



# Army

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- Developing Strategic Thinking
- Strategy and adaptation in counterinsurgency: lessons for the Australian Defence Force from the defeat of the Tamil Tigers
- What to do and how to think if you want to lead
- Informational properties of extremist content:  
An evidence-based approach
- USA Military Exemptions in International Treaty Law  
– Should Australia Follow Suit?
- Towards an Integrated System for Army Logistics Management
- An essay on the Success of Air-Land Integration during the Burma Campaign in World War II—An illustration of the importance of leadership, adaptation, innovation, and integration

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# Developing Strategic Thinking

Major Leon Young

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## Abstract

Why is strategic thinking so difficult to cultivate within organisations? It is a general observation that organisations rely on either the emergence of strategic thinkers within the organisations or poaching proven strategic thinkers from other successful organisations. Public organisations, like the military, are often restricted in their potential pool of strategic thinkers. Would it not make more sense to grow a strategic thinking capability as one would build an offensive or defensive capability? That is the inputs and outputs of a strategic thinking capability are predictable and robust over time.

This paper hopes to further our understanding of strategic thinking and strategic thinkers through original research and modelling. It will explore the contemporary understanding of strategic thinking from both a business and military point of view. It will then describe the significant characteristics of a strategic thinker that are measurable and developable. Finally, it will propose a capability development model for strategic thinking.

## Introduction

*'We tend to use strategy as a general term for a plan, a concept, a course of action, or a "vision"...Such casual use of the term to describe nothing more than "what we would like to do next" is inappropriate and belies the complexity of true strategy and strategic thinking'. (Prof Douglas Lovelace Jr., Director of the US Strategic Studies Institute)<sup>1</sup>*

Reflecting on Lovelace's quote we see that the scope of strategy is wide and covers a number of practical and academic fields. This has led to a concern that the use of the term is so varied as to be almost valueless.<sup>2</sup> Notwithstanding this diffusion of the term, or perhaps because of it, strategy attracts significant attention both within business and government organisations. A simple online search revealed over 4.8 million articles containing the word strategy.<sup>3</sup> Since 2015, 17,500 articles with strategy in the title, have been created.

Strategy is popular. But is it important? In a recent text, Prof Lovelace Jr also stated that '[no] subject is more essential in the preparation of national security professionals and military leaders than the teaching of strategy'.<sup>4</sup> While it is an understandable obsession within the security industry, strategy is also fundamental to the success and sustainability of any organisation.<sup>5</sup> The importance of strategy would be difficult to understate.

Equally, strategic thinking is often cited as being one of the most important abilities to foster within organisations. For instance, a recent report commissioned by the United Kingdom's House of Commons titled 'Who does UK National Strategy?' stated that 'Strategic thinking is a valued skill in the Civil Service. It is one of the six core requirements in the Senior Civil Service competency framework'.<sup>6</sup> This view is not new. Zabriskie and Huellmantel (1991) stated that '[s]trategic thinking is required to secure the long-term future of nations and organisations'.<sup>7</sup> However, despite the touted importance of both strategy and strategic thinking, the majority of CEOs cited the 'lack of strategic thinking as the main problem in their organisations'.<sup>8</sup> In fact, the UK Chief of Defence Staff, Sir Jock Stirrup, proclaimed that the UK had 'lost an institutionalised capacity for, and culture of, strategic thought'.<sup>9</sup>

Closer to home several operational reports from the Middle Eastern deployments demonstrated that the Australian Defence Force also lacked

strategic thinking. For example, an operational report from 2012 stated that ‘...the Australian Defence Force (ADF) needs to identify and develop Commanders that think at the strategic (macro) level in order to design and implement effective campaign plans’.<sup>10</sup> — while another in 2011 said ‘...there is plenty of room to improve education of military planners and...personnel to think in terms of effects’.<sup>11</sup>

It should be unsurprising then that there appears to be an inherent desire by organisations to foster strategic thinking. As the Chief of Defence Force Fellow in 2015, I was asked to research how we should develop strategic thinkers in the ADF. The intent of this paper is to provide a number of relevant insights derived from that research and my research into computational strategic thinking models. The paper will consider what strategic thinking is, who strategic thinkers are, how strategic thinking can be measured and, importantly, how it could be developed as a robust organisational capability.

## **Strategic Thinking is a means-ends way of thinking that seeks to create future value**

As a derivative of the universal term strategy, strategic thinking is also poorly understood. It is common for researchers to disagree on what strategic thinking is.<sup>12</sup> Strategic thinking has, it appears, turned into a synonym for almost all of the concepts with strategic as their first word.<sup>13</sup> It is these muddled waters that have created considerable debate and confusion in strategic thinking.<sup>14</sup>

Thus, at the start of my research, I found myself in a position where there was a recognised idea that was broadly considered to be extremely important, yet there was no agreement on definition. While there are a small number of conceptual descriptions of strategic thinking, none actually measure strategic thinking using quantitative metrics or cognitive logic.<sup>15</sup> Finally, a review conducted in 2015 failed to reveal any existing methods to develop strategic thinking as a capability. The review did reveal—what I hope is intuitive to the reader—that strategic planning is not strategic thinking.

Unfortunately, strategic planning is often used as a synonym for strategic thinking.<sup>16</sup> It is actually the very utility of the word strategy and its many offspring that seem to create this confusion. The use of the terms ‘strategic

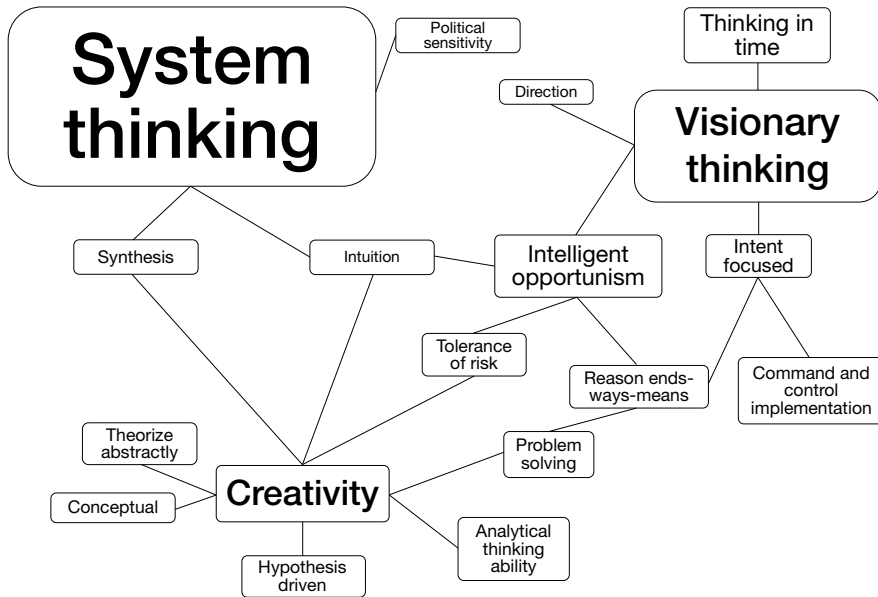
art' and 'strategic management' are two classic examples that serve to illustrate that one of the basic paradigms still widely accepted is analogising 'strategic thinking' with 'thinking about strategy'.<sup>17</sup> This is despite the highly-acclaimed and widely-accepted work of Henry Mintzberg, expounded in 1994, that strategic thinking could be distinguished from strategic planning, with Mintzberg arguing that 'strategic planning does not mean strategic thinking so much as formalized thinking about strategy—rationalized, decomposed, articulated'.<sup>18</sup>

This is not to say that strategic planning is outmoded or has no place in contemporary usage; rather, it should never be confused with strategic thinking. Ingrid Bonn is in good company when she describes strategic planning as 'a process that takes place after strategic thinking'.<sup>19</sup> Strategic thinking is not strategic planning, even if it is comprehensive and long-term.

So, if strategic thinking is not strategic planning, what then is strategic thinking? In order to understand the epistemology of the term strategic thinking, a historical review was conducted. What was immediately clear was that the confusion over the meaning of strategy thinking has prevailed for decades. Due to the apparent lack of consensus across other research, a different approach to a simple literature review was required to answer this question. Using over 120 key texts, predominately from the business and military fields, the key concepts of strategic thinking were identified and reviewed using a cluster analysis method. From this review, we could see that *strategic thinking is a means-ends way of thinking that is future-oriented and seeks to create value or an advantage for the system*.<sup>20</sup> While this definition departs slightly from a Defence- or national security-centric paradigm the definition allows us to recognise that there is a process (means-ends way of thinking) and an outcome (future value). Both the process and the outcome become important when we explore strategic thinkers and developing a strategic thinking capability.



## What makes a strategic thinker?



With strategic thinking defined, it became equally critical to understand the characteristics of the strategic thinking actors, strategic thinkers. Again, due to the many opinions about strategic thinkers, it was decided that the best way to understand the characteristics of a strategic thinker was through a comprehensive literature review and cluster analysis.<sup>21</sup> Detailed descriptions of the characteristics of a strategic thinker were discovered in 55 sources and 18 characteristics were identified and mapped using a cluster analysis (Figure 1).

The cluster analysis revealed that, despite the use of differing terms, there appears to be a broad consensus on three significant characteristics of a strategic thinker: visionary thinking, creative thinking and system thinking. A fourth characteristic, holistic intuition, was chosen as it appeared to be the glue that connected these characteristics together. Thus, theoretically at least, we should be able to describe strategic thinkers in the terms of the following four cognitive characteristics.

**Visionary thinking.** Genuine vision is a sense of direction that provides the focus for all activities within the organisation.<sup>22</sup> It even goes beyond this as a deep understanding of an organisation’s reason for existence is able to

provide a sense of common identity. Visionaries though are people with a sense of direction. Visionaries look far and wide while planners often focus on the short-term problems.<sup>23</sup> For strategic thinking to create future value it needs to be intent-focused—it should convey a sense of direction, discovery and destiny.<sup>24</sup> Strategic thinking is fundamentally concerned with, and driven by, the shaping and re-shaping of intent, often referred to as thinking in time.<sup>25</sup>

**Creative Thinking.** Creativity has attracted broad attention acquiring a complexity that ‘poses major problems for measurement’.<sup>26</sup> The field itself suffers from the most basic problems, ‘such as lack of definition and limited educational applications’.<sup>27</sup> This in turns has led to a situation where most measures and methods used to assess the creative processes, products and persons are found to be wanting.<sup>28</sup> Yet even the most basic assessments of creativity emphasise the ‘production of novelty as the crucial aspect’<sup>29</sup> when simple novelty on its own is not enough: ‘a product must also be relevant and effective’.<sup>30</sup> Creative thinking (that leads to future value) produces ideas that are novel and useful in competitive environments. War, as Storr said ‘is evolutionary, and that allows original and novel thought. That is the gateway to creativity for the practitioner’.<sup>31</sup>

That said, at this point, the distinction needs to be made between innovation and creativity. There is clearly a relation between the two as this definition of creativity demonstrates: ‘creativity is defined as the ability to innovate and move beyond what is already known’.<sup>32</sup> Innovation though appears to be greater as it has two phases: invention (or creativity) and exploitation.<sup>33</sup> Creativity in this case sits within the invention process and includes processes such as idea generation, idea evaluation and opportunity recognition. Exploitation meanwhile embodies the concepts of developing and commercialising. Moos et al defined innovativeness as the “ability of a firm to continuously generate and implement innovations”.<sup>34</sup> Whilst seemingly a circular argument it is clear that innovation requires creativity however creativity is not the whole of innovation.

**System Thinking.** The use of system thinking is not limited to any single domain. It is commonly associated with the field of systems engineering and most often used within strategic planning rather than strategic thinking. The use of systems theory within strategic planning is logical step due to its analytical nature. The use of systems theory within strategic thinking is

based on the association of holistic thinking. Originally it was considered that a system could best be understood through an understanding of the parts—bottom-up approach. System thinking however has evolved to understand that the system can only be understood through the dynamics of the whole.<sup>35</sup>

System thinking involves a number of steps. It first requires the consideration of the boundaries of the problem or 'framing the problem'. Note that there is no such thing as a closed system, thus forcing the thinker to consider the wider implications of their decisions. Following definition of the boundaries a system thinker must think in terms of the interaction of components, the inter-relationships of the processes within the system, and the interconnections between systems across time.<sup>36</sup>

**Intuition.** Perhaps indicative of the elusiveness of strategic thinking, intuition, like the other characteristics, appears to lack a comprehensive, overarching framework.<sup>37</sup> Most conceptualisations of intuition (the process) though include: non-conscious information processing; holistic associations often stemming from simple cognitive heuristics linked to environmental stimuli; affect associations linked with 'gut-feeling'; and speed.<sup>38</sup> A working definition of intuition that appears to fit the strategic thinking framework is 'a non-sequential information processing mode, which comprises both cognitive and affective elements and results in direct knowing without any use of conscious reasoning'.<sup>39</sup> Interestingly, there are at least three types of intuition.<sup>40</sup>

1. Holistic intuition is where judgements are based on qualitatively non-analytical process made by integrating multiple, diverse informational cues into a whole that may or may not be explicit.
2. Inferential intuition refers to judgements based on automated analysis. Inferences and decisions that were once analytical have been automated with practice. This type of intuition is often characterised as expert judgement.
3. Affective intuition where judgements are based primarily on emotional reactions to decision situations regardless of any explicit or rational support. This type of intuition is readily associated with 'gut-feel'.

Strategic thinkers can be described through these four cognitive characteristics or domains—however, which is more important? That would be a difficult question to address and here I can only provide my

thoughts. By sheer volume of references, one would be inclined to select system thinking as the primary characteristic. This makes absolute sense as strategy utilises the full organisational system to interact with the external environmental system. The ability to understand not just the linkages but also the effects of change over time is crucial to good strategy. Yet this would also apply to strategic planners and we have already established that the two are not the same. System thinking is not the differentiating characteristic—visionary thinking is. A strategic planner develops the plan to bridge or solve the problem. Strategic thinkers find, or even create, the problem so as to achieve a long-term advantage. System thinking provides understanding—creative thinking provides novel solutions—intuition allows for rapid understanding and decisions—however it is visionary thinking that provides direction and purpose.

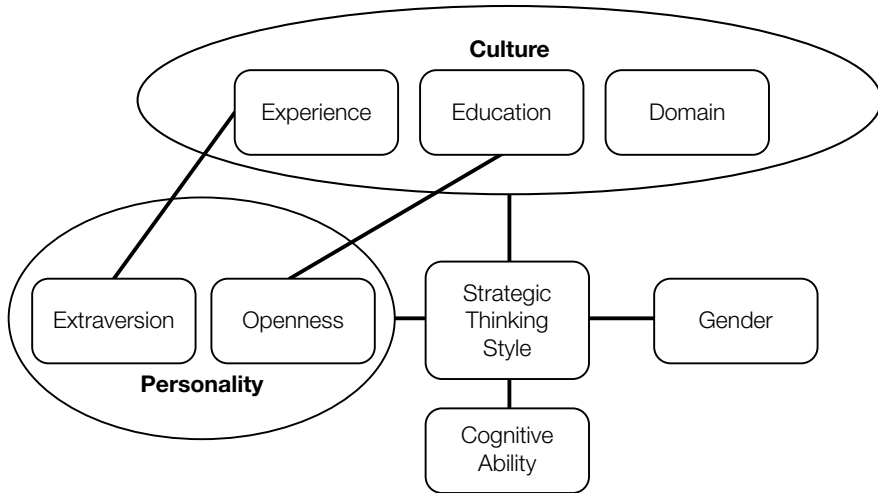
## Can strategic thinking be developed?

Judging from the number of self-help books gracing airport lounges, developing strategic thinking certainly appears to be the Holy Grail within most organisations. Yet it is the inability to quantify the capacity for strategic thinking that reduces them to mere bookends. For, without measures, how can one know that strategic thinking has been either developed or improved? An understanding of the cognitive characteristics of strategic thinkers allows the structured development of strategic thinkers to be considered. This is, of course, based on the presumption that these characteristics can be quantified. Fortunately, the four cognitive characteristics of a strategic thinker appear to be measurable.

Using the four cognitive characteristics (visionary thinking, intuition, creative thinking, and system thinking) as a guide, one could leverage and synthesise other established and successful trait-specific assessments into a single assessment. Unfortunately, it became readily apparent that there has been little work in assigning metrics to strategic thinking abilities. While there were several relativistic models, these appeared to be quite subjective and context-specific. Two of the characteristics though (creativity<sup>41</sup> and intuition<sup>42</sup>) are well studied with a range of applicable metrics that could be used.

Visionary thinking however proved to be quite problematic as most tests were simple judgement-based binary assessments of a vision statement. This resulted in the development of an original assessment for visionary

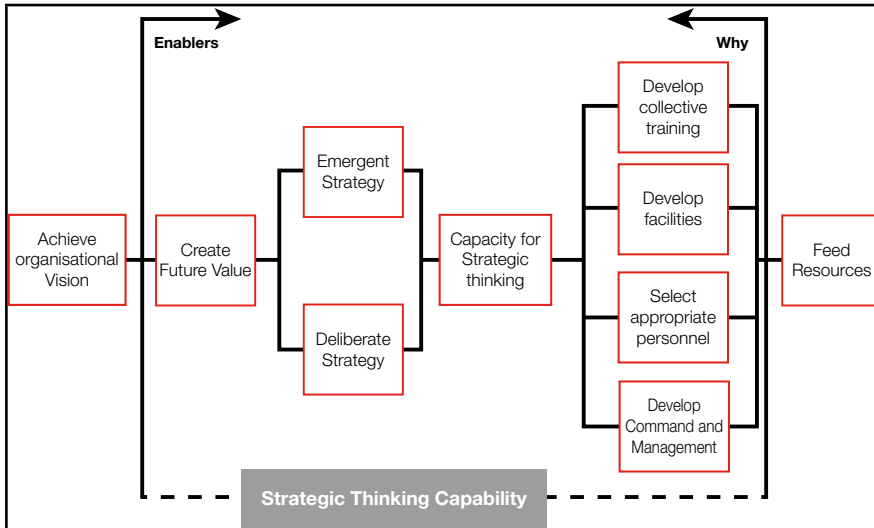
thinking based on the original review of strategic thinker characteristics. Similarly, the search for generic systems thinking assessment proved minimal. In the end, while a simple test based on Cardenas *et al*<sup>43</sup> was used, this area appears to offer options for deeper research.



The ability to measure strategic thinking is an important step—however, there exists a requirement to change the strategic thinking capacity (ie develop it in individuals or organisations). A comprehensive review indicated that each of these characteristics can be developed individually.<sup>44</sup> For instance, the creative process is generally understood, while system thinking courses are prevalent within most postgraduate programmes. Separately, a number of researchers surmise that strategic thinking is strongly influenced by external events.<sup>45</sup> The domain map in Figure 2 illustrates the typical understanding of how strategic thinking can be indirectly influenced or predicted. For example, we can see that cognitive ability (general intelligence), experience and personality can be a predictor or influencer of strategic thinking. Note the inclusion of gender is, at this point, speculation. Speculation is based on the two reasons: there is no evidence supporting the null hypothesis; and evidence of gender differences in several of the characteristics is inconclusive.<sup>46</sup>

## Can strategic thinking be described as a capability?

As difficult as it is to develop individual strategic thinkers, creating a robust organisational capability that continually produces future value—a strategic thinking capability—is far harder. Strategic thinking is often dissected at the individual cognitive level with very few researchers exploring organisational strategic thinking. Given the recent paradigm shift in the Defence capability life cycle following the First Principles Review, looking at strategic thinking through a capability lens would be useful.<sup>47</sup> What follows is a brief description of how strategic thinking could be described as a capability and how it could be developed.



Defence views capability as the capacity or ability to provide an operational effect.<sup>48</sup> More simply a capability is the ability to do something. In this case, capability is defined as ‘the capacity to be or do or affect something’.<sup>49</sup>

For strategic thinking to be a capability it must have the capacity to be or do or affect something. The definition for strategic thinking was previously established as a means-end way of thinking that is future-oriented and seeks to create value or an advantage for the system. The product, the effect in this case, is future value. How then do we quantify future value?

The very concept of future value appears to be intangible and nigh impossible to measure in the present. Historical analysis will allow us to understand the effects of a decision or a way of thinking provided the

effect has already occurred. Future value then creates enormous problems for those used to developing hard, quantifiable capabilities such as weapon systems or major platforms. These traditional hard capabilities are common throughout the modernisation programs and are relatively easy to understand. Soft capabilities though are defined by their intangibility and reliance on people. Strategic thinking capability is a soft capability that can still be created and described through fundamental inputs to capability.<sup>50</sup>

Through an understanding of soft capability and the inherent key characteristics of strategic thinking we can hypothesize a developmental model for strategic thinking. In this case, we use the Thinking Capability Analysis Technique (TCAT).<sup>51</sup> TCAT extends the Function Analysis System Technique (FAST) in System Engineering. FAST has demonstrated a great deal of success as a decision-aiding tool to map-out functional interdependency for Requirements Engineering. TCAT replaces the 'how' question in FAST with 'enablers', it extends the notations to include 'responsibility' or the 'whom' question to establish a line of accountability simultaneously, and increases the flexibility of the representation to cover multiple scopes. While still in draft form, a proposed TCAT for strategic thinking capability is represented in Figure 3.

When read from right to left, we articulate why we are conducting certain actions. For instance, command and management is developed in order to support a capacity for strategic thinking. In this case command and management would seek to ensure both that personnel are enabled through the appropriate guidance and also that personnel have supporting policy that allows strategic thinking to be effective. When read from left to right we understand how certain effects are enabled—future value is derived through the development of both emergent and deliberate strategy which, in turn, is enabled by the capacity for strategic thinking. While simplistic, this diagram allows for a systematic understanding of how to build the capability through enabling components and why the capability is designed with specific structures.

## Conclusion

Strategy appears to be a loaded term. It has acquired a universality beyond the military that has diluted the original Greek meaning. Yet, despite this apparent confusion, it is commonly agreed that the need for strategic thinking continues to be high both within the private and public sectors. The need is driven both by the organisation's requirement for strategy and the apparent lack of 'depth' in organisational strategic thinking. This situation is compounded by the lack of consensus amongst experts on what strategic thinking is and what defines a strategic thinker. This paper provided a definition of strategic thinking, derived from contemporary business and military texts, which acknowledges that it is a way of thinking that creates future value.

The cognitive characteristics that define a strategic thinker as the agent of strategic thinking, are system thinking, creative thinking, visionary thinking and intuition. While system thinking allows the understanding of the effect of change over time—a crucial element of successful strategy—it is visionary thinking that provides the direction and purpose to strategy. Each of these characteristics is not only measurable but also able to be developed. Understanding that strategic thinkers can be developed is an important step in building a robust strategic thinking capability within an organisation.

Strategic thinking is a capability that is difficult to describe in the traditional 'hard' capability paradigm. Strategic thinking is best described using a 'soft' capability framework that acknowledges both the intangibility of the capability and the centrality of people as the capability 'agent'. Using the TCAT it is possible to model the development of strategic thinking as an organisational capability. This model allows for a systematic understanding of how to build the capability through enabling components, and why the capability is designed with specific structures. Strategic thinking is definable, measurable and able to be developed as a robust, enduring capability.



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# Strategy and adaptation in counterinsurgency: lessons for the Australian Defence Force from the defeat of the Tamil Tigers

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## Abstract

How does a small nation defeat an insurgency that has well-armed land, naval and air forces, that possesses a powerful and ruthless ideology, excels at information operations, extensively employs suicide bombing and terror tactics both nationally and internationally, controls a large territory and has strong global financial and moral support? How can a conventional military defeat hybrid warriors by learning and innovating in asymmetric warfare? Sri Lanka defeated the Tamil Tigers after more than 25 years of bitter and brutal conflict, and their experience contains pertinent lessons for Australia. This article explores the effective use of statecraft and diplomacy to execute a clear national and military strategy, and how that strategy was achieved through victory on the battlefield. It then examines the Sri Lankan military's significant capacity to learn, adapt and innovate in order to undergo a transformation whilst in contact with the enemy. Two case studies consider the Army's development of combined arms jungle fighting skills and the Navy's evolution of counter-swarming tactics, and these can be read without studying the background to the war.

## Introduction: Using the Military to Achieve a Political Victory

The Sri Lankan defeat of the Tamil Tiger insurgency was due to the effective synchronisation of national strategy to military operations, and the capacity of their military to adapt those operations to the adversary. The Tigers were a sophisticated threat that combined conventional and terror tactics to conduct hybrid warfare in the pursuit of an independent nation for the ethnic Tamil minority of northern Sri Lanka. The generation-long conflict saw periods of intense fighting interspersed with uneasy ceasefires, political agitation, terrorism and international intervention before concluding with the near complete destruction of the Tamil Tigers in mid-2009. The approach of the Sri Lankan government and military to effect a successful conclusion to an apparently intractable conflict provides some important lessons to the Australian Defence Force in an era of long wars and asymmetric warfare.

This article explores the history of the conflict and describes the principal Sri Lankan methods and adaptations that resulted in victory. It is written to improve the Army's understanding of the conflict and how an insurgency might be defeated by force. After providing historical context it will examine the two most important factors in Sri Lankan success: the harmonisation of diplomatic and military actions to create a coherent national strategy; and the requirement for military forces to learn and innovate to defeat the enemy. This conflict challenged western notions that counterinsurgency operations cannot 'kill their way to victory'; how the Tamil Tigers were able to be defeated through force will be considered. How non-western states fight, learn and adapt in irregular wars is an under-researched area of study<sup>1</sup> and demonstrates how victory might be achieved in spite of those nations' comparative resource or technological constraints. Two case studies illustrate adaptations by the Army and Navy to defeat the enemy, and examine tactics, techniques and procedures in greater detail. Finally, the article examines some observations that should be considered by Army readers when examining counterinsurgency campaigns.



## Background: The Eelam Wars I to IV

The Tamils are an ethnic minority that comprise the majority population in the north of the island of Sri Lanka (a region they dubbed 'Eelam'), although a much larger Tamil community is located in adjacent India. Tamil leaders were systematically marginalised by the island's majority Buddhist Sinhalese community following independence from Britain in 1948, progressively losing their voice and influence in the nation's affairs<sup>2</sup>. Various armed and political Tamil groups coalesced in the early 1980s into the Liberation Tigers of Tamil Eelam (LTTE) or Tamil Tigers, led by Velupillai Prabhakaran. Charismatic but brutal in enforcing his rule, Prabhakaran led the organisation throughout its existence and maintained the clear goal of independence for Tamil-dominated areas<sup>3</sup>. In 1983, simmering tensions and years of political and armed resistance erupted into a large-scale separatist insurgency between Tamil groups and the Sri Lankan government: the Eelam War I<sup>4</sup>.

International intervention separated the belligerents and forced a negotiated end to the first war in 1988. Neighbouring India deployed a peace enforcement mission which spiralled into the second Eelam war, and the Indians withdrew in 1990 after fighting against both sides and suffering around 1200 soldiers killed<sup>5</sup>. The following year the LTTE demonstrated their reach by assassinating the Indian Prime Minister, Rajiv Gandhi, using a female suicide bomber, in retaliation for the intervention. In the 1990s a stalemate and uneasy peace was followed by the Eelam War III which saw the LTTE consolidate their territory and inflict substantial losses on government forces. The Sri Lankans lost a key fortress with more than 1,000 troops killed, and commercial and military jets were spectacularly destroyed in a suicide strike on Colombo's airport. Exhausted from the fighting, the opponents agreed on a shaky ceasefire that lasted from 2001 through to the start of the fourth and final war in 2006<sup>6</sup>.

The poorly trained and equipped government forces were often outfought in the Eelam wars due to the Tiger's superior tactics, morale, support networks and innovative use of suicide strikes<sup>7</sup>. The LTTE made extensive use of the diaspora of Tamils (including large communities in India, Canada, Britain and Australia) to obtain political support and funding for their cause<sup>8</sup>. A strong internet presence allowed them to promote their cause internationally, and they used their expertise to mount cyber-attacks on government websites<sup>9</sup>. At the height of their power, the Tigers controlled one-third of the Sri Lankan

coastline and were raising several hundred million US dollars each year from donations and criminal activities including people smuggling and drug trafficking<sup>10</sup>. Compared to the government they had small but well-developed air, sea and land forces that were employed to strike Sri Lankan government forces and institutions as well as to defend their territory<sup>11 12</sup>. The LTTE became notorious for pioneering the use of suicide bombers for targeted assassinations<sup>13</sup>, and the widespread use of terror tactics to enforce their rule and demoralise their opponents.

However by 2006 the situation had changed considerably; the LTTE were becoming increasingly isolated and the government was pursuing a new strategy to bring about their defeat. The post-11 September 2001 worldwide security crackdown had seen increasing numbers of nations proscribe the LTTE as a terrorist organisation which dramatically reduced its international moral and financial support<sup>14</sup>. The 2005 election of President Rajapaksa on a hard-line 'military first'<sup>15</sup> counterinsurgency platform saw the size and capacity of Sri Lanka's military grow significantly. With its plans to end the conflict by force, the Rajapaksa government was shunned by western nations and it sought alternative strategic partnerships, primarily with China<sup>16</sup>.

In late 2006 the conflict sparked into the fourth and final Eelam war. By this time, the government had articulated a clear strategy with an end state of destroying the LTTE, and was developing the ways and means to achieve it. The Sri Lankan forces embarked on a transformation to use increased weaponry and force size, superior tactics and improved leadership to target the Tiger's vulnerabilities. The government created political and diplomatic space for the military to operate by isolating the LTTE, securing new international supporters and preventing reporting on the war. The armed forces physically and functionally dislocated the LTTE from support through joint operations, then advanced ground forces deep into former Tiger territories<sup>17</sup>. By early 2009, the remaining LTTE forces, along with around 100,000 civilians, were surrounded on a small strip of land in the country's north. Despite increasingly desperate attempts by the international community—particularly Norway—to force a ceasefire, a brief but bloody battle saw the complete destruction of the LTTE leadership and their remaining fighters<sup>18</sup>.

While the government triumphantly revelled in victory a number of western countries began calling for investigations into the high civilian casualties, the allegations of war crimes, and the serious human rights abuses by both sides<sup>19 20</sup>. Former LTTE areas were subject to a military occupation with curfews and movement controls, along with the forced relocation and detention of some 300,000 people. Some have never been released<sup>21</sup>. The conduct of democratic elections, continuation of peace and the passage of time have seen a gradual rapprochement with the wider international community. Many still question whether the ends justified the means<sup>22</sup>, but after 26 years of great brutality by both sides it is arguable that a brief but violent resolution was preferable to more of the same. Although Tamil discontent remains, there have thus far been no significant instances of unrest that would indicate the re-emergence of Tamil opposition groups seeking influence outside of the democratic process<sup>23</sup>. The Sri Lankans can justifiably claim to have destroyed an insurgency by force, achieving their strategic end state through military means.

## **Part One: Strategy – a New Approach**

The pursuit of a 'military first' strategy in the Eelam War IV required a new approach by the government to give the armed forces the resources, space and time to prosecute the campaign<sup>24</sup>. It further recognised that attritionist methods of destroying the enemy's organisation could be decisive. An appraisal of the lines of operation used by the Sri Lankan government demonstrates the use of a whole of nation approach to internal and external diplomacy, isolating the opposition and enabling the military while maintaining political primacy<sup>25</sup>. This steadily reduced the enemy's international support and political and military strength before the conduct of a decisive, violent but comparatively brief conventional military campaign. It also granted the military the freedom of action to accept considerable friendly and civilian casualties in prosecuting that campaign without being disrupted by political considerations.

Sri Lanka achieved victory through force by destroying the LTTE's military and political structures and consequently its capacity and legitimacy. With their definite chain of command and organisation based on a single supreme leader, the Tigers proved susceptible to collapse following defeat on the battlefield or loss of key leaders<sup>26</sup>. This structure had proved capable

of exerting power and maintaining a unity of purpose that went almost unchallenged for around 25 years, but proved unable to function in areas not under direct LTTE control. Kilcullen noted that Sri Lanka's strategy:

*'recognised that the Tigers were operating in a conventional manner, were hierarchical and were actively alienating the Tamil population. Therefore, defeating them conventionally became possible'<sup>27</sup>.*

Another author supports this observation by noting that the terminal offensive was analogous to Sherman's destructive and decisive 'march to the sea' in the American Civil War<sup>28</sup>. Such descriptions explain how the Rajapaksa government might have concluded that a resolution through force was possible<sup>29</sup>. That this approach was effective is demonstrated by the absence of conflict since 2009. By destroying the Tiger's leadership and capacity to wage war the Sri Lankans were able to destroy the organization itself.

The use of internal statecraft was instrumental to the progressive marginalisation of the LTTE and the fragmentation of their influence. The Rajapaksa government was elected on a platform of ending the conflict through a hard-line approach in 2005 during an election in which the Tamil majority areas participated. A violently-enforced LTTE boycott of this poll both disenfranchised the population it purported to represent and ensured the election of a government that would come to destroy the Tigers<sup>30</sup>. The popular mandate provided the government both a justification for and a determination to maintain their strategy throughout the ensuing expensive and bloody campaign. It helped that the LTTE had brutally maintained its rule and assassinated large numbers of Sri Lankans, Tamils included, that it viewed as a threat. This brutality resulted in the steady fracturing of its support base and a perceived loss of legitimacy<sup>31</sup>. Sensing this, the Sri Lankan government pursued a 'divide and conquer' approach and encouraged the defection of several key LTTE leaders<sup>32</sup> who were subsequently absorbed into the parliament to demonstrate reconciliation<sup>33</sup>. Later, near the end of the conflict the government's unity and popular support allowed it to maintain a strategy of ignoring international pressure and insisting on an unconditional surrender or destruction<sup>34</sup>.

International diplomacy was also vital to providing the military with freedom to act. Determined to avoid the interventions that had frustrated previous campaigns, the Sri Lankan government reduced its reliance on financial and diplomatic aid from western states and courted nations more sympathetic

to the use of force to crush internal dissent. Past interventions by the international community had been inconclusive, but allowed the Tamils to recover thus preventing a decision being forced<sup>35</sup>. To enable the military's primacy the government increased military funding by 40%, made possible by obtaining \$US1 billion in loans from China and additional lines of credit from Iran, Russia, Pakistan and Libya<sup>36</sup>. As a permanent member of the Security Council, China's support of Sri Lanka ensured that the United Nations would be unlikely to intervene in the conflict. China's veto prevented the introduction of United Nations resolutions critical of Sri Lanka's renewed offensive, giving it a free hand in the conduct of its operations despite the protests of human rights groups<sup>37</sup>. Formal communications channels were established with India to reduce the chances of this powerful neighbour intervening in the conflict for a second time, and there is conjecture that the final assault on the LTTE's last redoubt in 2009 was delayed until after elections in the adjacent Indian state of Tamil Nadu<sup>38</sup>.

This deft diplomacy created time for the conduct of unrestricted military operations. Further space was created by silencing critics through rigorously denying humanitarian and media organisations access to the conflict zones, and by harassment and even assassination of domestic critics of the government<sup>39</sup>. A number of pro-Tamil websites reported frequent 'denial of service' attacks during and after the conflict, indicating the possible use of cyber-attacks by the government or its sympathisers<sup>40</sup>. In any case the government routinely blocked external websites and de-registered Sri Lankan-based sites it deemed to be opposing its policies<sup>41</sup>. These measures worked and few journalists or humanitarians were able to provide objective reporting in the final months of Eelam War IV<sup>42</sup>. Consequently, having guarded against the development of coordinated and effective international diplomatic pressure, the Sri Lankan government possessed much greater military freedom of action for the coming conflict. Political primacy thus enabled effective military action.

## Part Two: Transforming the Military

The Sri Lankan military's adaptation during the conflict provides the primary lessons for the Australian Army. Backed by the government's clear strategy of destroying the LTTE, and provided with the resources necessary to achieve that strategy, the military used lessons from the previous conflicts to improve their effectiveness in great measure. They also significantly increased the size and effectiveness of the Sri Lankan forces, particularly the Army, which increased from 120,000 in 2006 to 200,000 personnel in 2009<sup>43</sup>. Historical British doctrine and force structures were discarded by the Army as it developed more flexible jungle fighting methods that focused specifically on defeating the LTTE's tactics<sup>44 45</sup>. The Air Force rapidly developed an integrated air defence system and purchased interdiction aircraft after being surprised by the Tiger's use of light aircraft in bombing raids; it also employed capable ground attack aircraft in support of land forces throughout the war<sup>46</sup>. The Navy developed innovative swarming tactics to defeat small craft, and employed larger vessels and improved intelligence to target LTTE resupply ships on the open ocean<sup>47</sup>. All three Services cooperated in joint warfare to isolate, contain and then destroy the Tigers in accordance with the government's strategy. The change to a joint approach likely arose from the experiences of previous conflicts, and the firm direction and coordination provided by Defence Secretary Gotabhaya, a former Army Colonel and the brother of President Rajapaksa<sup>48</sup>. Provided with clear direction at the strategic (and potentially operational) levels, the military could then develop tactical innovations to execute that direction.

How the Sri Lankan military was able to undergo transformation while in contact with the enemy is best explored through the use of specific examples. The following case studies examine the improvement of jungle fighting capacity in the Army, and the development of counter-swarming tactics by the Navy.

### Case Study One: Transforming the Army.

This case study examines how improving the fighting capacity, effectiveness and flexibility of tactical units was fundamental to the Sri Lankan Army approach, being achieved through improved leadership, equipment and tactical skill. Early in the conflict the newly-appointed head of the Army,

Lieutenant General Fonseka, handpicked aggressive and innovative battalion and brigade commanders to carry the fight to the enemy<sup>49</sup>. Decision-making was devolved downwards and initiative promoted as a result of Army-wide training. Advanced Infantry Platoon Training involved all ranks in frank analysis and tactical discussion through After Action Reviews, inculcating a sense of creativity in all ranks<sup>50</sup>. These reforms, supported by an influx of new weapons and strong support from the political leadership, greatly improved the morale and fighting capacity of the army<sup>51</sup>.

New tactics emphasised effective intelligence, surveillance and reconnaissance to locate the enemy, followed by combined arms operations to clear or destroy them. Special forces and reconnaissance patrols were used to locate, isolate and fix insurgents in depth, then clear them through conventional advances and attacks by the regular force<sup>52</sup>. These conventional operations were fundamentally attritionist in nature, focused as they were on the destruction of the enemy and his command structure rather than the capture of ground. General Fonseka later stated: 'I always gave priority to destroying the terrorists and capturing the ground automatically became a reality<sup>53</sup>'. The conventional and unconventional forces were interdependent: while the special forces could locate and paralyse the enemy in depth, they were unable to clear them or hold ground without the assistance of the conventional Army. The adoption of these tactics necessitated improved training and junior leadership, and greater trust by the senior leadership in the capacity of their forces to operate in accordance with the commander's intent<sup>54</sup>. It is difficult to evaluate how widely they were practised but these approaches echo the philosophy of 'mission command', as well as the traditional (if perhaps not the contemporary) use of special forces in the Australian Army.

The number and size of infantry units was increased, they were issued improved weapons and night-fighting equipment, and great emphasis was placed upon the ability of the infantry soldier to operate independently in the dense jungle of the Tamil-held areas. Long Range Reconnaissance Patrols operated throughout the LTTE areas and completed both reconnaissance and interdiction tasks<sup>55</sup>. Special Infantry Operations Teams, similar to patrols from an Australian infantry battalion's reconnaissance platoon, were created and trained to operate several kilometres beyond the Forward Line of Own Troops. A standard infantry company would have up to six of these four- to eight-man patrols, and the training was provided to a wide range of soldiers

across many units. The patrols provided the infantry battalion to which they were attached improved understanding of the tactical situation while also disrupting LTTE operations in depth<sup>56</sup>. This allowed government forces to maintain the initiative and to concentrate force to destroy the Tigers when they were located in the complex terrain<sup>57</sup>. The screening effect generated also reduced the use of Tiger suicide bombers against concentrations of government troops and convoys<sup>58</sup>.

Direct and indirect fire support was improved with the introduction of new artillery, more effective rocket propelled grenades in increased numbers and the use of Uninhabited Aerial Vehicles to control fires in depth<sup>59</sup>. The Special Infantry Operations Teams were trained to call in artillery<sup>60 61</sup>, a capability that brought greater firepower under the control of junior commanders who were best placed to target a dispersed or fleeting enemy. Combat engineers were used to breach the extensive fortifications emplaced within Tiger strongholds, and to permit the mobility of armour in support of infantry following the break in<sup>62 63</sup>.

Combat service support functions were also improved to allow the army to advance further, faster and on more axes from the fixed bases it had traditionally relied upon<sup>64</sup>. The mobility and survivability of both combat and forward logistic units was improved by acquiring more capable vehicles. V-hulled armoured Unibuffel vehicles were fielded in support elements that were integral to the rear area security of the advancing force<sup>65</sup>. Engineers completed extensive mobility tasks to ensure that roads through the jungle-covered terrain remained trafficable in heavy rains during the main advance. Following completion of the battle they were essential to the establishment of shelter, sanitation, power and water services to the occupying forces, and to the hundreds of thousands of internally displaced persons the battle had created<sup>66</sup>. Unusually, General Fonseka claims to have pressed thousands of soldiers who were recovering from wounds into the effort to maintain rear area security, thus freeing up fitter soldiers for the main battle<sup>67</sup>.

The Army adapted whilst in contact with the enemy and was hence able to test concepts, to refine those that worked and discard those that failed, in preparation for the eventual decisive offensive. It was a clear case of the Adaptation Cycle<sup>68</sup> being used in combat. These innovations transformed the capacity of the Sri Lankan Army to close with and defeat the Tamil Tiger



forces in close combat and underpinned the campaign's success. Writing in *The Diplomat*, Layton noted:

*'With enhanced training in complex jungle fighting operations, Sri Lankan soldiers generally became more capable, more professional, and more confident. The Army could now undertake increasingly difficult tasks day or night while maintaining a high tempo. The Army had become a 'learning organization' that embraced tactical level initiatives and innovations'*<sup>69</sup>.

The above improvements allowed the Army to generate increased numbers of more effective units. Army utility in previous conflicts had been limited by the small number of combat-capable soldiers and limited logistics; most forces were unable to operate far from their protective bases and fortresses. Consequently, narrow frontage advances along jungle roads were required and these were easily stymied by mines, improvised explosive devices, ambushes and artillery strikes. These tactics were costly, slow and ineffective. Fonseka noted that to defeat the Tigers 'we realised we had to advance in very wide fronts...in order to disperse the terrorist manpower and firepower'<sup>70</sup>. By 2009 the Army's improvements would permit the conduct of a corps-level continuous advance by five divisions across a frontage comprising the whole Sri Lankan island<sup>71</sup>. That offensive would lead to the final battle of the war and was a clear demonstration of the progress achieved.

## **Case Study Two: Defeating the LTTE at Sea**

This case study examines the Tamil Tigers' successful use of basic swarming tactics, and the subsequent adaptation by the Sri Lankan Navy to defeat this threat through counter-swarming. The use of swarming tactics to isolate, overwhelm and destroy an otherwise more capable adversary has become increasingly common in recent conflicts. Such tactics are proving popular with the new generations of 'hybrid-warrior' groups practising hybrid warfare<sup>72</sup> (such as Hezbollah and Daesh) as they seek to negate the technological and firepower advantages of their better-equipped adversaries. The Iranian Navy makes heavy use of such techniques for potential anti-access/area denial operations in the Straits of Hormuz<sup>73</sup>, and the ADF might well encounter such threats when pursuing its maritime strategy.

Swarm tactics are designed to overwhelm the capacity of a target to respond effectively by simultaneously presenting multiple threats<sup>74</sup>. Such tactics allow otherwise vulnerable or unsophisticated weapons systems to defeat much more capable targets by exceeding the capacity of weapons and command and control systems, or denying the ability to outmanoeuvre a threat. Disruptive technology weapons like small, inexpensive uninhabited or autonomous air, land and sea vehicles<sup>75</sup> are being widely examined for their ability to saturate targets<sup>76</sup>. An unsurprising defensive trend is emerging in response: interdict the swarm as far out as possible using multiple defensive platforms with superior command and control and firepower. However, this can be difficult to achieve when detection ranges are short or the defender does not possess technical superiority, leading to proposals for counter-swarming<sup>77</sup>.

Lacking a sanctuary on land, the LTTE's materiel resupply depended on a fleet of armed speedboats that would dash backwards and forwards from 'warehouse ships' to collect everything from rifles to aircraft (effectively sea-basing, a concept Australia is pursuing). The Navy responded by attempting to establish a blockade with small Fast Attack Craft and Offshore Patrol Vessels.

To counter the blockade the LTTE's maritime arm, the Sea Tigers, used swarm tactics that involved five to fifteen armed speedboats closing simultaneously on a target vessel. Most of the boats would seek to suppress the Sri Lankan vessel's defences with machine guns and automatic grenade launchers while preventing its escape. Concealed among and protected by the other vessels, an explosive-laden suicide boat would then attempt to ram the target and detonate its payload. Initially these tactics were highly successful and were often filmed for their strategic messaging. Despite being more capable, the Sri Lankan vessels lacked sufficient weapons and speed to interdict the LTTE boats and proved to be highly vulnerable to isolation and destruction by the swarm<sup>78</sup>.

As with the Japanese kamikaze tactics of the Second World War, early interdiction was to prove more successful than point defence<sup>79</sup>. Rather than purchase larger and more capable craft the Sri Lankans copied captured LTTE speedboats and produced them in large quantities, seeking superior numbers rather than superior capabilities. This 'Small Boat Concept'<sup>80 81</sup> was supported by establishing land- and sea-based tracking radars to allow early

detection and more effective coordination of the blockade. Smaller craft patrolled close to shore with the larger and more capable vessels layered in depth, each layer coordinating the actions of the next layer landwards. LTTE speedboat sorties were detected and intercepted close to shore by large numbers of small craft in formation, preventing the Sea Tigers from massing against their preferred target. The LTTE boats were instead swarmed by large numbers of nearly identical Navy craft, and once isolated were destroyed in detail without a chance to employ their suicide craft<sup>82</sup>. LTTE engagements dropped from 21 in 2006 to 11 in 2007, then to only four in 2008<sup>83</sup>. The Sea Tigers had been comprehensively defeated—the naval blockade was crucial to the subsequent destruction of the LTTE on land.

While a maritime action, the use of early interdiction and counter-swarming tactics by the Sri Lankan Navy also has lessons that can be applied in the land domain. On land, the battlespace makes for short detection ranges, and the differences in capability between opposing weapons systems are often minor. Therefore the principles of superior early warning, command and control, using commensurate firepower, mobility and protection, and defence in depth apply. By learning from failure the Sri Lankans leveraged their superior manpower, training and command to develop tactics that adapted to the threat and defeated it.

## **Part Three: Using Strategy to Enable Effective Tactics**

The destruction of the LTTE could only be achieved through the conduct of a set-piece land battle to eliminate their military strength and leadership. While the Eelam War IV lasted from 2006 to 2009, the decisive manoeuvre only occurred in the final seven months of the conflict. The 2006 through 2008 period was largely consumed with shaping operations as the Sri Lankan Navy established a maritime blockade around the Tamil-held territory, the security and intelligence forces prevented Tiger suicide strikes in government-held areas, and the Army gained control of the eastern provinces while disrupting the Tigers in depth. The combination of diplomacy, information operations and targeted assassinations of LTTE leaders had increasingly fractured their leadership and capacity to secure their territory. This provided the time required for the transformation of the Army into a force capable of conducting extended and complex offensive

operations. By the time the main ground offensive commenced in late 2008 the LTTE lacked the broad support of its population<sup>84</sup> and was relying heavily on conscription and coercion to stay in power<sup>85</sup>. This offensive was the culmination of the 'military first' strategy.

The decisive ground manoeuvre saw five infantry divisions simultaneously advance north, east and south along four axes across the breadth of the island, dispersing the Tiger forces and firepower and denying them the ability to regroup. Previous narrow advances along the corridors of single jungle roads had proved vulnerable to interdiction and were abandoned in favour of advancing across a broad frontage. Unlike the previous Eelam wars, the improvements to the government forces allowed them to maintain the momentum of the advance until the Tigers were concentrated in a final defensive bastion<sup>86,87</sup>. The LTTE responded by forcibly utilising civilians as human shields, digging-in and desperately appealing to the international community for a negotiated settlement. The final battle was one of close and ruthless combat as the government forces fought through tens of thousands of non-combatants concentrated on a narrow coastal sandbar at Nandi Kadal. After bloody fighting with significant civilian casualties<sup>88</sup> the Sri Lankan Army overran the LTTE bastion, eliminated the final resistance and exhibited the body of LTTE leader Prabhakaran<sup>89</sup>. An end to hostilities was declared on 18 May 2009<sup>90</sup>.

## Conclusion

The Sri Lankan government triumphed by deciding to destroy the LTTE, developing a strategy that focused the whole of the nation on that objective, and transforming their military to execute that strategy. The LTTE proved incapable of adapting to the new situation and clung to their previously successful tactics, even as they failed to stop the government forces<sup>91</sup>. While improvements in technology and growth in force size were essential to the destruction of the Tigers, the increased ability of the government forces to learn and adapt was the fundamental difference between the victory of Eelam War IV and the stalemate achieved in the previous three conflicts. The development of specific capabilities and tactics, and the effective execution of operational plans to employ them was a direct result of the deliberate examination of previous failings.

Many militaries have disregarded the Sri Lankan approach due to the high casualties to both sides and to non-combatants, but this perhaps ignores the inherently violent nature of war<sup>92</sup>. Western counter-insurgency doctrine notes the need for an appropriate level of force in subduing opponents<sup>93</sup>, particularly when fighting against an enemy as adept at practising terrorism as the LTTE. Distaste for the non-combatant casualties caused by the Sri Lankan methods does not alter the fact they were effective, and there are parallels to other wars such as the Russo-Chechen conflict. It is possible that control of the media, a disregard for human rights and using ruthless tactics with an acceptance of significant civilian casualties is the price of victory in such insurgencies. This article has not sought to examine the ethics of the conflict. That is not to excuse the conduct of either side—United Nations investigations identified egregious human rights violations by both parties—but neither does it automatically invalidate the lessons observed<sup>94</sup>. There are also implications for the limits of western influence in a world where developing nations can find increasing support from non-Anglo-European sources.

The lessons for the ADF lie primarily in the fitting of military operations to the national strategy, and in the capacity for learning and adaptation demonstrated by the Sri Lankan military. The Sri Lankan forces examined their enemy, developed tactics to target critical vulnerabilities, and then trained, structured and equipped themselves to execute those tactics. This occurred not just through clear command direction, leadership and resources, but also by tolerating tactical failures early in the conflict. The essential pre-conditions for this force transformation were the commitment of the political leadership to a 'military first' strategy, and then orchestration of diplomatic and political actions to provide the military the means and the freedom of action to execute it.

The Sri Lankan experience provides salient lessons for developing professional militaries that can execute innovative techniques within a clear strategy to achieve victory. The Australian Army aspires to be innovative<sup>95</sup>. It must therefore have a deep understanding of the nature of the likely battle, a culture of effective and reflective leadership and a tolerance for failure to meet those aspirations.

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  2. Go to hell (that is, ignore domestic and international criticism)
  3. No negotiations
  4. Regulate media
  5. No ceasefire
  6. Complete operational freedom
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# What to do and how to think if you want to lead

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## Abstract

This paper presents a template of what to do and how to think if you want to influence others to join you in tackling complex problems in conditions of uncertainty, ambiguity and risk.

It reports a study that (1) identifies what junior and mid-level military professionals perceive as being 'good leadership' from the perspective of followers, and (2) examines the evidence in favour of a leadership style that balances task and people requirements as the desired leadership mode within the military profession.

In-depth interviews were conducted with 67 professionals (officers, WO1 and 2, and NCO) to explore the features they used to differentiate between leaders who were effective or ineffective and appealing or unappealing. Six main factors—persona, proficiency, authenticity, purpose, people-orientation and process—were identified and proposed as the nucleus for an Army leadership model.

The paper concludes with some broad recommendations for expanding this initial foray into military leadership research into something more substantial and useful.

## Introduction

### The centrality of leadership

Leadership is the process of engaging others in concerted efforts to pursue a goal, in conditions of complexity and ambiguity or in anticipation of such conditions.

Time and again when it really counts—in the two world wars, in Korea, Malaya, Vietnam, in peacekeeping, in disaster relief, and currently in the longest war in its history—Australia's military has demonstrated high standards of operational leadership at every level. Despite not having had serious 'match practice' for a quarter of a century, it was central to bringing peace to East Timor in 1999. And when confronted with damaging sexual harassment scandals in 2011, it responded promptly and systematically, in stark contrast to the evasive reactions of many other national institutions.

Given the centrality of leadership to so many spheres of its activities, you might expect the Australian military to have a keen analytical interest in the topic. But you'd be wrong. Beyond military histories and the occasional 'this is how I did it' memoir from retired generals, Australian contribution to the military leadership field has been sparse.<sup>1</sup> And official doctrine is intriguingly uninformative regarding just what comprises the leadership process.<sup>2</sup>

This is in stark contrast to its equivalent institutions in the USA, which not only offer research opportunities to leading academics but also encourage serving officers to get involved in the analytical research process and then rotates them through its military academies and institutes of higher learning to ensure that lessons are translated into practice.<sup>3</sup>

Encouragingly, however, this may be about to change. The ADF is currently experimenting with a range of strategies, from training and education in ethics and leadership psychology through to 360° and 180° multi-rater evaluation and feedback, all aimed at lifting an already high standard even further.

This study was initiated on the basis that such initiatives would be significantly enhanced if the Army was more specific about what 'leadership' involves, and about how leaders at all levels should think about – as well as do – leadership.



## Two basic questions and their guiding principles

Our voyage of exploration revolves around two sets of questions.

First, just what is 'good leadership'? What do leaders need to do in order to generate inherent authority? And who decides what 'good' means? Should it be assessed essentially on the basis of effectiveness (the frequency with which a team completes its assigned tasks successfully), or are there additional and deeper criteria—such as morale, team development, versatility and resilience or simply the popularity/appeal of the leader in question—that should be taken into account?

Second, and allied to these, is it acceptable for a leader to focus routinely almost exclusively on tasks/outcomes, regardless of the effects on the people in the team? If the job gets done, does it matter if the people are burnt out in the process? Beyond operational exigencies, can this be justified as 'normal' practice? Or is a balanced task-people focus style likely to be at least as effective in mission achievement and superior in other ways?

The answers to the second set of questions essentially fall out from those to the first and by reference to the scholarly literature.

An important aspect of framing the study was the definition of the central concept of 'leadership'. All interviewees were (commendably) able to give the definition from current doctrine, ie as a process of influencing people to pursue goals and find solutions to complex problems. (The scholarly literature uses much the same terms.) But the distinctive challenges associated with leading in the military institution demand attention to deeper aspects of the process and its intended outcomes.

One of the crucial things about military leadership is that it is generally performed in conditions of ambiguity, uncertainty and risk. Often the 'right' way forward is unclear, and leaders and followers alike will be understandably apprehensive about what lies ahead. Leaders who do best in these situations are those who had anticipated such challenges and had established strong levels of followership in advance. (Followership is the willingness and ability of an individual in a team to commit to its leader's objectives, take direction willingly and constructively, get in line behind a program, be part of a team, and deliver on what is expected.)

Additionally, those who hold the sovereign's commission have inherent officership obligations that go beyond simple short-term mission accomplishment. Military leaders should always be thinking about what they need to do *now* to create the right conditions for *later*.<sup>4</sup> They should always lead 'strategically': not so much in the conventional sense of 'big picture issues' but rather in terms of always acting with the longer term in mind, including building human and social capital as investments for the future, for all those who will succeed them in command.

The significance of these concepts will become clear as our argument proceeds.

## Method

The exploration of the nature of 'good leadership' was addressed empirically, by tapping the experiences of a sample of military professionals at the lower levels of the professional pyramid.

In-depth interviews were conducted with 27 JNCO, SNCO and WO1/2 and 40 officers (mostly majors) to explore the factors they used to differentiate between effective and ineffective leaders (ie achieved results—or did not) and appealing and unappealing leaders (ie were someone with which that person would—or would not—like to be associated in the future).

Each interviewee was asked to focus separately on pairs of effective, ineffective, appealing and unappealing bosses with whom they had served, and identify what each did in common that had contributed to their effectiveness/appeal. This method minimises the tendency to focus on ideal models or on attributes that are so distinctive that they are embodied in only a few people.

Most interviews were conducted face-to-face, and by phone with 19 others. Questionnaires were sent to interviewees beforehand for prior consideration, and transcripts were e-mailed to interviewees shortly afterwards to confirm their accuracy and comprehensiveness.

The responses were coded and categorised into factors that represent the distinctive sets of behaviour that military professionals look for and/or notice as being significant in the 'leadership' process. Instances of these were

coded only once for each interviewee, regardless of the number of examples that he/she might have given about that factor. For example, an interviewee might have given three examples of, say, a leader's interaction with team members but it was still coded once only under the relevant factor.

The utility and validity of the findings were judged from both practical and theoretical points of view. That is, they needed to make sense to Australian military professionals and be consistent with what the broader theoretical literature tells us are the dimensions of 'positive leadership'.

## What military professionals perceive as being 'good leadership'

### The elements of good leadership

Six factors were identified as being the core elements of leadership practice:

- *Persona –look the part, act the part, **be** the part*: reflect what is expected of an Australian military leader (in terms of character, demeanour, composure, confidence, approachability, professionalism and values);
- *Proficiency –bring expertise and professional knowledge to the process*: demonstrate problem-solving capacity and effective performance across a range of situations;
- *Authenticity –be a leader for **us***: prioritise activities that advance the common good, as opposed to those that advance the leader's personal career interests and make him/her look good;
- *Purpose –focus and energise committed action*: communicate a coherent path forward and a plan associated with that path;
- *People-orientation –relate, develop, bring together, bring along*: treat team members as valued colleagues, forge a sense of mutual trust and common identity and focus, and help them develop their skills and career opportunities; and
- *Process –engage and stretch*: engage team members collaboratively in working together and learning from experience.

Typical behaviours mentioned in both favourable and unfavourable terms for each factor are shown in Table 1.

Table 1: Examples of component behaviours of each factor

Attribute	Favourable examples mentioned	Unfavourable examples mentioned
Persona	<p>Approachable but uncompromising in their expectations.</p> <p>Looked the part, in terms of punctuality, dress, demeanour, organisation and the occasional light touch.</p>	<p>Falsely confident, arrogant and condescending.</p> <p>Indecisive, and often stuck in a search for 'certainty'.</p>
Proficiency	<p>Showed intelligence and wisdom.</p> <p>Professional and performed always to their best.</p>	<p>Not properly across their brief.</p> <p>Unable to see the bigger picture and where their activities fitted.</p>
Authenticity	<p>Driven—but for the common good, not for their personal advancement.</p> <p>Did the right thing, regardless of the personal consequences.</p>	<p>Focused on their own image at the expense of the real goals.</p> <p>Blamed subordinates for mistakes, often without their knowledge.</p>
Purpose	<p>Articulated the goal and kept us on track, and didn't allow the team to be diverted by extraneous needs.</p> <p>Great communication skills, with vivid language and engaging energy.</p>	<p>Failed to provide clarity and direction.</p> <p>Too much time adhering to regulations and 'ticking boxes', as opposed to providing capability.</p>
People-orientation	<p>Rolled up their sleeves and joined in.</p> <p>Spent time coaching and mentoring.</p>	<p>Rarely seen outside their offices.</p> <p>Questioning would be denigrated, even when they were intended for clarity.</p>

Attribute	Favourable examples mentioned	Unfavourable examples mentioned
Process	Gave people autonomy but were still clearly in charge of the overall effort.  Lived and breathed mission command.	Micromanagers.  ‘My way or the highway’.

The frequencies with which the component behaviours of each of these factors were mentioned in interviews in conjunction with Effectiveness, Ineffectiveness, Appealing and Unappealing are shown in Figures 1, 2, 3 and 4 respectively.

Although certain factors stand out for both Effectiveness and Ineffectiveness, their spread is fairly even. That is, all factors contribute to perceptions of effectiveness or ineffectiveness.

This is somewhat less likely for Appealing and even less so for Unappealing, where three or four factors—Persona, People-orientation, Process, and particularly Authenticity—predominate.

Authenticity emerges as a factor that is more likely to be in the breach than in the observance. This may be indicative of professional values. People who value authenticity and integrity probably take it for granted in others unless there is clear evidence otherwise, in which case they will be particularly likely to notice its absence.

Figure 1: Differentiating factors in leadership that is seen as 'effective'

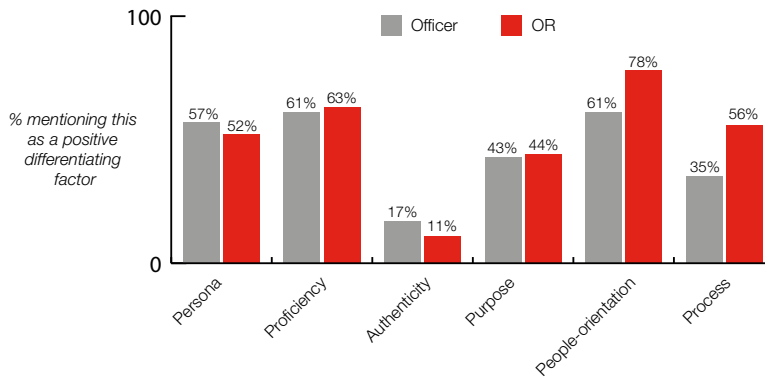


Figure 2: Differentiating factors in leadership that is seen as 'ineffective'

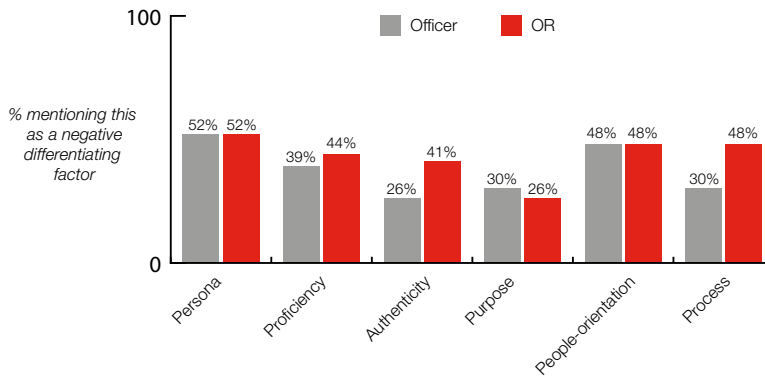
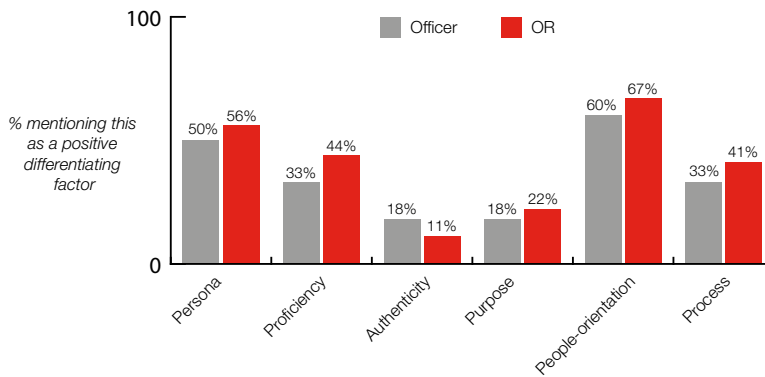
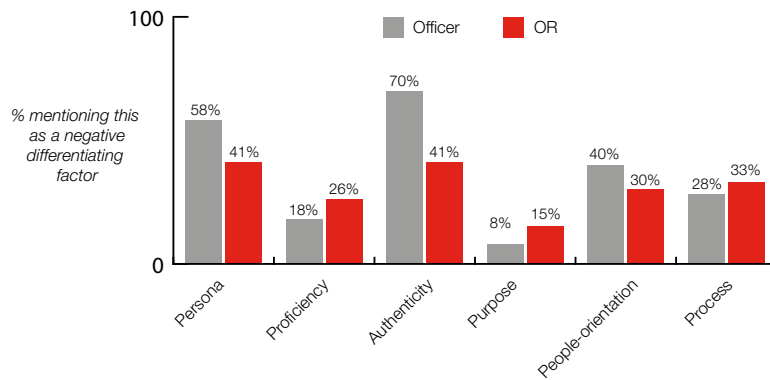


Figure 3: Differentiating factors in leadership seen as 'appealing'



**Figure 4: Differentiating factors in leadership seen as ‘unappealing’**



These frequency distributions suggest that different personality types or styles are associated with effective/appealing leadership on the one hand and unappealing leadership on the other. The good leader is an all-rounder: professional, focused, and working with and through team members in the pursuit of relevant goals. And although interviewees were able to highlight specific aspects of leader behaviour, in all likelihood these merged into a near-seamless set of activities, most of which could have been categorised in several ways. For example, activities that were directly related to Process would have also served to demonstrate People-orientation, Persona, Authenticity and Proficiency, and would have been a reminder to followers of their Purpose.

On the unfavourable side, we find the self-centred and insecure me-firsters ('SCIMFs'). The SCIMF is the epitome of toxic leadership. It is not surprising that SCIMFs are consistently seen as both ineffective and unappealing. Their priorities are often poorly aligned with the main game; they tend to exert an inappropriate level of control for the circumstances; they make little attempt to build relationships and therefore do not have the levels of emotional support and shared identity that more inclusive leaders can offer; and they deter team members from using their initiative. The argument that 'it seems to work' is not persuasive, given the lost opportunities for innovation and costs in terms of team development and morale. Moreover, SCIMF success may be due in large part not to so much to the leader but to the tendency for military teams to get on with the task regardless of the leadership style of its designated head. (This is one of the great strengths of Army leadership culture.) Even here, however, the effect will often be less than optimal.

These propositions regarding the influence of different personality types are necessarily tentative. The hypothesis can and should be tested using more rigorous methods.

## The effects of good leadership

When asked how they felt when led by the effective leaders they had just described, interviewees used expressions that alluded to identification, trust and intrinsic satisfaction.

These included the following: *'wanted to work with them'; 'felt part of the team'; 'wanted to be like them'; 'felt valued'; 'would have done anything for them'; 'felt we could do anything together'; 'felt part of a relaxed team atmosphere, as opposed to "just doing a job"'; 'motivated me to emulate their way of doing things in respect to team management, such as mentoring and facilitating as opposed to "exercising authority"'; and 'felt confident that he would watch my back and generally look out for me'.*

As a major remarked:

*It's the people who get work done, and you must manage them in such a way as to generate loyalty because, if it is not there, they might happily and diligently work for you from 8 to 4 but they won't work to levels beyond expectations.*

One sergeant spoke of how his career motivation had been wavering but how this changed when he was assigned to the team of a particular leader who *'confirmed my career choice, and confirmed that it would be worthwhile for me to use my abilities to contribute to the Army'.*

A junior officer spoke of how, even though being led by a particular person was *'challenging and sometimes frustrating'*, it *'made me feel incredibly proud'*.

Finally, the essence of this kind of leadership was summed up by a corporal who remarked that *'just a little bit of this makes you feel warm and fuzzy, and is enough to keep you working your guts out'*.



## Validity of the findings

The validity of these findings can be judged by the extent to which they make sense and are consistent with mainstream academic leadership models.

The findings pass muster on both accounts.

Military professionals to whom these findings have been shown identified immediately with these factors as descriptions of leadership. They are also consistent with research on leadership in the Australian context.<sup>5</sup> Australians respond best to supportive, egalitarian and 'no BS' leadership; we don't mind authoritative leadership but we tolerate it more readily when we believe that the authority appreciates our perspective and will act in our interests.

On the academic side, the six factors align with the main dimensions of mainstream positive leadership models. These include 'transformational leadership' (the most systematically researched theoretical leadership model in the last three decades) and the complementary concepts of 'authentic leadership' and 'servant leadership'. Transformational leadership inspires followers to raise their sights and lift their performance to levels beyond normal expectations, and to identify with and want to emulate the leader in question. In contrast, 'transactional' leaders control behaviour by incentives ('you do this for me and I'll do this for you'), corrections and reinforcing good performance.<sup>6</sup> Authentic leadership is similar to transformational leadership but with specific emphasis on the ethics and values that guide priorities and actions, in the sense of their being focused on the common good.<sup>7</sup> And servant leadership is similar again, but with specific emphasis on 'prioritising the fulfilment of team member needs'.<sup>8</sup>

Table 2 compares our six factors of military leadership with the four dimensions of transformational leadership. It can be seen that there is a close correspondence between the twin conceptualisations, except in one respect.

The one divergence between the two conceptualisations is in terms of the first factor. Whereas the *Idealised Influence* dimension of transformational leadership sees character, competence and values as a single factor, our leadership model represents this aspect of leadership by the three separate factors of Persona, Proficiency and Authenticity.

There were two main reasons for separating them in this way:

- *Practical*. It was evident from talking to many contemporary military professionals that each of these factors contributes separately to the overall effect of belief and trust. A leader could be strong on one or two and weak on another. For example, interviewees frequently spoke of leaders who were unpleasant and abrasive but who were nevertheless trusted because they were very proficient professionally.
- *Conceptual*. History is replete with leaders who were driven by questionable levels of morality but whose charisma was such as to compel strong levels of followership, eg Hitler and Stalin. The Army leadership model avoids this discrepancy.

*Table 2: Categories of Australian Army leadership behaviour, their transformational leadership equivalents and their psychological effects*

Category	Transformational Leadership equivalent: dimension and its behavioural essence		Psychological effect
Persona, Proficiency, Authenticity	Idealised Influence	Acting in ways that inspire emulation of performance and values	Belief and trust in the leader
Purpose	Inspirational Motivation	Setting a purpose that focuses, binds and energises by its relevance and challenge	Confidence in (and potentially inspiration from) the designated direction
People-orientation	Individualised Consideration	Building social bonds that enhance self-esteem, self-confidence and teamwork	Belief in oneself and in the team
Process	Intellectual Stimulation	Engaging followers collaboratively	Fulfilment from the process

### Leadership effect and style

These findings bring us to the second set of questions that drove this study, ie whether it is acceptable or desirable for leaders to focus entirely on tasks/outcomes, regardless of the effect on team members, as long as the job gets done.

There are three main reasons why the answer is 'no'.

Firstly, as noted above, as clearly indicated by the findings of this study, Australians respond better to engaging and egalitarian leadership than to autocratic leadership.<sup>9</sup> And while Australian leaders can achieve basic and minimal results with directive leadership styles, they need to do better than this if they want to achieve higher standards consistently.

In the business literature, this is called 'the Apple paradox'. This refers to the apparent contradiction between the enormous success of the Apple Corporation and the hard-driving, arrogant and get-things-done-at-all-costs style of CEO Steve Jobs. It is instructive that, near the end of his life, Jobs agreed with his biographer that 'The nasty edge to his personality was not necessary. It hindered him more than it helped him'.<sup>10</sup>

Secondly, military operations have long passed the era in which General John Monash could describe a 'perfectly perfected battle plan as like nothing so much as a score for an orchestral composition'.<sup>11</sup> Instead—to continue the musical analogy—contemporary military teams are much more like 'jazz musicians who interact with each other on the basis of each person's role in the group, guided by the structure of specific musical rules and norms'.<sup>12</sup> Leaders in the era of the strategic junior leader need to act as *catalysts* rather than as *controllers*, and lead in ways that give optimal flexibility and autonomy, and make their junior colleagues collaborators in the process.<sup>13</sup> However hard-driving this might be in practice, such leadership is unlikely to be seen as either 'hard' or 'inflexible' by those most affected, particularly if the need for hard-driving is explained in terms of mission accomplishment—and especially if those leaders have made the effort to build trust and set up the conditions for success in the relatively easy times before the stress of intensive operations.

This links with the third reason, and returns us to the fundamental principle of officership. Whatever their level, military leaders should strive to achieve more than the bare minimum, and should always have the longer term in mind so that they hand on teams that are in better shape than when they themselves took them over. These obligations of 'stewardship' also mean attending to the welfare of their charges.<sup>14</sup>

Not surprisingly, much of the research that confirms this principle comes from the military. For example, a very large study in the US Army showed that platoon performance in operational simulations at joint training centres was closely correlated to the pre-simulation in-garrison leadership styles of platoon commanders.<sup>15</sup> The teams of those who led in ways consistent with our Army leadership model consistently achieved superior performance down the track. Similar effects were found in a study conducted in the Israeli Defence Force.<sup>16</sup> Such leadership is crucial for outcomes beyond team performance and task achievement, including adaptability, cooperation, learning, resilience, employee well-being and turnover, and service spirit and citizenship.<sup>17</sup>

Given that all the evidence points clearly to the superiority of the leadership styles described in this paper, why do some leaders continue to practise an essentially autocratic and task-oriented style?

There are at least three main reasons.

Most simply, and as already discussed, many officers are neither aware of nor interested in the academic literature. Moreover, many may have inadvertently modelled themselves on task-oriented leaders with whom they had close contact early in their careers. (Early career role models exert a disproportionate influence over long-term behaviour.<sup>18</sup>)

Secondly, a task-oriented style is often more 'efficient' in the short-term. Time with subordinates means time spent away from the in-tray dealing with the multitude of often comparatively minor tasks that make up a large part of a busy officer's routine. Since advancement depends on satisfying the requirements of one's superior, it is not surprising that career-oriented officers often give short-term priority to activities that meet their superiors' most measurable requirements.<sup>19</sup>

The final reason has deeper cultural roots. Many managers continue to believe that strong task orientation is more likely to contribute to superior performance. A recent study showed that such a tendency is particularly prevalent in organisations with predominantly male workforces and corporate purposes that were predominantly pragmatic and action-oriented ('real men are tough leaders').<sup>20</sup> Regardless of their erroneous nature, such assumptions can be very difficult to shake off, particularly in the light of the weight given to particular leadership styles in selection decisions, and

the mental models and expectations that are passed from generation to generation. Plainly, it's a proposition that deserves deep reflection at all levels of the military profession.

## Limitations of the study

Interesting and useful though the finding might be, the study has two major limitations. Firstly, the sample is under-represented in junior officers, whose perspectives may well be subtly but significantly different to those with an extra decade or so of service. Secondly, the results tell us nothing about current standards of leadership practice in the Army.

The frequency with which the behaviours associated with a particular factor in the model were mentioned are a measure of what people look for and notice about 'good' leaders, regardless of how we designate 'good'. And although such frequencies do not necessarily indicate the relative importance of particular factors, they obviously have some correlation.

Thus the frequency count for a factor represents a broad indication of its importance within the overall leadership process. But it is literally that—no more than 'broad'. Each of the factors plays an important part in the total process. And the precise actions needed to perform each of the factors will depend on the circumstances.

The next step in investigating the general issues that gave rise to this short study should therefore be to broaden the sample and use more systematic measures of leadership performance. These should include longitudinal designs, in order to analyse questions such as the longer-term effects of leadership as it might be practised during exercise simulations and on operations. This would also facilitate the investigation of potential intra-professional stylistic differences, eg between GSO and SSO, female and male officers and NCO, and other demographic variables of interest.

It is to be hoped that the Australian military institution will shrug off its traditional indifference to scholarly analysis and throw itself into a long overdue investment in self-analysis, self-understanding and self-improvement.

## Conclusions

The findings of this study represent the first systematic first-principles analysis of desirable leadership models in the Australian Army. It goes considerably beyond previous offerings, such as the Adair situational approach to leadership and the principles of leadership enunciated in LWD 0-2.<sup>21</sup>

In terms of the first question investigated in the study—the nature of ‘good’ leadership—the Army leadership model derived in this study presents a template of how to behave if you want to lead effectively. Collectively or individually, it can be used as a guide for professional development and for day-to-day leadership behaviour.

In terms of the second question investigated in the study—the pros and cons of task-oriented leadership—it is telling that the most frequently mentioned behaviours were associated with ‘People-orientation’. This was particularly the case for soldiers.

The findings confirm the Army’s traditional emphasis on developing ‘all-rounder’ professional leaders of character, whose priorities are for the mission and the team before themselves. Good leadership is balanced across all the factors, giving as much attention to people factors as to task factors.

An all-round leadership style has always been important for the Australian military but it is even more important in the era of fourth generation warfare and the strategic junior leader, in which leaders must see themselves as catalysts rather than as controllers, and as stewards as well as commanders. While ‘leading from the front’ remains crucial, particularly in terms of winning trust and establishing standards, the concept must not be interpreted too literally. Given the fluid nature of the operational context, and the high levels of skill and motivation that even those at the most junior levels can bring to bear, a leader’s responsibilities must include doing what is necessary to help each team member to contribute optimally to mission success. And the establishment of capability, solidarity and trust established in the easy times must be seen as an investment for when things become more challenging, and as part of the obligation that each officer has to the institution.

The principle of ‘leading today with tomorrow in mind’ may well be a crucial differentiator between being good and being great. Meeting the significant challenges of the future will require the Australian military institution to give

as much attention to *thinking* about leadership – at the institutional as well as the individual level, and at the academic as well as the practical level – as it currently does to *doing* it.

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## About the Author

*Nick describes himself as a soldier, a scholar and a management consultant, since much of his professional practice has encompassed all three roles. He served in the Australian Regular Army from 1961-86 and retains his association with the military as a consultant and a reservist Brigadier. His scholarly interests include the sociology of the military career and organisational and team leadership. He recently completed a study of military strategic leadership (“The Chiefs: A Study in Strategic Leadership”) and he hopes soon to publish a book on Australian military leadership and the lessons that can be learned by leaders in civilian fields. As a resident of Marysville, he and his wife Judy were deeply engaged in community recovery and regeneration after the Black Saturday bushfires in February 2009, for which he was awarded the Medal of the Order of Australia.*

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## Endnotes

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# Informational properties of extremist content: An evidence-based approach

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## ABSTRACT

Extremism poses a danger to any society and can be detrimental if unchecked. In the post-web era, extremist groups have started using information networks to influence public perception, gain silent sympathisers, and radicalize youth. One such group—the Islamic State of Iraq and al-Sham (ISIS)—deftly uses information networks to intimidate rival groups, terrorize populations, radicalize youth, and recruit foreign fighters from Western countries—thus posing a threat to the security of regions in which it operates and in which it has supporters. This research study has developed a framework to analyse the content produced by ISIS and proposes a pseudocode designed to enable agile and responsive information operations. This framework is based on four elements: (1) qualitative and (2) quantitative properties of information, (3) affective and emotional dimensions, and (4) contextual factors. It was found that ISIS's information strategy is multi-tiered and designed to adapt to the affordances of digital media. ISIS's content is rich in affective and emotional cues, religiously-significant terms, and a romanticized view of martyrdom and the caliphate. Their content also uses highly negative and positive information bias (skewness) to demonize enemies and legitimize ISIS's agenda respectively. It is hoped that the proposed framework along with the pseudocode and findings of this study will enable the security agencies to develop a counter-informational response.

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## Introduction

The battlespace of the twenty-first century is networked and occupied by densely-populated, highly-connected communities. Social media can be weaponised to support influence operations; in turn, the ways in which hostile actors undertake information operations can provide insights into their own strategic objectives and organizational structures. In this paper, we investigate what the analysis of web and social media content can tell us about how insurgent groups influence the perception of the local populations. The implications are significant in that populations connected to social media form an intimate component of the landscape in which the profession of arms applies kinetic power.

Major Sarah Isdale<sup>1</sup> writes: 'Tactical cyberspace control is rapidly becoming central to dominating the information environment and thus will emerge as paramount for forces campaigning in the information age'. Innovation in this area has been discussed extensively within Army circles over the past two years. David Kilcullen's discussion paper<sup>2</sup>—*The Australian Army in the urban, networked littoral*—highlights the significance of connectivity on conflict. Last year Dr Glenn Russell's<sup>3</sup> contribution to the Land Power Forum blog noted: 'Monitoring the social media arena and cultivating the skills needed to compete therein are sure to prove key during future challenges to Australia's national security'. This paper offers insights to inform innovative thinking around influence operations and intelligence assessments in the twenty-first century battlespace.

The Australian Army's Future Land Warfare Report acknowledges this trend and notes that information networks will be used by non-state actors to influence public perception.<sup>4</sup> The purpose of this research is to analyse the web-based informational content produced by The Islamic State of Iraq and al-Sham (ISIS), with the objective of: identifying (1) the informational properties of; and (2) information strategies used in their content and to develop: (3) a framework guiding the Australian Army in identifying the extent of threat present; and (4) a pseudocode operationalizing the framework. To achieve the objectives of this research, different properties of information (including qualitative and quantitative) provided a lens through which ISIS's media content was analysed. This lens also helped to develop the pseudocode systematizing the identification of extremist informational cues in ISIS's content.

ISIS, a group that appeared on the global scene in 2014<sup>5</sup>, is deftly using information networks to spread its totalitarian agenda and poses a threat to the national security of many nations. More alarmingly for Western nations is the group's use of social media and online networks to recruit fighters from different countries and to gain silent sympathisers; social media can be weaponised to support influence operations. This paper is organised as follows: the significance of this work is presented; followed by a description of the literature review and of methodology; next, data analysis and results are discussed; and finally, conclusions are provided.

## Significance of this Research

The use of information networks by extremist groups to spread their message and to cause cyber and/or physical damage has drawn the attention of various researchers. Some for instance noted that lone wolves, insurgents and hacktivists can use information networks for launching cyber attacks.<sup>6,7</sup> Similarly, Adaptive Campaigning – Army's Future Land Operating Concept<sup>8</sup> made a note of increased misuse of informational terrain by extremists to seek shelter and cause harm. This strand of research (eg Arquilla; Arquilla et al; and Future Land Operating Concept) on the use of information networks by adversaries provides valuable insights about the use of information content; however, it does not tell us about the nature of information properties underlying each kind of content. It is important to know the properties of information as a change in content brings a change in information distribution, with resulting impacts on individual perception<sup>9</sup>. This research examines not only the content but also identifies the distributional properties of information relating to the different content and media in web-based extremist messaging. The findings of this research will help the Australian Army to: (1) better understand the role of distributional properties of information in shaping an informational message; (2) assess the information gathered to identify the potential threats both from home-grown as well as foreign extremist groups; and to (3) develop counter informational strategies.

## Literature Review

Extreme—as a term—refers to something far from moderate<sup>10</sup>. According to Sotlar<sup>11</sup>, ‘...extremism is essentially a political term which determines those activities that are not morally, ideologically or politically in accordance with written (legal and constitutional) and non-written norms of the state; that are fully intolerant toward others...’. People with extremist views are generally intolerant of anything, either in practice or thinking, which is different from their own views<sup>12</sup>. Extremist groups are present in almost every part of our world; however, their ability to disseminate information and influence public perception has increased tremendously in the post-Internet era. Corroborating this assertion, the New York Times published an article, ‘The revolution will be posted’, discussing how blogs transformed the 2004 USA presidential race<sup>13</sup>. In a similar vein, Eltantawy and Wiest<sup>14</sup> argued that social media played an instrumental role in the Egyptian revolution. The role of online media, including YouTube, Twitter, e-mail, Facebook etc, in facilitating extremist groups and non-state actors has also been recognized by national security agencies. For example, the *Future Land Warfare* report by the Australian Army<sup>15</sup> noted that some people or groups will use information networks to influence public perception. This observation can now easily be attested by looking at the recent online media use by extremist groups.

One such group is ISIS, appeared on the global scene in 2014<sup>16</sup> and: (1) occupying areas in Iraq and Syria; (2) using information networks, especially social media, to advance its agenda; (3) carrying out atrocities against minorities and opposing forces; and (4) recruiting foreign fighters from Western countries. According to Neumann, the total number of foreign fighters in the Syria-Iraq conflict exceeds 20,000 and almost 4,000 of them are from Western countries<sup>17</sup>. For instance, it is estimated that approximately 100–250 from Australia and 100 from the USA<sup>18</sup>, 150 from Netherlands<sup>19</sup>, 100 from Canada<sup>20</sup>, 677 from Germany<sup>21</sup>, 900 from France, and 500 from Britain<sup>22</sup> have travelled to Iraq and Syria to join ISIS.

In addition to the recruitment of foreign fighters, another significant and concerning factor is the radicalization of young people living in Western countries. Some security officials, including the former deputy director of CIA, commented that ‘...ISIS poses a threat to the homeland. That threat is largely indirect and involves ISIS’s ability to radicalize young Americans to conduct attacks here<sup>23</sup>. This threat of radicalization is noted in a large

number of research studies on foreign fighters, ISIS, and its media strategy. For example, in a study on foreign fighters from Netherlands, Bakker and Grol examined six cases of potential foreign fighters noting that extremist narratives did play a role in radicalization. However, they also noted the role of social and personal factors in radicalization<sup>24</sup>. Mueller and Stewart analysed 61 cases of extremism in the US and found that 'the people in many of the cases did go to the Internet for further information, and they frequently sought out the most radical sites...'<sup>25</sup>. Like Bakker and Grol however, Mueller and Stewart also noted the presence of various other factors (eg personal identity crises, difficulty holding jobs, criminal records) that potentially also played a role in radicalization. Porter and Keibell<sup>26</sup> looked at the radicalization of 21 individuals convicted in Australia for terrorism, analysing law reports and related newspaper articles concerning these individuals. The authors noted the interplay of different factors including identity issues, flawed understanding, and exposure to extremist content contributing to radicalization.

In view of the role of extremist content in radicalization, it is important to understand the informational properties of such content and the impact these properties leave on individual perception. Information has both qualitative and quantitative properties. For assessing qualitative properties of information, works of Lee *et al*, and Knight and Burn, provide important directions. Lee *et al* developed an instrument that conceptualized and operationalized 15 dimensions of information quality<sup>27</sup> while Knight and Burn described various information quality frameworks and then identified 20 common dimensions of information quality including properties such as accuracy, consistency, security, and timeliness<sup>28</sup>.

Excess and scarcity of information are related with quantitative aspects and have been researched more in the areas of finance, economics, and marketing. For example, impact of incomplete information on insider gains<sup>29</sup>, impact of excessive positive clues on product valuation<sup>30</sup>, and the role of quality and quantity of information in decision-making represent research on quantitative properties of information<sup>31</sup>. The quantitative property of information used in this study to analyse ISIS's content was skewness. From a statistical viewpoint, skewness denotes a distribution which is highly imbalanced<sup>32</sup>. As a distribution is around a mean, therefore this imbalance can be in either direction, leading to a positively- or negatively-skewed distribution. This characteristic of distribution can be applied to the

distribution of information too. According to Afzal<sup>33</sup>, a deliberate attempt can be made to release information which has overly positive connotations, thus positively skewing information and vice versa.

## Methodology

The research problem in this project is addressed using content analysis. Content analysis was done to: (1) identify themes in the data; (2) assess qualitative properties of information; and (3) prepare corpus of data for the assessment of quantitative properties. Qualitative attributes (eg balanced, accurate, consistent) of the selected information were assessed based on the works of Knight and Burn and Lee *et al*<sup>34</sup>. Definitions of qualitative attributes, provided in Knight and Burn, were used to contextualize the assessment appropriately<sup>35</sup>. Quantitative properties of skewness and lexical diversity were also assessed. According to McCarthy and Jarvis, 'lexical diversity refers to the range of different words used in a text, with a greater range indicating a higher diversity'<sup>36</sup>. Lexical diversity was assessed by calculating a Standardized Type Token Ratio (STTR). Specifically, content was divided into paragraphs of 200 words each<sup>\*\*2</sup> and then the STTR was calculated for every paragraph. To calculate skewness, two steps were taken: (1) specific recurring terms occurring in the content were identified and a repository of terms was created; (2) synonyms for every term were identified and then also added in the repository; and (3) based on theological, political, historical, and affective/emotional relevance, skewness weight was assigned to each term.

To draw out themes and findings that can be applied across extremist use of social media we also explored online content from another extremist US militia group called 'The Three Percenters' in order to provide some comparison. The Three Percenters are a so-called patriot movement and a paramilitary group that pledges armed resistance against attempts to restrict private gun ownership, and depict the federal government as tyrannical<sup>37</sup>. In part, the selection of the Three Percenters was opportune; as we began to undertake the process of data collection, various factions of the Three Percenters militia became embroiled in the armed stand-off at Malheur nature reserve in Oregon<sup>38</sup>. As we harvested data from across the social media platforms of ISIS official and supporter networks, the Oregon stand-off generated a rich dataset from the militia movement in the USA.

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<sup>2</sup> \*\*There were some paragraphs that were either a little less or more than 200 words.



Using an initial subset of social media users clearly aligned to extremist groups, the researchers adapted the relational functionality ('is friends with...', 'follows', 'links to...') of these social media profiles to derive a dataset of cross-platform social media content. This approach was adopted to provide comparative findings based on commonalities and differences between the content of ISIS and the Three Percenters. *Please see appendix for analysis.*

## Discussion

ISIS's content includes a large number of terms signifying religious/theological factors, at times carefully contextualized using historical information but, more importantly, these terms are unpacked for readers using out-of-context and flawed interpretations. The rhetoric of ISIS is also full of terms with strong affective and emotional connotations. It is important to note that this group's skilful twisting of religious, historical and political factors, along with emotional and affective appeals, presents an informational message that has considerable appeal. Specifically, religiously-significant terms such as 'taghut', 'murtaddin', 'apostates' 'shahada' have been used repeatedly to label others as 'enemies' and a threat to their desire to establish an idealistic state of caliphate (khilafah). Similarly, terms with affective connotations, including 'angry', 'grieve', 'fear' 'love', 'suffer', are used to: (1) gain sympathies and legitimacy for ISIS; and (2) present groups with which it is in conflict as 'the other'. For example, in the 'foreword' of *Dabiq's* issue no. 14 a very explicit rhetorical warning was given to opponents of ISIS:

*'Having heeded the lessons of years spent fighting the **harshest of wars...soldiers of the Islamic State promise their adversaries dark days of death and destruction in their own land. Bullets and shrapnel will slash and pierce...Survivors will be scarred... physically and mentally, haunted whenever their eyes are closed***  
\*\*\* "39

Addressing scholars who give verdicts against ISIS, it was stated in *Dabiq's* issue no. 13:

*'Indeed, it was already **obligatory to spill the blood of these scholars, for they had apostatized years ago, defending and supporting the taghut in the war...**'<sup>40</sup>.*

In a similar vein, derogating scholars who are balanced in their approach, issue no. 14 states:

***‘The **kuf**r of liberalism and democracy was instilled and a new breed of “scholars” was born, becoming a part of the West’s very own imams of **kuf**r’<sup>41</sup>.***

An important aspect of ISIS’s strategy are the insertions of: (1) verses from religious texts; (2) opinions of scholars; and (3) a romanticized view of martyrdom at various crucial places in the content to provide a seemingly authentic, balanced and yet emotionally-laden message to readers. This message presents a stimulus for the perception of potential receivers. Russell noted that people’s perception is influenced by external stimulus and depending on the ways people perceive the stimulus [including informational content] can have an affective impact<sup>42</sup>. Affect can then influence perception, cognition, and behaviour of people<sup>43</sup>.

This content can appeal to minds not grounded in basic religious knowledge or those looking for escape from existing personal issues. Researchers examining the lives of foreign fighters have identified personal issues (eg poor performance at school/university, family breakdown, criminal record) as an important commonality in a large number of departees. For example, 66% of departees from Germany had criminal records<sup>44</sup>, whereas the majority of Dutch foreign fighters also had varied personal issues such as criminal records, family problems, unemployment<sup>45</sup>. Hall in 2015 profiled Canadian foreign fighters and noted that ‘the typical foreign fighter joining ISIS also seems to be lost at a transitional stage in his life.’<sup>46</sup>

An important part of this research was to analyse the lexical variety of ISIS’s content. For this purpose, STTR was calculated for a selection of content from *Dabiq*. The lexical variety of the analysed content in *Dabiq* is reflective of ISIS’s agenda; that is, to gain attention and sympathy. The STTR of content did remain below 60%—a mark representing low lexical diversity and therefore considered useful for easy comprehension by the contents’ audience. However, this finding should be taken with caution as the data under analysis was limited only to *Dabiq* and did not include other sources of ISIS’s content.

ISIS is weaponising information by using positively- and negatively-skewed narratives to advance its cause. It is apparent that ISIS employs positive skewness, especially in describing its combat and violence. A particular use of this strategy is also highly visible in information content presenting: (1) an idealistic view of caliphate; and (2) martyrdom. Negative skewness is used to label everyone as an enemy or a serious threat to ISIS and hence to the idealistic-and-to-be caliphate. ISIS includes countries, rival groups, alternative perspectives, and even individuals, in its list of enemies.

It is significant to note that the ISIS's propaganda is designed to serve multiple purposes, including terrifying local populations, intimidating rival groups, influencing public perception and gaining silent sympathizers—some of whom then may decide to join ISIS in fighting. The brutality of the imagery presented in ISIS's official and supporter social media channels is also notable. This is strategically-framed psychological warfare via social media that coincides action with narrative to maximize effect<sup>47</sup>.

It is highly important for soldiers to comprehend the significance of terms, different ways in which these terms can be used—as well as consequent affective evocations, because these evocations can lead to actual action. Such knowledge is also important from an operational standpoint especially when soldiers are in active combat zones and engaging regularly with civilian populations. Countering combat strategy and informational propaganda of groups such as ISIS requires a deep understanding of religious and political sensitivities—once such a group is uprooted there should be denial of any sprouting of splinter groups or emergence of new groups of similar nature. From a strategic standpoint, understanding informational propaganda can help soldiers to develop counter-narratives and to build a positive image with civilian populations—all of which will help protect soldiers from the numerous threats present in active combat zones. There are also implications for developing an information strategy to be used in connected online environments. Army has to engage not only in physical space but also in virtual space as combative operations now include the cyber domain. The findings of this research can be used in assessing the extent of affective, religious/theological, and political, cues present in informational messages along with possible impacts on public perception.

## Conclusion

This study has developed a framework to analyse the content produced by extremist groups, based on four elements: (1) qualitative; (2) quantitative properties of information; (3) affective and emotional properties; and (4) contextual factors, including politics, history and religion. Based on this framework, content produced by ISIS in different formats was analysed to clarify its information strategy. Additionally, the STTR was calculated to assess the lexical diversity of ISIS's content. A pseudocode was also developed to operationalize the framework. Finally, to broaden the scope of this analysis, content from another—yet very different—extremist group (the Three Percenters), was also examined. Some commonalities were identified including the use of symbolic imagery, narrative style and emphasising a sense of grievance. It is clear that ISIS's information strategy is to produce and disseminate content through different media outlets and to influence different audiences. ISIS's content contains carefully-chosen informational cues aiming to present a romanticized view of the caliphate, a highly-positively skewed portrayal of combat success, of the camaraderie of a military brotherhood and of death in battle as the ultimate sacrifice.

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## Appendix: Analysis

An important challenge in this analysis was to identify official ISIS-generated content. ISIS-related content has been disseminated through various media outlets including Twitter, YouTube and blogs. Researchers eg Gambhir<sup>48</sup> and Steindal<sup>49</sup> have identified ‘*Dabiq*’ as the official magazine of ISIS. Late issues of *Dabiq* (issue no. 13 and 14)<sup>50</sup> and five news bulletins of ISIS<sup>51</sup> (March 7–March 9; April 19–20, 2016) were content-analysed; there are repetitive sections from one issue to another including ‘foreword’, ‘military reports/operations’, ‘interview’, ‘from the pages of history’. *Dabiq* uses clear language to present the content; the quality of arguments is impressive based on historical, political and theological underpinnings and affective undertones are pervasive and skilfully used throughout.

Selected sections from these issues were analysed to identify major themes and important terms; based on theological/religious, historical and political dimensions. Some terms were identified based on their function to describe an event, qualify an action, and usually including an affective component. The work of Ortony *et al* was used to identify terms with affective and emotional connotations who examined approximately 500 words from the literature on emotions to develop a taxonomy of affective lexicon<sup>52</sup>. In the current study, a total of 479 terms were identified and then classified into one of the three categories.

Terms	Theological/Religious	Emotional/Affective	Political/Historical
1	Khilafah	Grieve	Wakeup
2	Hijrah	Love	National interest
3	Bay’ah	Angry	Royals
4	Shahadah	Terrorizing	Stooges
5	Ummah	Mock	Taghut
6	Murtaddin	Shamelessly	Saudi
7	Mushrikin	Desperate	Palace
8	Shirk	Aggressors	Crusaders
9	Taghut	Defiantly	Masters
10	Jahannam	Angry	Liberalism
11	Kuffar	Bitter	Democracy
12	Jihad	Fear	Constitution

Table 1. Classification of Terms

A skewness value ranging from 0 to 1 was assigned to each term classified in any of the three categories. This assignment was based on the following principle: any term signifying the (1) exclusion of someone from religion; (2) absence of faith; (3) presence of a fatal challenge to an idealistic state; (4) glorification of an action; (5) belongingness of a person; (6) emotional and affective appeals (eg anger, pleasure) was assigned a value (see Table 2). A term having a moderate connotation pertaining to any six dimensions mentioned above was given a weight of 0.5 whereas a term with explicitly extreme/zealous connotation was given a weight of 1. In assigning weights, context around each word–sentences around the word–was also taken into consideration.

Terms	Terms (skewness value)	+/- Skewness
1	Khilafah (1)	+
2	Murtaddin (1)	-
3	Taghut (1)	-
4	Stooges (0.5)	-
5	Crusaders (1)	-
6	Grieve (0.5)	+
7	Mock (0.5)	-
8	Shahada (1)	+
9	Kuffar (1)	-
10	Liberalism (0.5)	-

*Table 2. Terms with Skewness Values*

Additionally, a STTR was calculated to assess the lexical diversity of the content. STTR should be calculated for a fixed number of words in order to have stable results. For this purpose, the content was divided into paragraphs of 200 words each and the content was cleared of all punctuation marks. To avoid artificial conflation of words in a paragraph, some terms and names were hyphenated to form compound words so they could be counted as one word. Each paragraph was visually inspected before calculating the ratio. The STTR was then calculated for every paragraph (see Table 3 for results).

Paragraph	STTR
1	57%
2	56%
3	57%
4	64%
5	59%
6	63%
7	52%
8	58%

Table 3. Standardized Type Token Ratio

Three qualitative properties of ISIS’s content were also assessed including ‘accuracy’, ‘consistency’, and ‘objectivity’ as defined below in Table 4. [All definitions were quoted from Wang and Strong (1996) as cited in Knight and Burn (2005)]<sup>53</sup>

Term	Definition
Accuracy	‘extent to which data are correct, reliable and certified free of error’
Consistency	‘extent to which information is presented in the same format and compatible with previous data’
Objectivity	‘extent to which information is unbiased, unprejudiced and impartial’

Table 4. Definitions

The accuracy of ISIS’s content varied; for instance, in describing combat-related activities, exact locations and the number of causalities not always being clear. In terms of consistency, it can be argued that ISIS has been very persistent. For example, information was presented along with very carefully-developed visuals. The content was well-written and also supported through carefully-developed arguments. Objectivity is a property that was extremely lacking in ISIS’s content. This group, skilfully, presents either a highly-positively-skewed argument to promote their agenda or uses highly-negatively-skewed information to create feelings of hatred, anger, and fear as identified in Table 5.



Qualitative Property	Example
Accurate	'...leading to a number of the barracks...and a large number of the murtaddin...' <sup>54</sup>
Accurate	'...operation with an explosive vehicle, killing and wounding dozens of murtaddin...' <sup>55</sup>
Objectivity	'...the taghut regime of...with the approval of their judges and the support of their scholastic stooges, ...' <sup>56</sup>
Objectivity	'...operations conducted by the soldiers of khilafah against the factions of apostasy in all their colors...' <sup>57</sup>
Consistency	'The soldiers of khilafah...apostate foot patrol...', '...injuring several apostates...', '...retreat of those apostates therein...' <sup>58</sup>
Consistency	'...leading to [a] number of barracks...and a large number of the murtaddin...'; 'The murtaddin's positions were bombarded...'; 'He succeeded in killing approximately 80 murtaddin and...' <sup>59</sup>

Table 5. Qualitative properties

Based on the framework above including: (1) an assessment of information skewness; and (2) the classification of terms in categories using affective, emotional, political, historical and religious aspects, a pseudocode was written. The purpose of this pseudocode was to systematize the identification of extremist information and assessment of associated risk of radicalization. A prototype has been developed and tested with promising results. This prototype is an initial step in the much-needed future work to systematize the proposed framework in this study (see below some screenshots of the prototype).



Figure 1. Interface

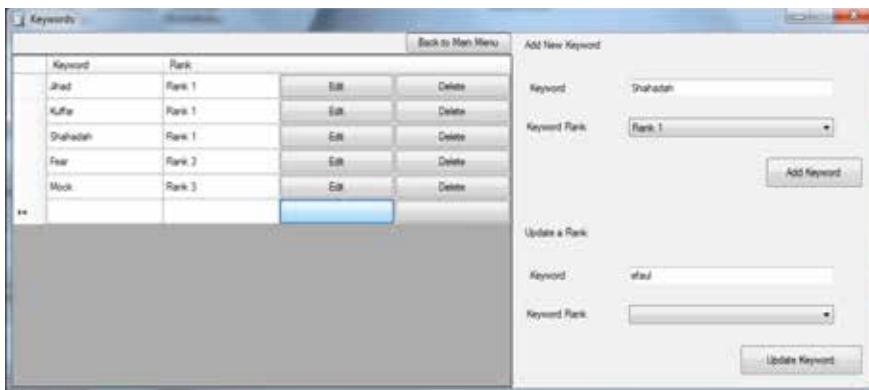


Figure 2. Lexicon input

For comparative analysis of extremist content between ISIS and The Three Percenters we followed the data, from platform to platform, harvesting samples for the study's dataset. For ISIS, use of the micro-blogging site Twitter was of particular prominence in building networks of supporters for the distribution of news, battle reports and propaganda. This approach was supported with the use of document-sharing sites like JustPaste.it (<https://justpaste.it/>) for photo-journalism and the appropriation of the Internet Archive (<https://archive.org/>) to distribute video.

Use of Twitter by ISIS operatives and supporter networks has been explored in previous studies. Berger and Strathearn<sup>60</sup>, Berger and Morgan<sup>61</sup>, Shaheen<sup>62</sup>, and Fisher<sup>63</sup> have shown how Twitter allows ISIS supporters to develop networks that are agile and adaptive, self-repairing and durable (what Fisher describes as a 'swarm'). These qualities were evident in this study's dataset; with multiple instances of accounts that were returning from suspension and rejoining the swarm. This swarm-like organic character to

the ISIS online presence crosses platforms, as both official and unofficial operatives play cat-and-mouse with the suspension policies of social media corporations. By February of 2016, Berger and Perez<sup>64</sup> were demonstrating that Twitter's renewed focus on the suspension of ISIS propaganda accounts was having an effect and that the organization was shifting operations to encrypted channels. Again, this observation was clear from our dataset. By the time we had undertaken the process of analysis, all the ISIS-supporting Twitter accounts in the study's dataset had been suspended.

The Three Percenters, in contrast, favoured Facebook, a channel providing significant reach to, and engagement with, a USA audience, where 71% of USA adults use Facebook (as opposed to 23% of adults using Twitter)<sup>65</sup>. For the group involved in the occupation of Malheur wildlife reserve, YouTube also provided a means to document the stand-off.

Dauber and Winkler commented on the underlying reasons for increasing use of visual imagery by extremist groups. They noted that images are processed more easily than text and hence can be more emotionally evocative and potent in drawing a response<sup>66</sup>. Our data confirmed their view, with a consistency in the symbolism that both groups employ to identify themselves as a clear brand in the extremist marketplace. There were a number of other commonalities and shared characteristics across the content from ISIS and the Three Percenters. Both groups employ consistent branding, symbolic imagery and narrative style. Both groups emphasized a sense of grievance. For ISIS, the impact of the air campaign by Coalition forces was emphasized in terms of the civilian casualties. Images of seriously-wounded or dead children were a feature of the Twitter feeds of ISIS supporter networks. Such imagery cannot fail to provoke an emotive response. When this emotional response is framed by ISIS propaganda it is clear who is to blame for this loss of innocent life. Such a powerful narrative is likely to have significant influence on the perception of a civilian population locked in the conflict zones of Iraq and Syria, as well as on diaspora communities watching from afar. For the Three Percenters, grievance was focused on a callous USA government, often referred to as 'tyrannical' in the dataset.

The urgency of an impending final conflict was a theme common to the narratives of both groups. According to Ingram, this communications tactic forces the audience to make a choice. It is designed to polarise, to create a context in which it becomes imperative that the audience chooses a

side. In each conflict the extremist group is framing itself, for a sympathetic audience, as a protector. Appeals to a higher authority featured strongly across both groups. Both selectively quote from important texts but without appropriate contextualization and accurate interpretations<sup>67</sup>.

There were themes that emerged from the ISIS dataset that were not replicated (at least were not so emphasized) in the Three Percenters dataset. A strong theme within the ISIS dataset was the camaraderie of a military brotherhood.



Figure 3. Military camaraderie

This visual narrative presents a picture of both adventure and belonging that may be appealing to the foreign fighters who have joined the ranks of ISIS from marginalized diaspora communities. Heroic death in battle was clearly presented as the ultimate sacrifice of an ISIS fighter. Also here, significant, is that ISIS presents itself as an intergenerational project. The narrative is clear; the Caliphate is a project that has continuous momentum. It is 'lasting and expanding' (the group's slogan—*baqiya wa tatamaddad*)<sup>68</sup>.



Figure 4. Continuous project

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# USA Military Exemptions in International Treaty Law – Should Australia Follow Suit?

Captain Michelle F. Rourke

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## Abstract

In 2006 the Government of the United States of America lodged a reservation against the World Health Organization's (WHO) International Health Regulations (2005) (IHR (2005)) that effectively nullified certain provisions with respect to the operations of USA Armed Forces. The aim of the IHR (2005) is to detect, prevent and control public health events of international concern; it does not contain provisions that explicitly relate to the militaries of States Parties. While public health considerations are undoubtedly important to the military, it is difficult to envisage how an international treaty on public health might directly obstruct military operations. This article will outline how certain provisions of the IHR (2005) might perceptibly affect the ability of militaries to conduct operations in accordance with military priorities. The article concludes that to secure operational manoeuvrability, the Australian Government should consider lodging similar exemptions to future international treaties, even if those treaties do not appear to affect the Australian Defence Force directly.

## Introduction

International treaty law is a valuable, if flawed, means of regulating the interactions between Nation States. The *Vienna Convention on the Law of Treaties (1969)* (Vienna Convention) recognises the principles of ‘sovereign equality and independence of all States’ and of the ‘non-interference in the domestic affairs of States’.<sup>1</sup> This creates the paradox that underlies all treaty law: in entering into an international treaty, the sovereign State must forego a measure of its sovereignty. International treaties must be entered into and performed in good faith.<sup>2</sup> While laws are only as strong as their ability to be enforced, and that ability on the international stage is admittedly deficient, in international law it is often the desire to be seen as a good global citizen that compels States to accede to, and abide by, treaty obligations.

The Australian Government has been party to the only legally binding international public health treaty, the *International Health Regulations (2005)* (IHR (2005)), since its adoption by the World Health Organization (WHO) in May 2005. The purpose of the IHR (2005) is ‘to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade’.<sup>3</sup> In becoming a party to this treaty, the Australian Government accepted all the obligations codified in its provisions.

This was not the case for the Government of the United States of America (USA), our long-term military ally under the 1951 *Australia, New Zealand, United States Treaty* (ANZUS Treaty). When acceding to the IHR (2005), the USA Government lodged a legal reservation and a series of three understandings which acted to modify the extent to which some of the provisions of the IHR (2005) would apply to the USA. Of interest to this discussion is the declaration that the USA Government made with respect to Article 9 of the IHR (2005) that obliges States Parties to notify the WHO of any evidence of a health risk occurring outside of its territories. On this point the U.S. Government stated that ‘[a]mong other notifications that could prove to be impractical under [Article 9], it is the United States’ understanding that any notification that would undermine the ability of the U.S. Armed Forces to operate effectively in pursuit of U.S. national security interests would not be considered practical’.<sup>4</sup>

The USA is famously averse to incursions on its national sovereignty, but this declaration is so specific as to be intriguing. The events of the last decade have demonstrated that the USA Government is generally very supportive of the IHR (2005) and have taken an active whole-of-government approach to implementing its provisions, both within the USA and abroad. How might an international public health treaty foreseeably affect the USA Government's ability to protect its national security interests? There is little doubt that public health considerations are vital when it comes to conducting military operations, but there is little in the IHR (2005) that should immediately spark the ire of operational commanders.

This article will outline how certain provisions of the IHR (2005) might perceivably affect the ability of militaries to conduct operations in accordance with military priorities, as opposed to international public health priorities as determined by the WHO. It will illustrate how the USA Government's declaration acts to modify the legal effect of Article 9 of the IHR (2005) with relation to USA military operations. The reasons as to why a military exemption of this nature might have been seen as necessary by the USA Government will be delineated. While it is too late for the Australian Government to consider lodging a similar exemption to the IHR (2005), the USA Government's military exemption makes for a more broadly applicable case study into the potential benefits and limitations of military exemptions to future international treaties. The article concludes that the Australian Government should consider similar military exemptions for future international treaties, even in circumstances where those treaties may not appear to have direct implications for the Australian Defence Force (ADF).

## ***The International Health Regulations (2005)***

The IHR (2005) is the legal keystone of the WHO's ability to monitor, assess and respond to global health threats. In 1951 the WHO adopted the *International Sanitary Regulations (1951)* as a non-binding set of directives designed to curtail the international spread of six specific diseases: cholera, smallpox, relapsing fever, epidemic typhus, plague and yellow fever.<sup>5</sup> These regulations were revised by the WHO in 1969 and made legally binding as the *International Health Regulations (1969)* (IHR (1969)), the world's first source of binding international law regarding the protection of public health. The IHR (1969) eventually became to be seen as a relic, abandoned to

the over-optimistic but prevailing assumption of the late-20th Century that infectious diseases were a thing of the past. By the time the 48th World Health Assembly called for their renegotiation in 1995, the IHR (1969) only applied to cholera, plague and yellow fever.<sup>6</sup> The emergence of the SARS (severe acute respiratory syndrome) coronavirus in 2003 demonstrated to the world that we were not wholly prepared for novel threats to global health and that the IHR (1969) was not an adequate framework with which to tackle such problems. This incident created the political will to finalise an enforceable and expansive global public health treaty and in May 2005, after 10 years of negotiations, the 58th World Health Assembly adopted the IHR (2005). The result was a broad and forward-looking treaty that is legally binding on all 196 States Parties, including every Member State of the WHO as well Liechtenstein and the Holy See.<sup>7</sup>

The IHR (2005) was novel in that rather than being applicable to a specific and antiquated handful of infectious diseases, the new Regulations encompassed all threats to global health from any origin. The aim of the IHR (2005) is to 'prevent, protect against, control and provide a public health response to the international spread of disease'<sup>8</sup> and its scope is applicable to any chemical, biological and radionuclear agents, whether natural or synthesised. Where the old IHR (1969) only mandated public health measures at designated entry and exit points (eg. sea ports), the IHR (2005) requires that States Parties implement public health capabilities throughout their whole territories. Importantly, all the provisions of the IHR (2005) apply to and are legally binding on the entire government of States Parties, not solely to specified ministries or departments of health. The IHR (2005) provide the mandate for the WHO to declare a public health emergency of international concern<sup>9</sup> and to act as the overseer and coordinator of any public health response on an international scale.

At the time that the IHR (2005) were agreed, the USA made a declaration that had the effect of exempting USA Armed Forces from certain provisions of the treaty. While '[t]he IHR (1969) and its predecessor treaties did not affect military forces significantly',<sup>10</sup> the newly-agreed IHR (2005) were deemed by the USA Government to have a potential adverse effect on the USA Armed Forces' ability to protect their national interests adequately.

## The USA Government's Reservation to and Understandings of the IHR (2005)

The *Vienna Convention on the Law of Treaties (1969)* defines a 'reservation' to an international treaty as 'a unilateral statement, however phrased or named, made by a State, when signing, ratifying, accepting, approving or acceding to a treaty, whereby it purports to exclude or to modify the legal effect of certain provisions of the treaty in application to that State'.<sup>11</sup> Essentially, a reservation, if not specifically prohibited by the text of a treaty, allows a State to attach certain qualifications or exclusions against specific provisions of the treaty whilst still becoming a Party to the balance of the treaty.

Article 62 of the IHR (2005) stipulates that States Parties may make reservations that 'are not incompatible with the object and purpose' of the treaty and reservations had to have been made within 24 months of the adoption of the IHR (2005).<sup>12</sup> On 13 December 2006 the Permanent Mission of the USA to the United Nations Office in Geneva filed an official Reservation and three Understandings, as follows (paraphrased):

Reservation: The U. S. Government reserves the right to implement the provisions of the IHR (2005) in accordance with the fundamental principles of federalism.

Understanding 1: The U. S. Government understands that the IHR (2005) apply to all health threats, 'irrespective of origin or source, whether they involve natural, accidental or deliberate release of biological, chemical or radionuclear materials'.

Understanding 2: With reference to Article 9(2) of the IHR (2005) which stipulates that 'States Parties shall, as far as practicable, inform WHO within 24 hours of receipt of evidence of a public health risk identified outside their territory', the U. S. Government understands that 'any notification that would undermine the ability of the U.S. Armed Forces to operate effectively in the pursuit of U.S. national security interests would not be considered practical for the purposes of this Article'.

Understanding 3: The U. S. Government understands that the IHR (2005) does not create a separate private right of legal action against the U. S. Government with respect to the IHR (2005).

In accordance with the IHR (2005) if one-third of the States Parties to the IHR file an objection to a reservation within six months of the reservation being filed, then the Director General of the WHO must give the reserving State the option to withdraw the reservation.<sup>13</sup> If, after three months, the reservation has not been withdrawn, then the Director General can submit the reservation to a review process, the outcome of which is provided to the World Health Assembly and put to a majority vote of WHO Member States.<sup>14</sup> If the reservation is not accepted then the State making the reservation is deemed to be a non-party to the IHR until such time as the reservation is withdrawn.<sup>15</sup> If, however, the World Health Assembly accepts the reservation, then the IHR are deemed to apply to that State Party subject to the terms of their reservation.<sup>16</sup> Only one objection to the USA Government's Reservation was submitted. On 20 April 2007 the Permanent Mission of the Islamic Republic of Iran to the United Nations Office in Geneva filed an objection to the USA Government's reservation on the basis that 'the reserving Government attempts to evade its due responsibilities and obligations' under the IHR (2005).<sup>17</sup> Furthermore, Iran stated that Understanding 2 constituted 'an attempt to place national interests above the treaty obligations by excluding the U.S. Armed Forces from the IHR bindings'.<sup>18</sup> As no other objections were filed, the USA remains a State Party to the IHR (2005) subject to the terms of the Reservation and Understandings lodged at the time of their accession.

The issue of federalism, cited as a fundamental principle in the USA Government's Reservation, is a relatively straightforward one in the context of international treaty law. The USA, much like Australia, exists as a federation of states. Approximately 40 per cent of countries are structured in this manner.<sup>19</sup> In acceding to a multilateral treaty, federal governments are entering into an agreement that may not strictly lie within their jurisdiction. That is, the USA Government may have difficulty in forcing state government public health departments to comply with the provisions of the IHR (2005) within the stipulated timeframes. Indeed, prior to the introduction of these Regulations, the USA state governments 'voluntarily reported conditions or diseases to the national authorities' as 'a matter of custom rather than overarching law'.<sup>20</sup> Accordingly, in their Reservation to the IHR (2005) the USA Federal Government is simply acknowledging the characteristic dilemma of federalism<sup>21</sup> and accounting 'for the demands of their national constitutional structures and systems of law'.<sup>22</sup> Similar issues were identified for Australia, where 'powers over emergency response to public health



crises also primarily reside at the state level, with the federal government having limited authority except for quarantine',<sup>23</sup> however, Australia made no such Reservation to the IHR (2005).

The discussion here will focus on Understanding 2, which will be referred to as a USA 'military exemption' from Article 9 of the IHR (2005). In delineating their understanding of Article 9 the USA Government is making an implicit statement about how their interpretation of this provision is different to the agreed or implied understanding of the other States Parties. Their Understanding applies only to the USA Armed Forces,<sup>24</sup> and not to the military forces of any other countries. The effect of the USA Government's second Understanding is to 'modify the legal effect of certain provisions'<sup>25</sup>. This Understanding does not constitute a mere interpretive declaration; rather, a qualified one with the characteristics of a unilateral reservation as defined by the Vienna Convention.<sup>26</sup> Accordingly, the second Understanding to the IHR (2005) will henceforth be considered to exist as a second Reservation.

## **The Need for a Military Exemption to the IHR (2005)**

Clearly the USA Government felt that their international obligations under the IHR (2005), specifically Article 9, might 'undermine the ability of U.S. Armed Forces to operate effectively in pursuit of U.S. national security interests'.<sup>27</sup> To determine the reasoning behind this we must examine the provisions of the IHR (2005) that could foreseeably affect military operations. Only then can there be an appreciation for the apparent requirement for military exemptions of this nature in the negotiation of international treaties more generally.

To reiterate, Article 9 of the IHR (2005) stipulates that 'States Parties shall, as far as practicable, inform WHO within 24 hours of receipt of evidence of a public health risk identified outside their territory that may cause international disease spread'.<sup>28</sup> Such health risks might be indicated through the presence of 'human cases',<sup>29</sup> the detection of 'vectors which carry infection or contamination'<sup>30</sup> or 'goods that are contaminated'.<sup>31</sup> Accordingly, States Parties are required to report to the WHO any event which may constitute a public health event of international concern irrespective of where that event may have occurred. When that event has occurred in the State Party's country of origin, reporting to the WHO is mandated in Articles 6 and 7 of the IHR (2005). Where Article 9 differs is that the same sorts of reporting obligations exist in territories outside of States Parties' own sovereign borders.

The military exemption proposed by the USA Government deems that such a requirement may not be 'practicable' during military operations. There are several conceivable reasons as to why this might be the case. If, for instance, USA Armed Forces were to be made aware of a reportable event, such as a disease outbreak, whilst conducting clandestine operations in another State's territory, Article 9 obliges the reporting of such an event to the WHO within 24 hours. This information could reveal the location and, in some instances, the nature of their military operations to the WHO. Under Article 11 of the IHR (2005) the WHO can use the information gained under Article 9 'for verification, assessment and assistance purposes' and can 'consult with the State Party in whose territory the event is occurring'.<sup>32</sup> When information of this nature is obtained from an unusual source, the WHO may 'maintain the confidentiality of the source', 'only where it is duly justified'.<sup>33</sup> Accordingly, there is no way of ensuring the confidentiality of the source of health information provided to the WHO and this may result in sensitive operational information being shared with third parties. These situations are further complicated in coalition military operations where a conflict of interest might arise between allies with contradictory international legal obligations.

Once a report has been made under Article 9, further provisions of the IHR (2005) may automatically come into play. For instance, under Article 13(5), the military force as an instrument and representative of a State Party may be requested by the WHO to assist with a coordinated public health response. This clearly presents an inopportune situation in clandestine operations, but it is easy to conceive of how wholly open military operations could be severely impeded by such a request. A military exemption to Article 9 ensures that military objectives are met in line with military priorities, not public health priorities. It further ensures that military supplies and resources are not unexpectedly reallocated to non-military assignments during the conduct of operations.

There are additional provisions in the IHR (2005) that might pose a threat to or impinge upon the ability of Armed Forces to conduct military operations in accordance with their own priorities. Article 44, for instance, requires that 'parties undertake to collaborate with each other' to detect, assess and respond to health events. In times of conflict this may be considered unfeasible by the international community, however, a military exemption to this provision might act to clarify the existence (or absence) of obligations

to civilians in host or enemy nations. Does the military, as an instrument and representative of a State Party, have the right *not* to cooperate on any level with potential adversaries? In conflict zones, health intelligence should be guarded like any other category of intelligence. Indeed, the destabilisation of an adversary's systems of health governance could be beneficial to conducting operations in some instances. An implicit military exemption from collaborating with and assisting enemy parties during health emergencies may be considered a given by some, but without an explicit military exemption to the IHR (2005) collaboration and assistance are mandated.

## Should Australia Follow Suit?

The IHR (2005) was met with few objections upon its adoption by the 58<sup>th</sup> World Health Assembly. Its provisions are clear and justifiable in meeting the overall objective to protect against global health threats of all origins. Since its entry into force in 2007,<sup>34</sup> the IHR (2005) have been invoked by the WHO in four instances to declare a public health emergency of international concern. In 2009, the outbreak of H1N1 avian influenza became the first test of the IHR (2005). In 2014, the Ebola crisis and a resurgence of polio cases were both declared public health emergencies of international concern, and the IHR (2005) was most recently invoked in response to the Zika virus epidemic in South America. While the handling of these emergencies by the WHO has met with some criticism, the IHR (2005) have proven flexible in meeting the demands of dealing with emerging and evolving health threats.

Unlike the Australian Defence Organisation, the USA Department of Defense (DoD) has defined responsibilities in the public health arena. In 1996, the Clinton administration extended the mission of the USA DoD to include support for surveillance and research into emerging diseases around the world.<sup>35</sup> The USA Armed Forces Health Surveillance Center has helped to develop a global infectious disease surveillance network, 'in direct support of the [IHR]'.<sup>36</sup> This DoD network is a major contributor to global health preparedness and security, surveillance and response. Further support for the IHR (2005) is provided through the USA Agency for International Development (USAID) that supports public health capacity building 'efforts throughout Africa and the Pacific'.<sup>37</sup> Despite their Reservation regarding the principle of federalism, the USA Government has achieved a great deal in implementing the IHR (2005) at all levels of government, including the DoD. It would appear

that the Reservations made by the USA Government have not acted to undermine the overall effectiveness of the IHR (2005) in the USA or abroad.

With respect to their military exemption, '[s]ome in the international community have criticized this understanding as a potential loophole that might allow noncompliance'.<sup>38</sup> That there is a loophole is the point; it provides the operational manoeuvrability that the USA Armed Forces might have needed to take whether a specific exemption to the IHR (2005) was sought or not. A military exemption exists simply as an open acknowledgement of what is already implicitly understood on the world stage: that a global power such as the USA intends to act in good faith, but cannot make this guarantee in circumstances where their national security interests are at stake. Accordingly, during operational situations, the focus of the Government and the Armed Forces can remain on military priorities and not on attempting to meet all tangential international obligations that are non-essential to the success of the mission.

In making the military exemption overt, the USA maintains the perception of acting in good faith even in military circumstances in which it chooses not to comply with the requirements of the IHR (2005). Without an explicit military exemption, any military forces that do not comply with the requirement to report a health event occurring in areas of operation outside of their territorial borders will be in contravention of Article 9 of the IHR (2005). In the conduct of clandestine operations such a transgression would, of course, not deliberately be made public knowledge and in such cases, there is no direct consequence for non-compliance. But compliance comes in degrees and those particularly contemptuous of treaty law might be inclined to conclude that there are few consequences to non-compliance even when transgressions are made public. While it is true that the IHR (2005) offers little in the way of dispute resolution<sup>39</sup> and the WHO has no powers to enforce its provisions or penalise transgressors, contravention of the IHR (2005) may come with considerable diplomatic costs. Under the Vienna Convention, a material breach of a multilateral treaty may render that treaty inoperable either in whole or with respect to the defaulting Party.<sup>40</sup> It is in each State Parties' interest that all WHO Member States continue to comply with the IHR (2005) as the only 'governing framework for global health security'<sup>41</sup> The integrity of an international health surveillance and response system is only as strong as the continued compliance of individual States Parties. Moreover, by contradicting the general principle of 'good faith', the

act of defaulting on any one international treaty may produce vulnerability in all other international agreements to which the defaulting State is a party. This could have an incalculable destabilising effect on treaty law and international relations more generally.

## Conclusion

This article has examined the reasons behind the USA Government's decision to declare a specific military exemption to Article 9 of the IHR (2005); a treaty that does not specifically pertain to the conduct of military operations. While this resulted in some contempt at the international level, the military exemption simply represents an acknowledgement of the intentions of the USA Government to ensure that USA military operations occur in accordance with USA military and Government priorities, not with the global public health priorities of the WHO. The military exemption therefore affords the USA Armed Forces a level of manoeuvrability in the conduct of operations that might otherwise have been restricted by pressure to comply with international public health obligations. It is too late for the Australian Government to declare a reservation to the IHR (2005). This case study serves to demonstrate that the wholesale accession to international treaties by the Australian Government, even to those treaties that do not appear to be directly related to the conduct of military operations, warrants the careful attention of Defence. Acceding to future multilateral treaties without considering the lodging of Reservations to allow for military exemptions may introduce very real operational vulnerabilities and risk diplomatic relations when our national interests conflict with international obligations. In some cases, it may be advisable to relinquish a slice of our reputation as an obedient global citizen to secure an increased degree of operational manoeuvrability for the ADF.

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### About the Author:

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# Towards an Integrated System for Army Logistics Management

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## Abstract

*'Sua Tela Tonanti'* is the motto of the Royal Australian Army Ordnance Corps (RAAOC), which is translated as 'To the Warrior his Arms'. This task has increased in difficulty over time. The growing sophistication of Army platforms, the higher tempo of Army operations, and the high diversity of Army operational locations has greatly complicated the task of bringing the warrior their arms. Thus, Army logisticians currently face considerable difficulties in decision-making. These primarily stem from the need to access, utilise and maintain information from a large number of databases. This has led to considerable data inaccuracy, data incompleteness and significant lags in report generation leading to a significant impact on Army logistics management efforts. To address this issue, we suggest there is scope for a systems-based solution. In this paper, we describe a current prototype that: 1) harnesses current data sources; 2) overcomes current data limitations; and 3) results in a centralized and seamless user experience. We further suggest that the underpinning ideas behind the prototype could be an effective means to overcome the current issues facing Army logisticians, particularly as this relates to report generation, inventory management decisions and forecasting. The approach represented by the prototype also allows Army to use current resources rather than replace them completely.

## Introduction

*'The line between order and disorder lies in logistics...'* Sun Tzu, *the Art of War* (circa 500 BC).

The importance of logistics to military operations has long been recognised. Classic military writers such as Sun Tzu and Carl von Clausewitz were well aware of the need for adequate supplies. The level of access to appropriate materiel can ultimately determine an army's ability to fulfil its mission. Weaknesses in military logistics can also expose the army to hazardous situations and ultimately lead to its destruction. The modern army is even more dependent on robust logistics capabilities. However, military logistics has now evolved considerably; a point not lost on the Australian Army. In recent times, the Australian Army has conducted peacekeeping, humanitarian and disaster relief operations, with these now forming the kernel of Defence activities more broadly described in the First Principles Review 2016. In addition, the Australian Army must maintain operational readiness, so it also conducts training and other activities in this regard.

These greater demands pose a series of challenges for Army logisticians. First, Army platforms have increased in diversity and sophistication. For example, a new platform design could reduce the effectiveness of a current logistics monitoring system if operators are unsure how to record platform characteristics in a given database. Second, Army continues to face a high operational tempo. This creates high usage situations for Army platforms, thus increasing the need for maintenance and for materiel supplies including fuels and oils. Third, the global footprint of Army operations creates long distances between warehouses or storage facilities and the location of use. Again, this places greater pressure on Army logistics operations through higher maintenance and materiel supplies.

The higher pressure on Army logistics operations has highlighted the limitations of current management approaches. Army currently utilises multiple logistics databases which are mostly isolated from one another. The need to enter data multiple times in conditions where Army logisticians are under considerable time pressure has inevitably led to poor data quality in many respects. For reporting purposes, this data is often inadequate and can force platform managers to access multiple databases for simple reporting purposes. Considerable scope exists therefore to reconsider the approach Army takes to logistics management.

The First Principles Review 2016 advocates a 'One Defence' approach. This intention has subsequently been reflected in the Defence Industry Policy Statement as well as in Defence planning more broadly. A major tenet of this is the centralisation of the management approach to Defence operations. For Army, this has multiple impacts, some of which relate to the ways in which Army manages logistics. However, there has been limited discussion as to what this means in a forum such as this journal. The purpose of this paper, therefore, is to describe how an Information Technology (IT) could provide a mechanism to centralise and streamline Army logistics management. The paper begins with an elaboration on the issues currently facing Army logistics. Next, we argue that a robust business intelligence platform could support an Army logistics management approach that aligns with the One Defence notion, while also improving the Army logistics management capability. Lastly, we present a prototype of a system that attempts to achieve this. We conclude by offering a series of reflections on our suggested approach for Army.

## Current Problems Facing Army Logisticians

Army logisticians currently face a range of challenges, many of which date back more than 20 years<sup>1-3</sup>. In synthesizing multiple sources, three major issues appear to account for the majority of these challenges:

1. **Planning and forecasting is difficult and time consuming.** A range of sources highlights the current difficulties involved in producing reports and in finding sufficient information to support planning activities<sup>3-10</sup>. This generally relates to the need for manual extraction of data from multiple vendor-supported logistics systems requiring users to access multiple systems over extended periods due to limited interoperability and the fact of data sharing. Manual data extraction, analysis and reporting for each biannual reporting period appears to take six weeks on average<sup>1-3, 9-15</sup>, with this delay often rendering reports useless due to their lack of currency<sup>9</sup>.
2. **Data misalignment.** Several sources highlight the presence of multiple data sources that inform Army logistics decisions<sup>4-8</sup>. This has created a range of data issues such as inconsistency, inaccuracy and incompleteness leading to a situation where it is difficult to trust the data extracted, any search results and the validity of any reporting

done on these bases. Unfortunately, this appears to have had a pervasive effect, with impacts across all aspects of Army logistics management.

3. **Poor inventory visibility.** A range of sources indicates difficulties in obtaining accurate and reliable inventory indications through current systems<sup>16-18</sup>. This undermines decision-making ability, particularly relating to demand planning, forecasting, asset optimisation, procurement, stock-holding positions, and financial control.

Many of these problems stem from the current logistics database arrangements within Army. The presence of multiple databases, each of which requires separate maintenance, reduces the ability for operators to enter accurate or complete data. This has a cascading effect for other users.

## The Information Needs of Army Logisticians

A logical question to ask when recognising the above situation is 'what do we do about this?' We suggest that the first step is to identify the information needs of Army logisticians. The term 'business intelligence' is often used to describe information that users require to understand the activities of their business. Hence, we suggest this term is also relevant to Army logisticians. The term has three main properties that are relevant for Army logisticians.

- First, information needs to be relevant. While a common assumption is that information availability is the primary determinant of information management success, this is a necessary but insufficient condition. Information use relates to an individual's specific need and situation.
- Second, input, utilisation and maintenance activities require minimal 'noise'. Noise relates to unintended, unnecessary, inaccurate, incomplete or inappropriate data. Analyses based on data that have these properties dramatically reduce their validity.
- Third, usage situations should involve seamless user experiences that are as simple as possible. This requires 'user-friendliness', where users can find the information they require with minimal effort. By drawing on these principles, Army could greatly improve information usability in multiple areas.

Given these properties, we suggest a user is more likely to engage with an Army Logistics Management system if they are exposed only to the information or systems they require for the task at hand, if that exposure has content calibrated to their needs, and if the system allows quick and accurate decision-making on the basis of reliable data.

## Towards a Centralised Army Logistics Management System

A Centralised Army Logistics Management System (CALMS) should allow a seamless user experience. Given developments in a range of technologies, it is now possible to harness existing databases and to provide a seamless user experience. This is mostly possible through advances in Artificial Intelligence (AI). AI involves developing a system in such a way that it can learn from current environmental and usage conditions. Underpinning AI is typically a series of algorithms that are designed to mimic human thought processes. If well-designed, they can manage large volumes of transactions simultaneously while also incorporating user-specific requirements. To effect an AI-based approach, we suggest a series of steps are necessary once the information needs of Army logisticians are clear:

1. **Consolidate data sources.** Consolidating databases would allow Army to reduce and manage data entry and reporting issues more coherently. Rather than using a single enterprise resource planning (ERP) tool to replace the entire suite of current databases completely, intelligent algorithms could allow Army to maintain current databases while also overcoming many of the current data integrity issues. The underlying algorithms will address current issues with legacy systems through AI (semantic reasoning, stratification and defuzzification).
2. **Use AI tools.** A range of technologies (clustering, self-organizing maps, association rule mining, Bayesian inference, etc.) are now available in the tool that could allow Army to overcome the current data management issues by improving data integrity while also creating better business intelligence outcomes. For example, behavioural modelling could allow a system to incorporate the skills and experience evident in usage patterns of experienced users in system design and layout in a dynamic, user-specific manner.

3. **Use a single, seamless user-interface.** The need to access multiple systems, each with their own rules and user demands has contributed to significant user anxiety as well as endemic data inaccuracies. A single user-interface that is specifically calibrated for each individual user is now possible. This approach would allow users to access all relevant data located across all databases, to gain real-time business intelligence at multiple levels of aggregation, and automate many of the data entry and reporting functions currently performed manually.

## Towards a Prototype

Given the attributes of the CALMS we suggest above, members of the Logistics Research Group at the University of New South Wales Canberra at the Australian Defence Force Academy have worked with Army and Capability Acquisition and Sustainment Group to develop a prototype, screenshots of which are included in the appendix).

Users open the system to see a map that provides visibility of stock location, demand for stock by location and displays links between different warehouse, unit and other stock-holding locations. Users can drag and drop inventory items from one location to another to execute an order. By accessing the menu on the right of screen, users are confronted with the outcomes of a recommender system. Taking the form of a series of advisors, this system produces algorithm-generated recommendations regarding specific inventory management decisions.

Users can customise their screens to see a variety of different inventory management-related data. For example, this includes the automated multi-dimensional search of Inventory Holdings and Demands by:

- Stock Item Owners
- Inventory Types and Categories
- Individual Stock/NSN
- Life of Type
- What and where of Demands from Unit to Base
- What and where of the capability/NSN/Asset from Unit to Base

- Current, predicted and forecast Inventory Pool size, including spare pools
- Inventory in the Supply Chain networks (1st, 2nd, 3rd line operations) including dues-in, transit, transfer, return, consumed etc.

While the user has a near-seamless experience that calibrates to their needs, while factoring in the expertise of more experienced users and the outcomes of intelligent algorithms, these decisions draw on a range of data sources, including MILIS and ROMAN. The system is able to handle multiple data sources regardless of format or data integrity. This allows the system to overcome the endemic limitations of current Army capability management.

Although currently in prototype form, prototype testing thus far has shown that: 1) it consolidates heterogeneous data sources without altering them; 2) it uses artificial intelligence to account for data integrity issues and to produce meaningful business intelligence; and 3) it does this through a customisable, seamless user interface. The intellectual property for this system is currently jointly owned by the university and Defence.

## **Underlying Technologies and Methods**

The prototype currently relies on a range of cutting edge technological solutions, all of which are open source. The primary technologies used include OData REST API, Elasticsearch, Bootstrap, GIS tools, JSON, Nruler, RapidMiner, each of which readers can find using web searches. The methodologies used manage both structured and unstructured data (text, document, graphs, images, etc). This is incorporated into search processes, data mining, predictive analytics and cognitive computing. The system relies on the combined recommender system, heterogeneous information fusion, geospatial intelligence and business intelligence techniques<sup>19-22</sup>.

## **Implications of the CALMS**

The prototype we describe represents an alternative way of thinking about Army logistics management when compared to ERP-centric approaches. The testing thus far has revealed a series of possible implications for Army.

Australia currently faces a severe shortage of logistics experts with sufficient computer science backgrounds. This has contributed to the currently limited levels of data management skills sets available to Army. To account for these shortages, many data management tasks have now been outsourced. Given the sensitivity of this data and the potential power imbalances where external databases rest on proprietary systems, outsourcing data management poses some significant risks for Army. Indeed, this practice is somewhat uncommon, with very few intelligence agencies (eg FBI), banking institutions, or large corporations (eg Boeing, Lockheed Martin) adopting the same practices<sup>13, 23</sup>. The data management approach embedded in the prototype will allow Army to manage this risk more effectively by reducing the need for highly-sophisticated skills sets. While not totally eliminating this need, our approach will empower users with relatively little ICT experience and across multiple platforms, including through mobile technology.

An average ERP implementation schedule delay is between 1.5 years and 12.5 years<sup>24</sup>. About 75% of implementations fail<sup>25, 26</sup>, and about 90% of ERP implementation processes overrun their allocated budget by a factor of between three and seven times<sup>26-34</sup>. Given the current emphasis on using a centralised ERP approach, there is at least some likelihood that these issues will also affect Army. The proposed system is extremely cost effective. It uses a range of open-source tools, all of which are completely free. The prototype system also integrates multiple extant heterogeneous data sources. This reduces the need for replacement of old databases. The logic behind the prototype system sees it focus on the 'front end' of current systems by focusing on the user interface. This contrasts with an ERP, which focuses on the databases themselves while also providing user interfaces. The prototype could complement an ERP due to its front-end emphasis and, as such, does not compromise ERP capability.

## Conclusion

This paper highlights several issues currently confronting Army logisticians. Stemming primarily from the databases that span multiple domains, users face significant difficulties in entering, accessing and utilising data to inform decisions. This has reduced Army's ability to achieve its mission. Consequently, there is currently a need for Army to reconsider its approach to logistics management. Drawing on this base, we suggest



a new framework and describe a prototype that reflects these principles. By: 1) consolidating data sources; 2) using artificial intelligence tools; and 3) developing a single user interface for all logistics-related information, Army could dramatically improve its logistics management by reducing the constraints logistics may otherwise place on operations.

The approach we describe in this paper harnesses the latest in open source software and, as such does not involve a cost in software. Moreover, the prototype has been designed in such a way as to complement any new ERP system. Security is likely to be a concern for Army given this new approach. However, the underlying 'block-chain' design effectively compartmentalises major components of the system while also using the latest in encryption techniques. These designs have become best practice in industries such as banking and aerospace, which are often considered attractive targets for cyber espionage and related activities.

Overall, the approach we describe to Army logistics management in this paper represents a snapshot of ideas currently at the leading edge of computer science in logistics, while also addressing a range of the issues currently facing Army logisticians. The user-friendly design should improve the efficiency and effectiveness of Army logistics management activities such as data input, utilisation and maintenance. By harnessing current data sources and open source AI and other technologies, Army can harvest current data while also adapting to the new needs over time. By incorporating design features and the highest encryption standards, Army logistics data has only a modest threat of cyber security breaches. The prototype we describe is one example of how an Army logistics management system might be implemented, yet it shows how One Defence could work for Army logisticians in the near future.

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## Appendix

Figure 1. The CALMS Prototype



Figure 2. The Red Targets give Capability Demand Overviews, click each Target to gives the Demand history, move the mouse over the graph to give the Demand statistics for each year.

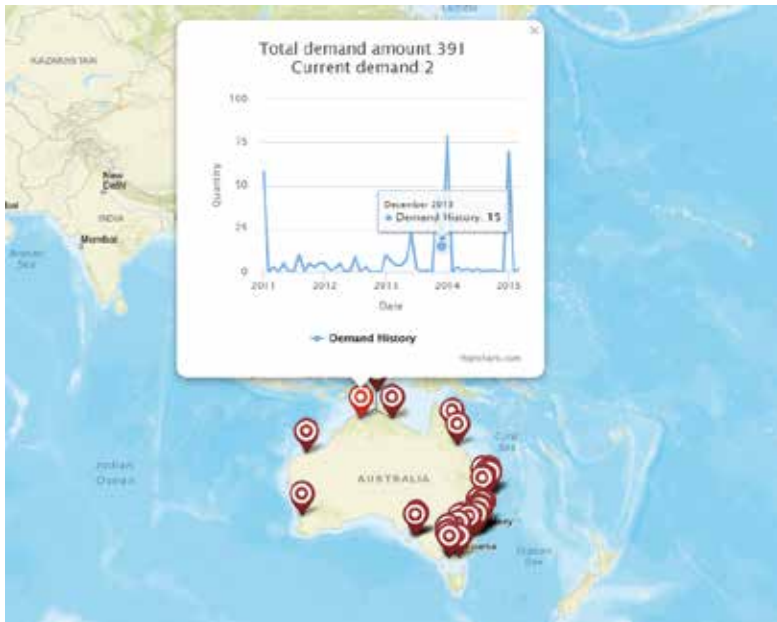


Figure 3. Zoom-out to see national picture of JLC/JLU stock holdings by Categories with PIE chart on map (Rotatable, Consumable etc); on the right are corresponding details of JLC/JLU and stock holdings descriptions.



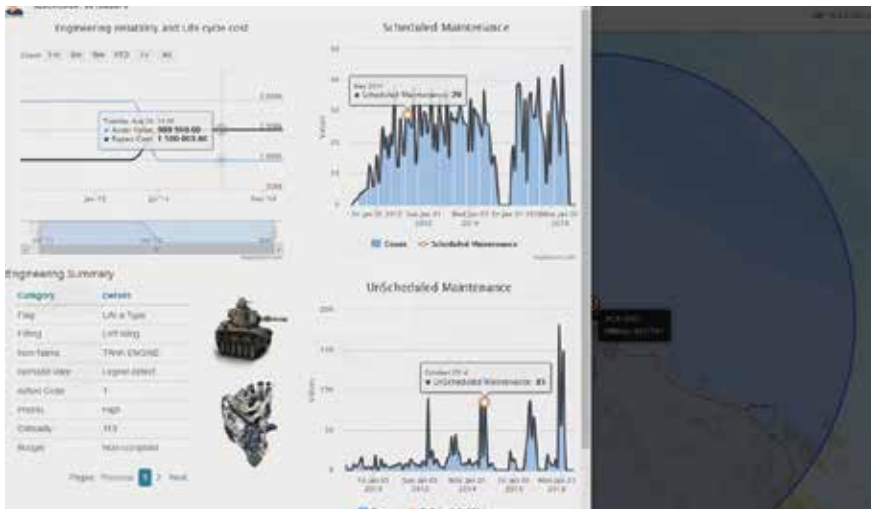
Figure 4. Zoom-in to see JLC/JLU and stock holdings at district and regional level; corresponding details are shown in tabular form on the right, with capability to switch between the map and the table.



Figure 5. The system produces 9-Box model to indicate none-moving inventory and slow moving inventory, to medium and fast moving, by week, by month and year. Each box within the the 9-box model provided 4 sub-divisions, including over-stacking shown in Pink, under-stocking in Blue, stock holding trend over time in Green graph and total stock holdings in light-green, by stock categories, from Consumables to Repairable, etc.



Figure 6. Asset engineering life cycle tracking, asset reliability and value proposition are shown, based on the provenance of the data, with scheduled and unscheduled maintenance on the right. Move the cursor over the graph to give drill down functions to view data by year, cost, number of repairs p/yr etc





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# An essay on the Success of Air-Land Integration during the Burma Campaign in World War II—An illustration of the importance of leadership, adaptation, innovation, and integration

Lieutenant Colonel Mark Mankowski

*In peace, the function of tactical air support of land operations is apt to fade, but in war its urgency will increase.<sup>1</sup>*

Field Marshal Viscount Slim

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## Abstract

Any history of the campaign in Burma highlights the vital importance of air power to the eventual victory over the Japanese by the 14th Army. The purpose of the paper is to explore how the Allies achieved air-land integration (ALI) during the Burma campaign during the Second World War. The key research question was to establish why ALI was so successful during the Burma campaign.

The first factor was the leadership of the Army and the Air Force senior officers within their respective organizations built strong relationships, which overcame inter-service rivalry. Co-located headquarters, combined messes and the linking of RAF groups with Army formations built strong

relationships across the chain of command and enabled co-operation and collaborative planning. The second factor was the four core roles of air power were vitally important to an ostensibly land campaign. Air superiority provided the necessary pre-condition to enable the other three roles. There was significant innovation and adaptation in the air mobility role, which provided the solution to the Japanese tactics of encirclement. The strike and reconnaissance role worked in synergy. Overall, forming strong relationships is the principle lesson from the successful application of air power in Burma.

## Introduction

The quote from Field Marshal Viscount Slim highlights how important air support is to the army during conflict. In 1944, the then General Slim commanded 14<sup>th</sup> Army in Burma. This campaign, conducted from December 1941 until 28 August 1945, is relevant to the Australian Defence Force (ADF) due to the lessons resulting from the success of inter-Service cooperation, principally between the Army and the Air Force.

The system or process for organising and executing tactical air support of land operations is now termed Air-Land Integration (ALI). There is no ADF definition or specific doctrine for ALI. British doctrine highlights that ALI requires three key elements: the development of strong relationships to engender co-operation and mutual trust, an understanding of each component's capabilities and limitations, and the knowledge of component doctrine and validation through joint training.<sup>2</sup> The purpose of the paper is to explore how the Allies achieved ALI during the Burma campaign in the Second World War. The study of ALI, innovative methods of war fighting and adaptable command and control concepts are of contemporary relevance, and they were the focus of the Sir Richard Williams Foundation in March 2016.<sup>3</sup>

This paper will first describe the campaign in Arakan and the defence of Imphal and Kohima in 1944 to set in context the success of ALI in these conflicts. Next, the paper will discuss the importance of leadership in the development of the effective relationships necessary for ALI. The strong relationships based on mutual trust between the leaders in the campaign ensured close co-operation between the Services. Finally, the paper will provide examples of the adaptation and innovation that took place within each of the four core air power roles of air power (control of the air, strike,

air mobility, and intelligence, surveillance and reconnaissance (ISR)).<sup>4</sup> Air superiority provided the vital pre-condition to enable significant innovation for air mobility. Air superiority also enabled effective strike missions without enemy interference. There was significant innovation in how air power supported land forces to clear Japanese fortifications. ISR assisted in locating the Japanese—its greatest utility was in detecting the movement of additional Japanese aircraft into the Burma theatre.

## Background—The Burma Campaign 1943–1944

*Without doubt, air power was crucial to Anglo-American successes in Burma.*<sup>5</sup>

Any history of the campaign in Burma highlights the vital importance of air power in defeating the Japanese. The quote above provides one example. Hence, the Burma campaign in late 1943 is worth studying as it illustrates the importance of adaptation, innovation and integration to the successful use of air power. In late 1943 and early 1944, the view of the Allies and the Japanese was that campaigning in the monsoon was impossible, due to difficult ground and air movement. Therefore, the campaign season was from October 1943 to May 1944. The Allied plan for the Second Arakan Campaign was to seize the small, but significant, ports at Maungdaw and Buthidaung in the Arakan (see Map 1). The road connecting them was the only all-weather route for motor transport across the Mayu Peninsula. The capture of these ports and the road would improve the logistical support of 15 Corps, thus enabling a subsequent operation to seize the important airfield at Akyab—vital to the recapture of Rangoon.

The Japanese plan was first to attack in the Arakan around Ngakyedauk and draw the British 14<sup>th</sup> Army reserves to that area. Once the British were engaged in the Arakan, the Japanese would then advance across the Chindwin River, climb into the hills in Assam and seize the Allied administrative area that supported 4 Corps on the Imphal plain with its depots and airfields.<sup>6</sup> In February 1944, the Japanese struck, infiltrating two brigades through 15 Corps' front, encircling the 7<sup>th</sup> Indian Division, overrunning its headquarters and blocking the main supply road to the 5<sup>th</sup> Indian Division (see Map 2). Fortunately, the main British administrative area, organised as an all-round defensive box, was able to resist their repeated attacks. After three weeks of violent attacks the surviving Japanese retreated.

The Japanese also attacked 4 Corps on the Imphal plain in March 1944 (see Map 3). The intent of the campaign was to seize and secure the Allied logistics support there and delay the campaign to recapture Burma by another year. The Allies knew of the Japanese plans and intended to fortify the various logistics nodes and destroy the Japanese attackers on ground of its own choosing using vastly superior armour, artillery and airpower. The Japanese attack was initially successful and almost trapped and destroyed the 17<sup>th</sup> Indian Division; however, by 22 June 1944, 33 Corps, attacking from the north, had broken the siege and re-opened the road to Dimapur. The Japanese 15<sup>th</sup> Army retreated in disorder.<sup>7</sup>

Air power was vital to 14<sup>th</sup> Army and its effective use throughout the campaign was attributable to the high level of integration between the Services. The next section will explore the importance of the strong relationship between the two principal commanders in the campaign and the relationship's impact on ALI.

## **Strong Relationships—The importance of Leadership and Command to ALI**

*The problem of inter-[S]ervice cooperation is essentially a political one.*<sup>8</sup>

The political problems that Russell Parkin refers to above are largely due to a lack of understanding between the Services of each component's capabilities and limitations. To overcome the political issues of inter-Service cooperation requires intelligent leadership to form the strong relationships vital to mutual trust and coordination. Fortunately, the tactical commanders during the fighting in Burma in 1944 had the right qualities for ALI. The Commander of the 14<sup>th</sup> Army was General Slim. Slim recognised from his earliest experiences during WWII just how crucial air power would be to the campaign. In Slim's words, '...in Burma it [air power] was from the very start a dominating factor'.<sup>9</sup>

General Slim's opposite number was Air Marshal Sir John Baldwin, the Air Officer Commanding Third Tactical Air Force. Third Tactical Air Force comprised the Strategic Air Force, Troop Carrier Command, and the Photographic Reconnaissance Force.<sup>10</sup> General Slim saw the air force and the army as a combined force. When Slim spoke of the Third Tactical Air Force he stated, 'we grew into a very close brotherhood, depending

on one another, trusting one another, and taking as much pride in each other's triumphs as we did our own'.<sup>11</sup> This quote stresses the strength of the relationship between the two Services. Baldwin recognised that Slim understood the capabilities and limitations of air power, highlighting that 'particularly did he [Slim] appreciate what the air required and was ready to understand their difficulties and limitations'.<sup>12</sup>

The next section will describe the importance of air mobility operations in supplying isolated army formations during the Arakan campaign. An example of the strong relationships between Services occurred early in these operations. In February 1944 in Arakan, the 7th Indian Division was isolated by a surprise attack by the Japanese and required air resupply to maintain its position. The first flight of transport aircraft had to turn back due to enemy air interference. The Commander of Troop Carrying Command (Brigadier General Old, United States Army Air Force ((USAAF)) led the next wave to ensure it got in.<sup>13</sup>

The leadership by commanders influences the behaviour of their staff and the overall tone of their headquarters. During the retreat from Burma in 1942, Slim had learnt a sharp lesson on the necessity for the headquarters of the land forces and the supporting air forces to be together.<sup>14</sup> This was an innovation from the Middle East, which stressed intimate relations between the two Services at all key points (at the highest command level, at important field headquarters level and at the battlefield).<sup>15</sup> Baldwin's Third Tactical Air Force Headquarters was alongside Slim's. Brigadier General Old also established his headquarters there. The three headquarters worked as a joint headquarters, pooling their intelligence and planning staff. All three commanders and their principal staff also lived in the same mess.<sup>16</sup> The air force staff collaboratively developed all plans for 14<sup>th</sup> Army with their army counterparts. Army and air force staff conducted the initial appreciation and then Slim consulted Baldwin.<sup>17</sup>

In addition, the assignment of RAF Groups from Third Tactical Air Force in direct support of the corps within 14<sup>th</sup> Army increased partnerships or habitual relationships. 221 Group's headquarters was collocated with 4 Corps' headquarters at Imphal and was responsible for the central front. The shared joint, headquarters and dedicated support meant that the relationship between 4 Corps and 221 Group was excellent.<sup>18</sup> David Dick, a pilot with 221 Group, stated that 'on and around the Imphal plain during the siege in 1944 a close association grew up between the two [S]ervices.'<sup>19</sup>

In contrast, 224 Group commanded by Air Commodore Gray, had its headquarters at Chittagong, but it was some 100 miles from 15 Corps' headquarters on the Arakan front.<sup>20</sup> During the second Arakan campaign, there was friction between the two headquarters. 15 Corps was entirely committed to the Arakan offensive, whilst 224 Group was engaged in a variety of other operations including air defence. As Sebastian Ritchie highlights, 'in these circumstances, there was inevitably strong competition for resources between the two headquarters, and it proved difficult to strike a mutually acceptable balance'.<sup>21</sup>

Following the victory over the Japanese 15<sup>th</sup> Army, a combination of the difficulties caused by competition for scarce resources and the Japanese defensive posture led to Admiral Mountbatten (Supreme Allied Commander South East Asia Command) appointing an inter-Service committee to examine and report on methods for closer tactical support in the coming offensives of 1945. The committee recommended in August 1944 the reorganization of 221 and 224 Groups into mobile groups, each with a main headquarters designed to combine with the headquarters of the appropriate army formation. Reorganization occurred on 4 December 1944, with Headquarters 221 Group remaining responsible for close support on the Central front, but now accommodated with Headquarters 14<sup>th</sup> Army, and Headquarters 224 Group collocating with 15 Corps to provide close support for the Arakan front. Both groups were relieved of responsibility for the air defence of their base areas and allowed to concentrate on support to land forces through close contact between the respective land and air commanders and the exercise of command through joint land/air headquarters.<sup>22</sup> As Wilfrid Russell observes, '...the 14<sup>th</sup> Army in Burma was an army with an air force, not an army and an air force; the air force and the 14<sup>th</sup> Army were in spirit as fused together as a pair of oarsmen'.<sup>23</sup>

This section highlights that strong relationships fostered by intelligent leadership were vital to the success of the campaign in the Arakan and on the Imphal plain in 1944. These relationships overcame the political issues of inter-Service rivalry and achieved effective ALI. Both Slim and Baldwin ensured their staff worked collaboratively to develop a joint plan. Collocated headquarters, combined messes and habitual relationships between air and army formations ensured strong relationships. The friction between 224 Group and 15 Corps prior to their collocation highlights the risk of neglecting the importance of face-to-face relationships.

The next section will discuss the outcome of the collaborative planning, highlighting the importance of innovation and adaptation in the campaign to the four core roles of air power.

## **The enduring importance of the four core roles of airpower and the success of adaptation and innovation in the Burma Campaign**

War has an enduring nature and a changing character that reflects political, social-cultural, economic, technological, military-strategic, geographical, and historical contexts.<sup>24</sup> The four core roles of airpower are enduring and they were vital to the joint campaign in Burma in 1944. However, the environment, the Japanese enemy and the significant changes in technology, required significant adaptation and innovation within the RAAF.

ALI requires an understanding of each component's capabilities and limitations. As early as 1940, the army knew of its weaknesses in operating in a jungle environment. Military Training Pamphlet No.9 (India) *Extensive Warfare: Notes on Forest Warfare* published in 1940, highlighted that 'Armoured Fighting Vehicles and artillery would have a limited role since they were largely road-bound'. The solution lay with the air force, which needed to be used fully, especially for providing heavy close support (strike) and transport of supplies and information (mobility)'.<sup>25</sup>

Generally, military campaigns such as the one in Burma are won on the land.<sup>26</sup> To win on the land, armies require the support of air power in providing strike, air mobility and ISR; however, for airpower to provide these roles in a sustainable fashion requires a degree of control of the air. As RAAF doctrine clearly highlights, failure to achieve adequate control of the air will constrain or preclude the conduct of land activities. Determining the degree of control of the air required and then achieving it must be the prelude to all other operations.<sup>27</sup>

The definition of control of the air is 'the ability to conduct operations in the air, land and maritime domains without effective interference from adversary air power and air defence capabilities'.<sup>28</sup> Jim Storr in his book *The Human Face of War* highlights the vital importance of control of the air by quoting a study of 158 land campaigns from 1914 onwards. The study

found that three battlefield factors dominated the probability of success at the campaign level. One was the possession of air superiority, as it enabled freedom of manoeuvre for your own forces and permitted some interference with the movements of the enemy.<sup>29</sup> The fighting withdrawal during the first Burma Campaign reinforces this point as the Army faced a handicap (assessed as serious, but not fatal by General Slim) as it fought without adequate air support.<sup>30</sup>

It was no different later in the campaign in 1944 where Allied air superiority would eventually become almost the crucial factor in the struggle for Burma.<sup>31</sup> As a prelude to the Allied offensive in the Arakan, the first requirement was the establishment of the degree of air control necessary for the operation. The campaign to re-establish air control was incremental and had commenced in March 1942 when Air Marshal Sir Richard Peirse arrived in Delhi from Java to assume command of the air forces in India and Ceylon (now Sri Lanka). At once, he began to reorganize his command, establish a main supply unit for aircraft, establish base repair facilities and tackle the colossal problem of constructing new airfields for the expanding air force. In March 1942, there were only sixteen airfields in India and Ceylon with all-weather runways; to deploy the envisaged 66 squadrons, 215 airfields were required.<sup>32</sup> Later came the establishment of a radar chain (augmented by ground observers), and fighter control facilities. The final foundation was a properly unified and integrated command and control structure—Air Command South-East Asia—covering all British and American air forces in India and Burma.<sup>33</sup>

These changes came just in time as gaining air control had become especially important during the winter of 1943–1944. The Japanese Army and Navy demonstrated that they still held the initiative in the air, conducting air raids on Calcutta and 15 Corps from a wide selection of forward airfields. The geography in northern Burma also provided the potential for the Japanese to achieve surprise in the air. The Allied air forces had to provide air defence to a wide variety of potential targets and their warning system had a handicap, since there were many places where the intervening mountains made radar warning impossible.<sup>34</sup>

Peirse, in December 1943 and January 1944, directed that fighter operations were to be undertaken in the greatest possible strength to engage and destroy enemy aircraft in the air and on the ground at enemy



airfields and installations.<sup>35</sup> It took the RAF until February 1944 to establish air superiority over Arakan, partially due to an increase in the numbers of fighters in the area establishing a 2:1 numerical superiority. They also re-equipped with improved aircraft including the Spitfire, which was superior to the Zero and the Tojo, and the Allied aircrew had a more professional approach to the employment of air power.<sup>36</sup> From that point, Japanese air operations over Allied territory began to incur unsustainable attrition rates.<sup>37</sup>

The establishment of air superiority enabled the use of the other core roles of air power without undue interference.<sup>38</sup> As Sebastian Ritchie stresses, ‘... none of the air operations in support of 14th Army would have been possible without one fundamental precondition—air superiority’.<sup>39</sup> The next role that was vital to the campaign in the Burma, because of the geography of the theatre, was air mobility.

The definition of air mobility is, ‘the ability to move personnel, materiel or forces using airborne platforms’.<sup>40</sup> As early as April 1941 (prior to the declaration of war by the Japanese), the Army in India Training Memoranda No. 6 War Series suggested that mobile infantry columns in a jungle environment required highly trained porters or air supply.<sup>41</sup> A review of the Commonwealth Army’s defeat in Malaya reinforced the need for air supply. Field Marshal Wavell’s notes on the Malaya campaign offered insight into how to meet and defeat the Japanese tactics. He argued that troops needed to learn not to be road-bound, to develop their cross-country skills and he discussed the concept of resupply by air.<sup>42</sup>

During the Burma campaign in late 1943 and early 1944, important innovations in air mobility occurred due to the requirement to adapt logistics arrangements for 14th Army to the environmental conditions in Burma. 81st West African Division was the first conventional formation to be committed to full air maintenance during offensive operations in the Arakan.<sup>43</sup> This was an important innovation and an understanding of the difference in the terms, *air supply*, and *air maintenance* is needed to comprehend the magnitude of the logistics operation undertaken by Troop Carrier Command. The definition of *air supply* was the airborne delivery forward of stores, by either landing or dropping. *Air maintenance* embraced all aspects of tactical logistics transport: the forward delivery of supplies, equipment and reinforcements, as well as the rearward evacuation of casualties, prisoners of war and damaged equipment.<sup>44</sup> This capability had only recently been realised but

the low priority of the Burma Theatre for silk parachutes almost made air supply impossible.

There was a shortage of parachutes in January 1944 and they would not be available for the forthcoming campaigns in 1944 in the quantity required. Due to General Slim's familiarity with industry in eastern India, he recommended that it might be possible to make serviceable supply-dropping parachutes from either paper or jute. Within ten days 14th Army were experimenting with 'parajutes'. Within a month, there was a parajute in use that was 85 percent as effective as a normal parachute.<sup>45</sup>

The next adaptation was providing air maintenance in defence. The 'Battle of the Admin Box,' during the Arakan Campaign of 1944, provides an excellent example of the importance of air mobility. The 'Admin Box' at Sinzweya, near Ngakyedauk, contained the administrative base for the 7th Indian Division. Air mobility enabled the British to stand and fight once encircled by the enemy with their ground lines of communication cut. Previously, without air maintenance, a division would have needed to break out and fight a costly retreat to its next administrative hub. Now each time the Japanese attacked the defensive position, the British could use their advantage in firepower delivered by air power and artillery. Air mobility provided 10,000 short tons of supplies during February 1944.<sup>46</sup> It was during the second resupply mission to the Admin Box that Brigadier General Old led the flight. It was a true battle with the Japanese still contesting the degree of air control that existed over the area; however, the Japanese Army Air Force 'proved unable to stop airborne supplies from reaching the surrounded Indian ground troops'.<sup>47</sup>

More innovation was to come when the Japanese attacked 4 Corps' administrative areas in Imphal. When the road from Imphal to Dimapur was cut by the Japanese, 4 Corps, consisting of two and later four divisions, required air maintenance. Their combined requirement was 400 tons of stores per day. Over the course of the battle, air mobility also flew 59,000 personnel into or out of the battle area and evacuated 15,000 casualties.<sup>48</sup> 4 Corps could fight on ground of its own choosing and Baldwin began the airlift, code named Operation STAMINA, on 08 April.<sup>49</sup>

It was during the Imphal battle that the Allies achieved another first. 14th Army's reserve was 5th Indian Division positioned on the Arakan Front. The reserve was now required to support 4 Corps to shore up the defences

around Imphal. The redeployment of an entire division by air required 750 sorties.<sup>50</sup> Air mobility achieved staggering results during this period. The complete support of a division by air mobility in attack and another in defence proved the concept of air maintenance. These systems were adapted to support an entire corps in defence. Finally, air mobility enabled the redeployment of an entire division during a crucial period of fighting. As Graham Dunlop argues, 'air maintenance was the most significant development in tactical logistics during the campaign in South-East Asia by providing the most effective countermeasure to enemy encirclement on the ground'.<sup>51</sup> Air mobility allowed the Allies to stand and fight. However, the destruction of the Japanese 15th Army around Imphal was due to a combination of strike, artillery and armour. Strike operations will now be examined.

Doctrinally, strike consists of seven missions comprising strategic attack, Close Air Support (CAS), air interdiction, anti-surface warfare, anti-submarine warfare, electronic warfare and information operations.<sup>52</sup> During the period in question, the RAF undertook strategic attack, CAS, air interdiction and anti-surface warfare missions in support of the Army in Burma. Strategic attacks took place against key logistic nodes in Siam (now Thailand); Japanese coastal and riverine transport was subject to anti-surface warfare across Burma, which greatly reduced the supplies of ammunition and food available to the Japanese frontline forces. However, this section will concentrate on CAS and air interdiction, which were so vital to the outcome of the campaign.

The meeting engagements between the Japanese and the British at Imphal, whilst expected, did not initially go well. 17th Indian Division was encircled and 23rd Division (the Corps' reserve) was required to re-open the road to it. The tactical/reconnaissance Hurricanes were particularly valuable during the confused fighting that followed. They assisted in searching for enemy movements and positions (ISR); attacking opportunity targets (air interdiction); spotting for artillery (forward air control); and passing information on the location of Allied troops (assist with CAS).<sup>53</sup> As Slim stated this support was vital: '...had not our fighters maintained continuous cover and given quick support at call, the withdrawal...would have been a much grimmer and more protracted affair'.<sup>54</sup>

As the battle progressed and the British went onto the offensive, strike was a vital part of the solution to trench warfare, which developed around the key logistic nodes. The Japanese were superb at constructing fortified

defensive positions that were impervious to frontal attack. The problem was how to achieve continuous fire support whilst the infantry advanced to clear the trench/bunker. First, the tanks fired surface-burst high explosives to clear the jungle around the bunkers. Next, the tanks used delayed-action high explosives to break up the facades of the bunkers. Finally, as the infantry closed in, the use of solid armour-piercing shot provided covering firing without the fragmentation that could injure the infantry.<sup>55</sup> Instead of tanks, artillery could strip the vegetation from the bunkers and low-flying aircraft could make successive strafing and bombing runs. On the final run, the conditioned enemy would take cover, but the low-flying aircraft would hold their fire, safely allowing the infantry to advance.<sup>56</sup> The reduction of the Razabil fortress during the Arakan campaign in 1944 required heavy bombing from the strategic air force and dive-bombing by RAF Vulture A-31 Vengeances, directed by smoke shells from artillery.<sup>57</sup>

There were often large distances that separated tactical squadrons from the troops they were supporting, which rendered face-to-face briefings on the locations of ground targets and friendly positions impossible. The search for an effective means of controlling direct (close) air support led to a new system based on methods developed in Europe.<sup>58</sup> This involved the appointment of pilots (often reluctantly) to command Air Support Signals Units and a Visual Control Posts with VHF radio communications. These units were attached to ground forces to speak directly with the aircrew to prosecute attacks.<sup>59</sup> In addition, there were senior officer air advisers established at corps and divisional headquarters to assist in the control of the assigned air support. When the Japanese emerged from the jungle, air power gave an overwhelming advantage to the British and quickly exacted punishing strikes on the enemy. The final core role of air power was required to find the Japanese—ISR.

ISR enables 'decision superiority by providing key pieces of data, information and intelligence to assist commanders in achieving battlespace awareness and decision superiority'.<sup>60</sup> Following the invasion of Burma in 1942 and the long retreat, General Slim considered the factors that had been responsible for the defeat of Burma Corps. Intelligence on the enemy was extremely bad, which resulted in the British inability to form cohesive plans to parry the Japanese's blows or seize the initiative by counter attacking.<sup>61</sup>

The previous section on the strike role highlighted the role of Hurricanes as both a tactical and a reconnaissance platform. The integration of air power

in the army's plans was crucial to the ISR role. The jungle environment meant that there was a dearth, or entire absence, of visible worthwhile targets.<sup>62</sup> However, the defence of fortified administrative centres on the Imphal Plain drew the enemy out of the jungle onto ground advantageous to the defender. Without cover, suitable tactical aircraft could then attack the enemy on call from the Visual Control Posts near the fortified bases or search for and destroy the enemy along his lines of communication.

ISR was significant just prior to the Imphal Battle. Pilots reported that the enemy were developing roads from the Chindwin to central Burma, camouflaged rafts existed on the river due east of Imphal, and there were great herds of cattle.<sup>63</sup> This intelligence fitted with the noticeably increasing enemy activity and gave a general idea of the enemy's intentions and strength. Photographic reconnaissance was also important.

Photographic reconnaissance in Burma was of greater importance than in other theatres to strategic attack and air interdiction owing to the meagre intelligence available from other sources such as ground patrols, signals intelligence and prisoners.<sup>64</sup> The spectacular successes of the bombers was due to the remarkable flow of information from photographic sources.<sup>65</sup> The maintenance of air superiority relied on photographic reconnaissance as it provided timely evidence of the concentration of enemy aircraft when they redeployed into Burma.<sup>66</sup> The Intelligence staff also used photographic reconnaissance for aerial survey to produce maps. New arrivals to Burma used these maps to train and learn the hard-won lessons of the campaign. In May 1943, the Military Intelligence Directorate at GHQ India published a detailed new guide; *Japanese in Battle Part 1: Enemy Methods*—for regimental officers. It used aerial photographs to illustrate the various types of country in which military operations might take place. 14th Army also produced a series of detailed reports on recent operations (including maps and aerial photographs).<sup>67</sup>

This section highlights the enduring importance of the four core roles of air power to ostensibly land campaigns. Air superiority was the necessary pre-condition to enable the other three roles. There was significant innovation and adaptation in the air mobility role, which provided the solution to the Japanese tactics of encirclement. The strike and ISR role worked in synergy. Tactical aircraft could spot and destroy Japanese troops. The strike role gave 14th Army an advantage over the Japanese and air mobility enabled 14th Army to fight on ground of its own choosing.

## Conclusion

*The victory was at every stage a joint Army/RAF one.*<sup>68</sup>

Following World War II, Field Marshal Viscount Slim reflected on how 14th Army achieved victory in the Burma campaign. His view on the successful execution of the campaign was attributable to, 'the utmost co-operation between soldiers and airmen'.<sup>69</sup> The leadership of Slim and Baldwin within their respective organizations built strong relationships, which overcame inter-Service rivalry and enabled effective ALI. Collocated headquarters, combined messes and the linking of RAF groups with Army formations built strong relationships across the chain of command and enabled co-operation and collaborative planning.

All core roles of air power were vital to the success of the joint campaign and of enduring importance to the prosecution of warfare. Innovative thinking and adaptation were vital to each of the four core roles due to the enemy and the environment. The establishment of air superiority required the build-up of proper support facilities, the introduction of radar warning and the introduction of superior aircraft. The contest for control of the air was continuous with the Japanese Air Force, but it was a necessary precondition to enable air mobility. In turn, air mobility provided the answer to the Japanese encircling tactics on land. Formations of 14th Army, including a corps of four divisions, could now stand and use the tactical advantage of the strike role to destroy the Japanese as they emerged from the dense jungle. The ISR role was of less use to 14th Army directly because of the jungle, but it was vital to maintaining air superiority.

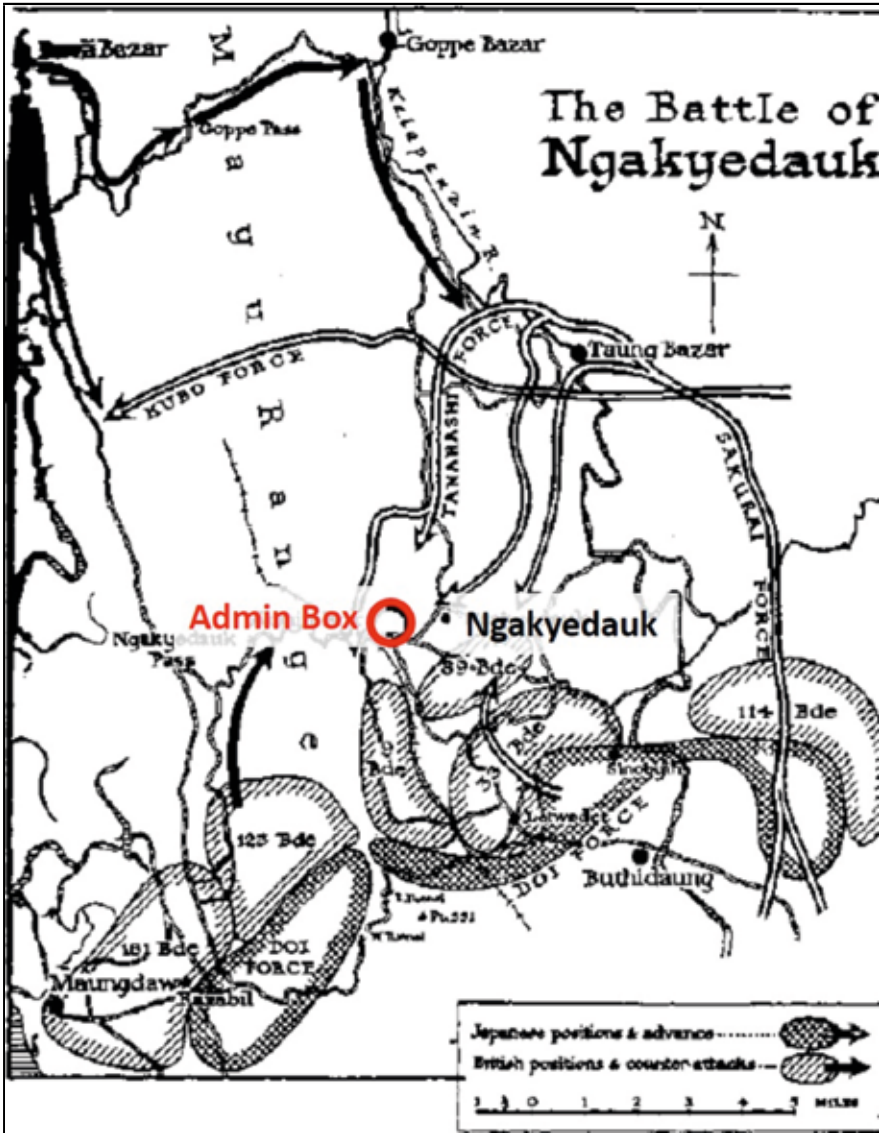
The Sir Richard Williams Foundation seminar suggests that the application of technology in conjunction with innovative methods of war fighting and adaptable Command and Control concepts has the potential to revolutionise the way the ADF conducts ALI.<sup>70</sup> This essay argues that the success of the Burma campaign was due to the strong relationships between Baldwin as the air commander and Slim as the land commander. Strong relationships enabled effective ALI. Once effectively integrated, the land and air forces adapted collaboratively to the environment and the enemy. Forming these strong relationships is the principal lesson from the successful application of air power in Burma.

## The Author

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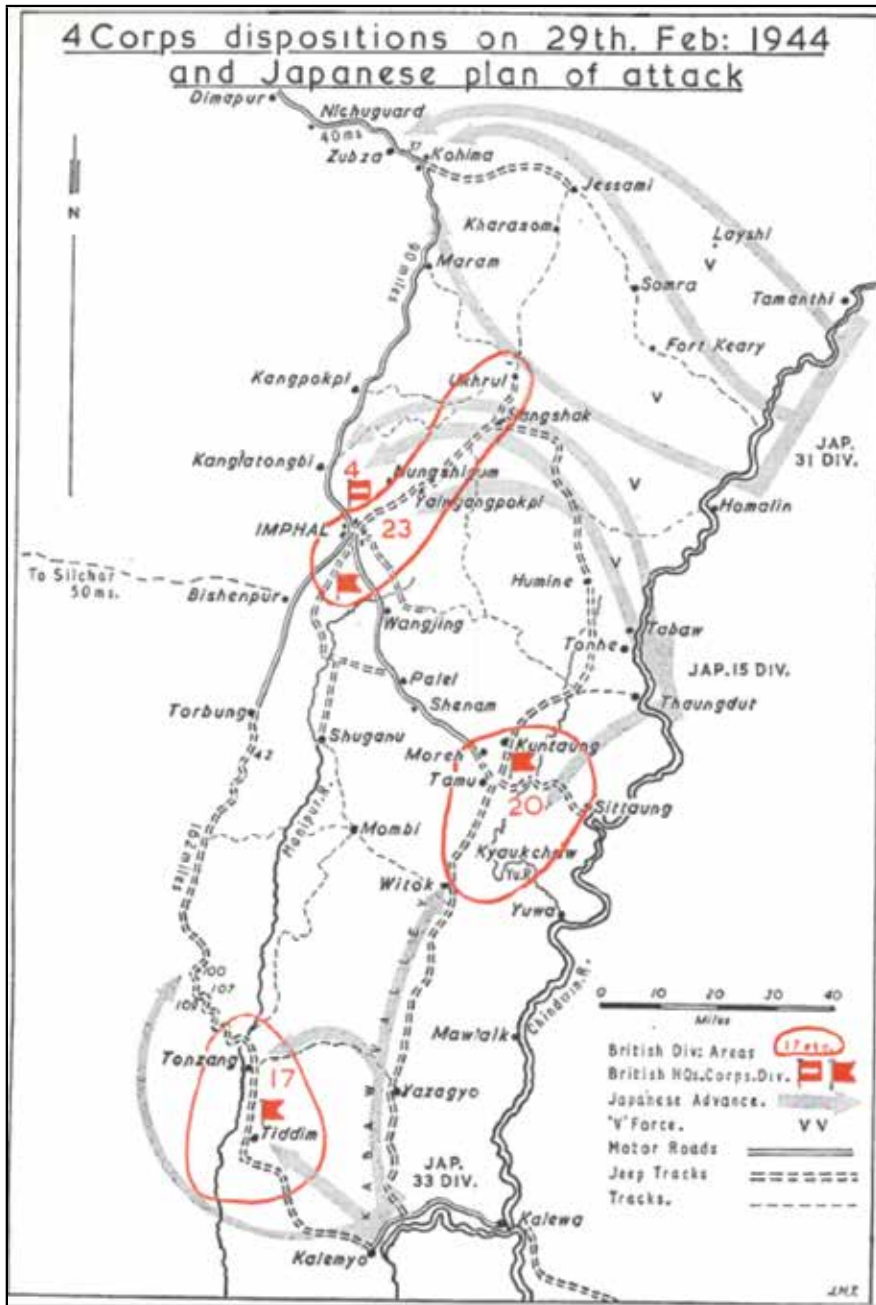


Map 1 – North Arakan.<sup>71</sup>



Map 2 – Battle of Ngakyedauk.<sup>72</sup>





Map 3 – 4 Corps dispositions on 29 February 1944 and Japanese Plan of attack.<sup>73</sup>

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## BOOK REVIEW

### *Anzac Day Then & Now*

edited by Tom Frame

Reviewed by Marcus Fielding

UNSW Press: Sydney; 2016; 312 pp.; ISBN 9781742234816 (paperback);  
RRP \$39.99

Published on the centenary of the first Anzac Day in 1916, *Anzac Day Then & Now* is a collection of perspectives on Anzac Day from contributors who were asked to examine the events that set apart 25 April from other days in the calendar, and to explore why Anzac Day appears to mean many different things to different people. It is the first book to take a long-term, broad view of Anzac Day and how it has been marked in Australia.

Historians and cultural commentators—John Connor, Jeff Doyle, Tom Frame, Michael Gladwin, Jeffrey Grey, Carolyn Holbrook, Ken Inglis, Gareth Knapman, John A. Moses, Heather Neilson, Robert Nichols, Christina Spittel and Peter Stanley—explore why Anzac Day was chosen to commemorate our war dead, and why it has arguably overshadowed Australia Day as a reflection on what it means to be Australian.

The contributors examine the early debate between grieving families and veterans about whether Anzac Day should be commemorated or ‘celebrated’, the effect of the Vietnam War, popular culture’s reflection on the

day, commercialisation and our political leaders' increasing profile in public commemorations.

As editor and a contributor, Professor Tom Frame believes that the role of academics is to challenge people to 'think critically and creatively about the place of uniformed service and the importance of armed conflict in the evolution of the Australian nation'. Does Anzac Day honour those who died pursuing noble causes in war? Or is it part of a campaign to redeem the savagery associated with armed conflict? Do the rituals of 25 April console loved ones? Or do they reinforce security objectives and strategic priorities?

*Anzac Day Then & Now* shows that Anzac Day has evolved considerably since 1916, and that the notion of a traditional commemoration is misleading, as its place, function and observation have never been static. It remains an amorphous and shifting phenomenon in Australian social order.

Frame is a former naval officer, academic, historian, author and commentator. A graduate of the Universities of New South Wales, Melbourne and Kent, he was appointed Director of the Australian Centre for the Study of Armed Conflict and Society, University of New South Wales, Canberra, in mid-2014. He is the author or editor of 26 books and has been commissioned to produce a history of the relationship between the University and the Department of Defence, for release in 2017 on the 50th anniversary of the commencement of the relationship.

*Anzac Day Then & Now* includes a smattering of black and white images and two appendices with poems and hymns relating to Frame's chapter. The notes are comprehensive but disappointingly there is no index.

Frame concludes that perhaps commemoration is about how we would prefer to remember the past, and that we choose to forget the complexities and conundrums of history. In all, *Anzac Day Then & Now* is a multi-faceted examination of the phenomenon of Anzac Day but, perhaps unsurprisingly, it doesn't make any grand conclusions. If there is any conclusion to be drawn it is that Anzac Day will likely continue to shift in its meaning and observance in the future.



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## Book Review

### *War, Strategy and History. Essays in honour of Professor Robert O'Neill.*

edited by Daniel Marston and Tamara Leahy, ANU  
Press, 2016, 312 pages.

Reviewed by Lieutenant Colonel Mark O'Neill

*War, Strategy and History* is an apt title for this Festschrift honouring the influential career of soldier, strategist and historian, Professor Robert ('Bob') O'Neill. From Intelligence Officer of the 5th Battalion, Royal Australian Regiment (5 RAR) in South Vietnam in 1966–67; to involvement with the International Institute for Strategic Studies (IISS); to Oxford Chair of the History of War, plus many other appointments, this book captures the life's work of a great Australian.

Bob O'Neill was a Duntroon graduate and Rhodes Scholar prior to his service in Vietnam with 5 RAR. Grounded in these formative experiences, his career subsequently took a path arguably unmatched by any other Australian soldier–scholar before or since. The editors tell the story through a series of essays written by people who worked with Bob over fifty years of intellectual endeavour and contribution.

Sir Michael Howard sets the scene for Bob's abilities early in the book's foreword. He writes of approaching the young Rhodes Scholar to fill a gap in a volume he was editing on Sir Basil Liddell Hart:

*...Captain Robert O'Neill produced, bang on time, a superb contribution that more than held its own in the company of those by, among others, Andre Beaufre, Henry Kissinger, Yigal Allon and Alastair Buchan.*

Amongst the contributing writers to this book are Sir Lawrence Freedman, Paul Dibb, Allan Gyngell, Beatrice Heuser, John Nagl and John Hillen. All significant writers and thinkers in their own right; their contributions reflect the respect people have for Bob's work and his long record of mentorship and teaching.

The book successfully incorporates several themes. As a biographical piece, it comprehensively charts the work and influence, arguably, of Australia's greatest strategic studies polymath. The editors have done good work in managing the tone across the various authors, and a very interesting and readable biography emerges. But the book is more than biographic. It effectively charts the development of big issues in the field broadly labelled 'strategic studies' over the last 50 years. From the counter-insurgency wars of the cold war, through to nuclear arms control and disarmament, the development of contemporary think-tanks and back to the wars of the present, Bob O'Neill's presence and contribution emerges. For this reason alone, the book should be of significant interest to students of strategic policy development.

The final theme that emerges in the book is one of leadership—whether policy leadership, institutional leadership or teaching and mentorship—this enduring aspect of Bob's work is consistently emphasised by the authors. Many acknowledge a debt of gratitude for his efforts. Readers of this journal will find an inspirational example, upon which to reflect, of life-long leadership across multi-disciplinary teams.

In *War, Strategy and History* Daniel Marston and Tamara Leahy have produced a well-written, interesting and worthy record of the career and times of Professor O'Neill. I recommend it to students of history, strategic policy and leadership and those interested in biography of notable Australians.

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## Book Review

### *Margins of Victory*

by Douglas Macgregor

Reviewed by Major Mick Cook, Army Headquarters

A battle can determine the outcome of a war. The outcome of a battle can be determined by decisions made decades earlier. The reform program that Sir Richard Haldane began to impose on the British Army in 1905 enabled it to hold the line at the Battle of Mons in 1914. General Kazushige Ugaki was able to implement a partial reform program of the Japanese Army during the 1920s that enabled it attain victory at the Battle of Shanghai in 1937. The destruction of the Russian forces at Lohvitsa in 1941 delivered some hard lessons that, once learnt, empowered it to destroy the German Army Group Centre in 1944. The Egyptians overextended in the Sinai and the Israelis were able to exploit a gap and destroy the crucial air defence umbrella that had protected Sadat's forces. The USA missed an opportunity at the Battle of 73 Easting in the First Gulf War and Saddam Hussein maintained his iron grip on Iraq for another 12 years. The results of a battle, and the manner in which that result is exploited, can have a profound effect upon a conflict.

In *Margin of Victory* Douglas Macgregor examines five battles that influenced the conflict they were a part of and how they shaped modern warfare. The five battles discussed in the book are the Battle of Mons, the Battle of Shanghai, the destruction of the German Army Group Centre in 1944,

the counter-attack across the Suez in the Yom Kippur war, and the Battle of 73 Easting. Macgregor recounts the battles from the perspective of each of the respective adversaries, analysing the make-up of the force, the tactics employed by the force and the political imperatives driving the force. Macgregor provides a detailed account of each battle; the arguments he presents are drawn from a logical analysis of the evidence provided. Throughout his analysis, Macgregor aims to determine what gave the victors of each battle the winning edge. He seeks to determine the margin of victory in each of these to, presumably, find a correlation that is able to be distilled into a more general lesson.

*Margin of Victory* concludes with some general lessons applicable for the USA. military in the 21st century. Two of these lessons that resonate with an audience from the Australian Defence Force are the need for protected mobility and firepower for the close fight and the importance of an efficient strategic sustainment system that enables the execution of joint operations.

The book is well-written and is an easy read for those with a general or specific interest in military history. At only 194 pages long it can be read in a single sitting and the structure, each chapter focusing on one of the particular case studies, focuses the reader's attention on the details needed to build an understanding of each battle. I recommend this book to military officers and non-commissioned officers looking to understand the development of the close fight in the 20th century and the likely challenges for the Australian Defence Force on operations in the 21st century.

Macgregor, D (2016) *Margin of Victory*, Annapolis: Naval Institute Press

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## Book Review

### *The Battle of Long Tan: Australia's four hours of hell in Vietnam*

by David W. Cameron

Viking \$35

Reviewed by Major Lindsay Amner

Military history is generally written by the winners. If the losers write their version of history, they will generally add a bit of glory to their actions so they appear glorious losers rather than just losers. But whichever side writes the history, it is generally told from only one side, from the cultural perspective of the writer. David Cameron attempts to correct this and his military history books are generally written with an attempt to show both sides of the story, or at least to include the perspective of the other side.

The Battle of Long Tan in 1966 lasted a bit over four hours—and most Australians will have heard of it, in this the 50th anniversary year—as it has become the most famous Australian action of the Vietnam War. Boiled down, the story we know is that 105 Australians and three New Zealanders bumped into more than 2000 Viet Cong and fought a desperate battle in the Long Tan rubber plantation. By the end of the battle, the Australians were pulled back in all round defence of the New Zealand artillery observation officer as he called in the constant rain of artillery fire which won the battle, for the loss of 18 Australian soldiers' lives.

As the winners, Australia wrote the history and every history written of the battle so far has largely focused on the Australians; and in large part, on the controversy which followed as the winners' efforts were not recognised with medals. The lack of a Vietnamese viewpoint is partly because of the difficulty in getting any good research done in Communist Vietnam. But in this book David Cameron has attempted to show what the Vietnamese were thinking and doing, before, during and after the action. In this he has been moderately successful. While there are still gaps from the Vietnamese side, this is the best attempt yet to show a balanced view of the action, including testimony from Vietnamese who took part in the battle, alongside the numerous personal accounts from Australians interviewed by the author.

The book also includes an excellent potted history of the Australian involvement in Vietnam and a detailed retelling of the events which led to the actual battle. It includes some criticism directed at senior Australian commanders who appeared to believe what they wanted to believe—of small scale local attacks, rather than the possibility of an enemy regiment moving into their area in strength, which a more open-minded approach to the intelligence may have indicated.

David Cameron has written an interesting and engaging book, the most-balanced account yet written of the Battle of Long Tan and well worth a read.

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## Book Review

### *The Australian Imperial Force*

by Jean Bou & Peter Dennis

Melbourne: Oxford University Press, 2016

Reviewed by William Westerman

This is the final volume of a five-book history of Australia in the Great War published by Oxford University Press during the war's centenary years. Previous volumes have explored the war against the Germans, the war against the Ottomans, the war in the air and the home front. This book completes the picture, doing away with battle altogether and examining the AIF as an organisation. *The Australian Imperial Force* covers the AIF's administrative, compositional and organisational history. True to the aim of the series, it has not told a new story, but has told an old story in a new way, and as the concluding book in the series, Jean Bou and Peter Dennis have rounded off the series very well.

This is not a book for every reader interested in military history. Those looking for a more kinetic re-telling of the Australian Imperial Force's story will need to look elsewhere. *The Australian Imperial Force* discusses what was required to raise, train and sustain five infantry and two mounted divisions on deployment for four years. For anyone interested in a more complete understanding of military organisations, this book is essential and brilliant.

*The Australian Imperial Force* is loosely chronological, although it is far more thematically- than narratively-driven, covering all the aspects of the AIF's existence that did not directly involve combat. Through this approach the reader get a sense of the AIF as a living organisation, the way it organised for battle, from where it drew its officers and how it sustained and administered itself over four years. It leaves no stone unturned, even including discussions about the AIF's postal service.

One of the most impressive aspects of the book is the depth and scope of demographic survey in Chapter Four, which provides a much more extensive examination of the composition of the AIF than most other works, allowing for some fascinating deductions. For instance, the book charts with accuracy the stated religious affiliations of monthly enlistments, thus assessing the impact of perceived sectarian events such as the 1916 Easter Rising in Dublin or the two conscription plebiscites. The work done in preparing this survey was immense, and is a great credit to the authors for their audacity and diligence in undertaking such a task.

Beyond that, many obscure aspects of the AIF's organisation have been highlighted, such as the composition of AIF Headquarters in London or the details of how the AIF dealt with the issue of pay. Bou and Dennis assess the politics and practicalities of William Birdwood as GOC AIF, as well as exploring the issue of whether the AIF was too large. The third contributor, Paul Dagleish, provides an appendix on the AIF's record-keeping. In keeping with the nature of the book, if you are a reader who enjoys administrative historical detail, this will be fascinating—if not, then it will likely be of little interest. A final issue addressed in *The Australian Imperial Force* is the events after the Armistice, particularly repatriation, which is often neglected in operational histories of the First World War. The concluding chapter on the legacy of the AIF provides a fitting end to the series as a whole.

For all its strengths, it must be said that the book is a little dry to read in some places. This is to be expected for a serious work of this type, but it might turn off a casual reader. There is also a lack of consistency in the focus of the book, as it switches from organisational history to demographic surveys to issues of command and administration, which makes any overall thread difficult to follow.

Nevertheless, *The Australian Imperial Force* presents an honest look at a young nation attempting to put together an expeditionary force for



active service in two major theatres of war, each with its own challenges. A final positive for the book is that it does not neglect the Middle East theatre of operations, providing ample discussion of AIF organisation and administration in Egypt, the Sinai and Palestine. This is a book for those seriously interested in the Australian Imperial Force; a rigorous exploration of what is required of a nation such as Australia to send a large expeditionary force overseas and sustain it for several years.



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## Book Review

### *Command Culture: Officer Education in the U.S. Army and the German Armed Forces, 1901-1940, and the Consequences for World War II*

by Jörg Muth

University of North Texas Press, Denton, 2013, 376 pp

Reviewed by Captain Dale O'Shannessy, SO3 Technical Airworthiness,  
Headquarters Forces Command

The quality and performance of military forces throughout history is often founded foremost on a compelling narrative. Narratives about naturally-gifted soldiers and officers, who possess superhuman courage, what historian Michael Howard calls 'nursery history', are meant to inspire soldiers or build national pride. While these stories obviously serve a purpose and often contain grains of truth, it is far more difficult to depart from the narrative and examine the facts and context, warts and all, of past battles and forces in order to reveal real reasons for success or failure. In *Command Culture*, author Jörg Muth has taken the latter path and sought to untangle and illuminate the reasons for the substantial difference in performance between the German and American officer corps in World War II, by exploring how these nations selected, educated and promoted their officers in the interwar period.

The central and unassailable fact of Command Culture is that the German officer corps was superior to the US one. German officers demonstrated daring, competence and creativity. American forces were often shocked to realise that a stubborn German company, which they had defeated at great cost, was commanded by a mere Leutnant and that the Officer Commanding had been killed at the outset while leading from the front. In contrast, American officers who demonstrated ferocity in battle often did so 'despite every discouragement from their seniors'. Muth traces this difference in command culture from the battlefield right back to the schoolhouse.

The book first examines the lives of American and German officer candidates at their respective academies and schools. The realities for these two groups are shown to run counter to common intuition, with stereotypical 'German strictness' more a feature of American officer training. Cadets at West Point lived miserably in a system of stiff ceremony, honor codes and bastardisation, where the failure of a single subject could mean the repetition of an entire year. At the end of four years, the cadets graduated as Second Lieutenants into the Army having had minimal contact with soldiers and modern equipment, and an education focused purely on engineering. The German *Kadettenschulen* on the other hand is shown to be far more accommodating and nurturing. German cadets were taught a broader range of subjects in a collegiate environment, where character and leadership were central tenets. Junior cadets could outrank senior cadets as promotion in their cadet hierarchy was based on merit, and hard-won promotions were easily lost. Academic failure would not prevent graduation as long as the cadet displayed officer qualities (they weren't educating scholars after all) and at graduation most cadets were not commissioned. Commissions were won only once cadets had proven themselves in a real unit. From the outset, it is apparent that the German and American approaches are radically different.

Next the book examines the mid-career education courses for each nation's officers. In America, this entailed the Command and General Staff Course (CGCS) at Fort Leavenworth and in Germany attendance at a *Kriegsakademie*. An immediate difference between these two courses is that entrance to the *Kriegsakademie* had to be earned through a rigorous examination process, while the CGCS selection process was based more on 'personal influence and cunning paperwork'. In Germany, attendance at the *Kriegsakademie* was an achievement that came with improved prospects for promotion, while the CGCS was seen mainly as a 'ticket-punching' exercise.

Adding to this distaste of the CGCS was the course itself, which focused on rote-learned information and assessments which valued 'technique' rather than 'tactics'. And again, the German system demonstrates greater nuance, such as tactical solutions being openly published and instructors being chosen for their teaching ability, largely absent in America.

A great American exception is discussed however, in the form of the Infantry School at Fort Benning. After the war, officers who attended this school credited it with providing skills they found to be essential in battle. The success of the Infantry School is attributed largely to George C. Marshall (who would go on to fill the position of US Chief of the General Staff during the war), who, as its assistant commander in the 1930s, revamped and 'Germanised' the course. This too is evidence that American successes were often produced by visionary officers who were not successful because of the US system of education, but in spite of it.

The final chapter of the book attempts to synthesise the information presented and to point out other critical differences and commonalities between the two officer corps. This final examination of how education either emphasised or counterbalanced the cultural traits of the respective officer corps goes so far as to consider the historical cultural mark left on the modern US officer corps, and considers actions from the Second Gulf War. The great achievement here is how the book demonstrates how, due to cultural factors, the Germans, living in an authoritarian state and restricted through much of the interwar period by the Treaty of Versailles, were able to create a liberal and effective system of education, where the USA as a liberal democratic nation, encumbered only by self-imposed restrictions, produced only a mediocre system of education.

The book and the language used is best described as precise and academic, mainly because it was written as the author's doctoral thesis. A related characteristic of this type of writing is the attempt to avoid bias by critically evaluating sources, and to contemplate both sides of an argument openly. This kind of careful and considered analysis largely prevents simple, solid conclusions from being drawn however the results are still illuminating and the book maintains the reader's interest well. Another happy consequence of the style is a wealth of referenced works to consider for further study.

Overall, Command Culture is a worthwhile and stimulating read, for more reasons than can be explained in this review. It gives plausible explanations,

based on the study of preparations in the interwar years, for the widely-believed narratives surrounding the performance of USA and German forces in World War II. For the military reader, it prompts self-reflection on the efficacy of their professional education, and more importantly, challenges them to consider the state of their military's command culture.

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## Book Review

### *The Ministry of Ungentlemanly Warfare. Churchill's Mavericks: Plotting Hitler's Defeat*

by Giles Milton

John Murray Publishing, 2016, ISBN 9781444798951, 356pp

Reviewed by Lieutenant Colonel Matt Patching

The use of sabotage in war is often something westerners associate with the enemy: dirty tricks that are outside the rules of 'gentlemanly' warfare. That was certainly the view of the British polity in the late 1930s. Despite this view, a small and carefully selected group of men and women were given the responsibility to plan, resource and execute sabotage attacks against the Axis powers. Giles Milton has written an entertaining and informative book that takes the reader into the British organisations responsible for planning and conducting these sabotage raids behind Axis lines in the Second World War. Milton writes in a conversational and fast-paced style that allows the reader to enjoy the story and build an association with the main protagonists.

*Ungentlemanly Warfare* follows the establishment and covert operations of the Top Secret departments 'Section D', charged with developing specially-trained agents to engage in murder, sabotage and subversion behind enemy

lines, and MI(R), responsible for designing and building innovative new weapons. In particular, it chronicles the wartime careers of Colin Gubbins, Millis Jefferis, Cecil Clarke and Stuart Macrae; masters of guerrilla warfare, explosives and sabotage. These men oversaw a style of warfare that relied upon violence, secrecy and not playing by the rules. Their early forays into the war saw them smuggled into Norway in 1940, where Gubbins' men undertook their first ambush of the German invasion force. These expeditionary raids grew in danger and complexity to include the theft of Axis shipping from a Spanish colonial port in Western Africa to destruction of the St Nazaire Dock—the only dock large enough to service the German *Tirpitz*, the most powerful warship in the world at the time. Expert saboteurs trained in the United Kingdom were also responsible for destruction of the Norsk Hydro heavy water plant in 1943, probably depriving Hitler of an atomic bomb.

The establishment and continued operations of these departments were not popular with the War Office, who continuously diverted or delayed resources critical to the manufacture of weapons and training. However, Winston Churchill was a strong advocate of the need for guerrilla tactics and personally intervened to ensure continued weapons development and sustained expeditionary operations. Ultimately, this support saw over 4,000 tons of sabotage equipment parachuted into France prior to the planned Allied landings. French and British saboteurs used these supplies to heavily influence the war, conducting relentless harassing raids of the 2nd SS Panzer Division and preventing it from reaching Normandy in time.

This book is a very good read, telling the story in an informative and entertaining style. Hard core historians may not appreciate its informality; however, this style extends the book's appeal to a much broader audience.