unsuccessful battles like Fromelles or Bullecourt. This is in keeping of the self-image of the First AIF, as an ultimately victorious force. Indeed, one such memorial (to the 2nd Division at Mont St Quentin) was so aggressively triumphal that the invading Germans destroyed it when they occupied France during World War 2. As Professor Beaumont notes, the AIF was a force that did not see itself as the victim of circumstances!

As is common among historians, the Versailles Treaty is criticised for its draconian terms, quoting Keynes' attack on it as a 'Carthaginian peace'. Perhaps, but a German victory might have brought harsher terms upon the Allies, given the example of Brest-Litovsk. As an example, had the British Empire lost to Germany in that era of colonial 'trade-offs', claims might have been made against Australia, which had nearby pre-war German colonial possessions.

Perhaps inevitably in a volume of this size, there are typos, including Mansurian Lakes, Steel's Post, Anthill (probably appropriate for the Bullant), and 260,544 British deaths at Gallipoli. Actual errors have also crept in: there were 66, not 40, Australian Victoria Crosses awarded during the war; the figure of 40,000 Australian deaths in 1917 seems high—perhaps it is the cumulative total to then; the battalions of the 1st Division and the 4th Brigade were split during the expansion of the AIF in 1916 but not those of the 2nd Division. There is also some confusion about unit designations in places; the map on page 366, for example, has the 4th and 12th Light Horse Brigades charging at Beersheba, whereas both units should have been shown as regiments, albeit part of the 4th Light Horse Brigade.

***The Long Road to Changi:
Australia's greatest military defeat
and how it broke the bonds of empire***

Peter Ewer
HarperCollins: Sydney, 2013
ISBN: 978-0-7333-3110-7



Reviewed by Squadron Leader Stephanie Collet, RAAF

The fall of Singapore is infamous in Australia. It graphically illustrated 'mother' England's inability to defend its colonies—which were responsible for producing vast amounts of its wealth. Australian dislike of command arrangements where large numbers of its troops are controlled by foreign military leadership can also perhaps be traced to Singapore.

Regrettably, the fall of Singapore left a painful memory for many Australian families, who were left to grieve loved ones lost with no known grave. These families probably saw both Australian and English political rhetoric about the 'bonds of empire' as empty as the graves of their loved ones. Of those who were captured, pitifully few survived Japanese treatment as prisoners-of-war, although some like 'Weary' Dunlop became household names.

Peter Ewer looks at the fall of Singapore from a perspective rarely addressed. Australians weren't alone in Singapore, as Indian, Scottish and other British troops were there when it fell. Yet only the 'poor' behaviour of Australians during the fall has been widely documented. No other nation's activities were presented to the British Cabinet, much less published since, raising the obvious question of why this occurred.

Aviation history buffs—especially RAAF members—would be familiar with Dr Ewer's previous works concerning the RAAF's performance in the skies over Darwin and Kokoda. His approach is similar in *The Long Road to Changi*, as he starts with the political nature of Singapore defence planning in the early 1920s. Australia's reliance on the 'mother country' for defence even then had its critics in Australian political and higher defence circles. The practicalities of England being able to defend Australia were glossed over, which Ewer clearly articulates. Ewer's narrative makes use of various voices, from Churchill to the troops on the ground, and through them also brings the disastrous 'Fortress Singapore' strategy to life.

As one expects of an historian, Ewer's work incorporates meticulous research from various sources in the UK and Australia. It is not always an easy read—and that's even before getting to the narrative on the activity in Singapore itself when it fell. Through the use of classified British Cabinet cables (that were not made available to the Australian Government), Ewer shows Churchill's contempt for Australia's government, defence requirements and even its military forces. While times have doubtless changed, this reader reflected on potential parallels in Australia's military experience some 60 years later, when Australia committed forces to the Middle East in 2003 alongside the UK and US.

Ewer's research usefully highlights the 'island holiday' attitude of the military forces present at Singapore. Senior military officials were appointees from the 'mother country' and they clearly forgot lesson one of officer education: *lead by example*. This is quite frankly cringe-worthy reading, and Ewer spares no Service. Comments in a (British soldier's) diary about how (British) leaders were often so drunk they were incapable of issuing coherent orders appear beyond belief. It is unfortunate the soldier's family didn't give Ewer permission to publish the specifics. Interestingly, the Australian Air Force was twice as productive as its British counterpart in Singapore, as its work day stopped at 4pm rather than midday!

Of course not all senior officers—nor junior ones—in Singapore were incompetent or racist. Ewer skewers those that deserve it, such as the savaging accorded Air Vice Marshal (RAF) Robert Brooke-Popham, Commander of British Forces in the Far East. His role in the disaster is clearly illustrated with his peculiarly Janus-like performance well referenced.

Ewer also particularly focuses on puncturing the media-propagated 'model general' myth of Australian Major General Gordon Bennett. While a psychological diagnosis appears a stretch for an historian's work, Bennett's performance is so meticulously researched and well referenced that Ewer's conclusion appears reasonable to a layperson. Nonetheless, Ewer's description of Bennett's self-treatment for 'nerves' during World War 1—the symptoms of which would support what we call post-traumatic stress disorder today—would likely horrify current-day mental health professionals. It certainly explains what can only be termed Bennett's dubious performance before he escaped Singapore in the chaos of the fall.

Ewer's narrative highlights quite a bit of the actual battle for Singapore, both the good and not so good aspects. Again, this is drawn from various perspectives and, again, it is not easy reading in parts. The accounts of Indian and Scottish bravery, in addition to Australian, come not only from the voices of their peers but Japanese records such as diaries and battle reports. There is something for every reader in this book, regardless of Service, but it could still be painful for some readers. Learning that the Japanese shelling of Singapore was more intense than Australians experienced in World War 1 was disturbing, as were many tales of the work of transport corps personnel.

From a personal perspective, I found that reading this book during a family Christmas was unwise, as my great-grandfather served in the Australian Infantry in World War 1 and, in Singapore, was a 40-year old driver with 2/3 Motor Ambulance Convoy. He perished as a prisoner-of-war somewhere on the Sandakan death marches in Borneo.

While the political aspects are well referenced, more referencing in actual battle narratives would not have gone astray. And although engaging, Ewer's description appears too lively in parts to have come from battle records, which may prove bothersome for those with front-line

experience. Some of the referencing is also incorrect, which would not concern readers using this book for general information but would prove frustrating to those seeking source material for research purposes.

Best of all, by using British records held by its National Archives and Imperial War Museum, Ewer shows the blatant hypocrisy of Churchill and certain British authors, such as Peter Elphick. Focusing on Australian troop misbehaviour was more convenient than dealing with the messy issue of the misbehaviour of their own troops or Britain's larger failure in Singapore. Ewer also clearly articulates the highly-dubious sources quoted in the British Cabinet papers as 'proof' of the misbehaviour, many of which were unreliable at best, based often on nothing more than gossip.

In line with correcting the record, Ewer usefully highlights the shambolic evacuation process. His description of events is at times akin to the scene from Cameron's *Titanic* movie—with different policies applied on what boat, how much could be carried, and by whom. Unsurprisingly, one's class was often the discriminating factor. The British Air Force, for example, had permission to leave, whereas Australian forces (and some thousands of other British forces) did not. Why was this?

Ewer's research shows only 100 places were allocated to Australian forces. That's 100 in total. Precisely why this number was allocated, having no bearing on the ratio of Australians within the overall force, will likely never be known. Yet Indian regiments, which comprised a smaller ratio of Singapore's defenders, were allowed one officer and 30 troops per battalion; British ratios were smaller again but their overall evacuation allocation was substantially higher.

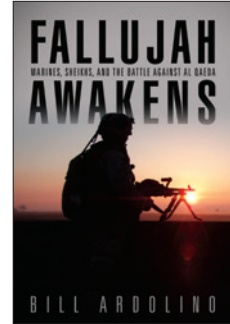
For this reviewer, the strength of Ewer's book is that it provides sufficient depth behind the disaster of the Singapore strategy by showing the personalities involved in the grand strategy through to the tactical decision makers. In addition to the issue of how racism played a part in the downfall, Ewer's use of personal accounts powerfully illustrates the cost of arrogant decisions made by Churchill and others to the lives of many Australian and British troops. Ewer also shows that misconduct was displayed by a broad range of military personnel, including British, during the fall of Singapore.

Best of all, Ewer's book will make readers question 'why' in relation to a range of issues. Even though many of these questions will likely remain unanswered, Ewer's findings very usefully contribute to a better understanding of the circumstances and decision-making surrounding the debacle that was the fall of Singapore.

***Fallujah Awakens:
Marines, sheikhs, and the battle against al Qaeda***

Bill Ardolino
Naval Institute Press: Annapolis, 2013
ISBN: 978-1-6125-1128-7

Reviewed by Thomas Messer



Libraries are full of studies on effective leaders, particularly those defined by leadership during conflict. Such studies often focus on the individual and their defining character traits, which combined with their often lofty rank and ability to affect change, can become decisive. As conflict has devolved from nation-states fighting one another on agreed terms through to intra-state violence, tribal or ethnic war, and counterinsurgency—which are defining the modern era—the individual has arguably become even more important.

In these sub-state conflicts, decisions taken by individuals can have considerable importance, as shown throughout American journalist Bill Ardolino's *Fallujah Awakens: Marines, sheikhs and the battle against al Qaeda*. Fallujah, known as the 'City of Mosques', featured in media reporting in the early stages of the Iraq conflict as the scene of vicious battles and the subject of a major Marine assault following the public mutilation of four Blackwater contractors (the so-called First and Second Battles of Fallujah).

Ardolino's book examines the personalities and politics involved in counterinsurgency through the lens of A Company, 1st Battalion, 24th US Marine Corps Regiment, a unit of Reservists with varying backgrounds. Ardolino examines the strategies employed by the Marines and Fallujah residents seeking to counter the influence of militants in the region. Ardolino introduces readers to the nuances of Iraqi tribal life and the importance of sheikhs having influence, wealth and luck to maintain their leadership position. *Fallujah Awakens* follows the relationship between the Marines and various tribal leaders from its inception through to their combined efforts to fight the insurgency and sway local populations towards supporting friendly tribes and US forces.

Eschewing the option to romanticise counterinsurgency's application and its wholehearted adoption, Ardolino uses the Marines' and Iraqis' own words to portray the mixed emotions that arise in such a complex environment. His accounts of the responses to an accidental shooting, a chlorine bomb attack on civilians, and a decision to support the Marines' local allies against foreign fighters all show the atypical decisions which may confront military personnel serving in complex environments. Without Ardolino's interviews with local Iraqis, these incidents—and the Marines' response and the outcomes—would have lacked an Iraqi perspective and their real impact would have been somewhat speculative.

Fallujah Awakens is illuminating because, for most people, it is difficult to comprehend the challenges in attempting to distribute foodstuffs or conduct foot patrols in an area known to be frequented by insurgents. Discussion on issues such as the concept of differentiating between 'good bad guys' and 'bad bad guys' to identify former enemies who might be utilised

to work alongside coalition forces or whether coalition forces undertaking counterinsurgency campaigns should select local leaders as their allies, take detached theory to hard examples of the sort of tactical decisions that need to be made by those engaged in the difficult and at times not immediately rewarding nature of counterinsurgency operations.

Fallujah Awakens is a most readable account of a complex period involving multiple individuals, groups and agenda, drawn from Ardolino's numerous trips to Iraq and his interviews with a range of stakeholders. Ardolino has managed to recreate events that occurred at Fallujah with the suspense of a novel combined with the succinct prose of non-fictional reporting. Throughout, Ardolino's understanding of tribal politics and counterinsurgency doctrine are evident, without any requirement to use extended quotes from field manuals or speeches. His goal was evidently not to lecture on the theoretical underpinnings of counterinsurgency but to let readers understand how counterinsurgency was applied by those on the ground, and to share the practitioners' views on its application and utility.

Fallujah Awakens provides a useful counter-point to counterinsurgency publications which focus on the strategic picture but neglect detailed case studies. Seminal counterinsurgency publications draw on the experiences of practitioners, synthesising their at times divergent experiences to a cohesive analytical whole. The pen portraits of involved individuals which Ardolino shares with readers are a valuable contribution to the field and do not stray into the unnecessarily romantic and idealised characterisations which regularly feature in some writings.

Fallujah Awakens does not present an abstract and detached analysis of the efforts of 1/24 Marine Battalion in Fallujah or critique their application of counterinsurgency. Rather, it shows the thought processes, decisions made and results of those decisions in a complicated and fluid environment. Analysis of whether the decisions were correct or wholly consistent with policy is left to the words of the Marines and Iraqis themselves, with Ardolino simply narrating, which he was wise to do as a detached analysis would have proved far less informative and less of a deviation from the existing literature in the field.

The accounts of events—usefully shaped by research and interviews with Iraqi and American individuals—illuminates the work of the Marines and grants readers a window into the incredibly delicate decisions made by the involved parties. Much like the work of T.E Lawrence and other authors who spent considerable time operating in a foreign country and seeking to develop alliances—and whose works proved informative decades after their publication—*Fallujah Awakens* may serve the same purpose as an extended case study displaying the nuances of applying counterinsurgency or, more broadly, the requirement for considered policies in post-conflict zones with complicated social and political undercurrents.

