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A year of global challenge and adaptability has resulted in a corresponding surge in new ideas. Ways of operating in response to domestic and international threats has provoked discussions in Army of force posture and composition, strategy and technology. The Australian Army Research Centre has been honoured to host many of these discussions, facilitate research and effect collaboration between military, academic and industry partners to find answers to the new problems which now face us. This edition of the Australian Army Journal grasps these challenges and celebrates the variety of ideas present in the Army community and represented here by its members.

We lead with two articles by current Chief of Army Scholars. Lieutenant Colonel Nick Brown explores a new role for Army in deterrence, one that had traditionally belonged to Airforce and Navy; and Lieutenant Colonel Nick Bosio combines the art and science of war in a discussion about the dynamic world of unrestricted wargames as a way of exploring alternate approaches and broadening the minds of military officers.

Major Jack Cross takes us into the grey zone in a discussion of cyberspace and contends that the Army's current approach to protection of networks is unsuitable. By likening this defensive approach to loss of agility when wearing body armour, the author argues for a more proactive and aggressive approach in a move from cyber security to cyber manoeuvre. Captain Richard Williamson then critiques the centralisation of Defence innovation functions as a move which has separated new ideas from the needs of the warfighter. He instead proposes an online portal accessible by all ranks which would align industry innovations with Defence project gaps

more effectively. Finally, to coincide with the 50th anniversary of Australian infantry deployments to Rifle Company Butterworth, Lieutenant Colonel Richard Niessl examines at the history of the relationship between the Australian and Malaysian Armies and suggests an innovative and expanded role for future deployments.

Two engaging opinion pieces follow from Corporal Gabrielle Hammond on the success of the new Recruit Development Wing at The Army Recruit Training Centre, Kapooka; and Lieutenant Colonel Mick Cook writes on the need to embrace creative practices in professional military education.

We then bring you a whole summer's reading with reviews of six exciting new releases including Russell Glenn's volume of essays on the Australian Army's approach to mission command; a fascinating biographical and investigative journalism adventure into information warfare by Peter Pomerantsev; and a study on military obedience by ethicist, Pauline Shanks Kaurin. Rachel Louise Snyder writes a timely account of family and domestic violence, presenting confronting stories from the perspectives of victims and perpetrators; we introduce a new critical military studies collection from renowned military geographer, Rachel Woodward; and look at Ron Boxall and Robert O'Neil's edited collection of the counterinsurgency experiences of members of 5RAR in Vietnam.

The Australian Army Research Centre is pleased to facilitate this growing body of military scholarship and to see that discussions of future land capability are occurring at every level of command. I invite you all to participate in the debate and I commend this edition of the *Australian Army Journal* to you.

Riding Shotgun: Army's Move to the Strategic Front Seat

Lieutenant Colonel Nick Brown

Abstract

Historically, the Australian Army has been precluded from a role in deterrence, but recent documents indicate that the Australian Government no longer wants its Army occupying a strategic backseat when it comes to deterring actions against Australia's interests. At the same time, integrating mobile long-range, land-based rocket artillery will be inherently complicated, and needs a strategic community of teams to forge these systems into an accepted and credible deterrent. In moving to 'ride shotgun' alongside the Air Force and Navy, there is an opportunity for the Army to lead the challenge and draw on its experience in engaging with domestic and international partners. Working together in such a way provides a scale no one nation can generate alone, and Australia's access to leading-edge technology and commitment to build a sovereign defence industry makes Defence an increasingly attractive partner.

Introduction

Historically, the Australian Army has been precluded from a role in deterrence. This has suited Army's preference to pursue a self-issued mission, reflecting more its sense of identity and offensive spirit than a possible contribution to Australia's strategic defence posture. As self-penned visionary missions such as 'winning the land battle'[1] have given way to formal direction—'To prepare land power in order to enable the joint force in peace and war'[2]— Army finds itself reconsidering its role and purpose as part of Australia's warfighting team. This is a timely evolution as the Defence Strategic Update and its companion, the 2020 Force Structure Plan, indicate that the Government no longer wants its Army idly occupying a strategic back seat when it comes to 'deter[ring] actions against Australia's interests'.[3] Eras of Defence White Papers relegating Army as the *silent service* on deterrence appear to have expired, and for the first time in its history there are plans for the Australian Army to prepare capabilities with deterring strategic reach and lethality. Yet integrating mobile long-range, land-based rocket artillery will be inherently complicated, and building the strategic community of teams to forge these systems into an accepted and therein credible deterrent will be inherently dynamic. In moving to 'ride shotgun' alongside the Air Force and Navy, this is an opportunity for the Army to lead each challenge, the latter a mix of energetic and active variables.

The question at the core of this discussion is not one about the Army becoming more strategically employable. Since the ADF's joint expeditionary debut in East Timor in 1999, the Army has been consistently engaged in an array of operations across the Indo-Pacific as part of joint and multinational forces. Being able to contribute and respond to Australia's shifting military strategic needs has not been the issue. The question this discussion seeks to address is a broader one, concerning the character of Army's contribution to those components of Australia's future strategic defence posture that deter adversaries. On paper, an answer involving mobile long-range, land-based rocket artillery seems to help solve the age-old Australian problem of denying attacking adversaries a military advantage, particularly in periods of great power competition. For decades Defence has sought and sustained capabilities to appear militarily dominant in the air-sea gap to Australia's north. Land-based, long-range lethal systems might be seen as an additive ingredient, giving the deterrent mix a little more spice. However, as is the case with machine guns and defensive

positions, these weapons must be 'tied in' with other defence capabilities and to their geography. In Army parlance, interlocking the arcs of fire between weapon systems is known as 'mutual support'. Drawing heavily on its experience in partnering, the real contribution of the Australian Army in bringing long-range rocket artillery into service will be the degree to which it ties these systems into the minds, institutions and defence infrastructure of the immediate region, both Australian and foreign. In doing so, it will forge a sense of mutual support among an emerging strategic community of teams, both domestic and international.

Under-Gunned and Outranged

The Australian Army Research Centre's Dr Albert Palazzo recently posited that defensive firepower, for example long-range rocket artillery, 'is once again in the ascendant; its strength is again more powerful than the offense'.[4] If he is right, an outsider's glance at current joint force land-based defensive firepower would suggest Australia has been severely under-gunned. The longest distance the joint force can launch a piece of ordnance from a land-based system, the M777 howitzer (field artillery), is no more than 30 km, allowing for the wind at its back. The maximum flight time of such munitions from the firing point to target is no longer than 90 seconds, the approximate time to take a selfie, check it and upload it to your preferred social media account. For the land-based in-service air defence system, the RBS-70, the maximum reach is less than 10 km. In other words, an RBS-70 sited atop a skyscraper in the centre of Melbourne or Sydney cannot reach their major airports, for lack of range.

Practically these analogies are redundant, but they are illustrative of a gap in reach and lethality between Australia's land power and its national maritime and air power counterparts, illuminating the scale of capability change upon which Army must deliver. Until these systems are in service, Army will never have prepared a comparable capability with the endurance and reach to deliver a lethal strike far north of the continent, in partnership or independently. Some may lament an omission of contributions by Army's Special Operations Command and Defence's maturing amphibious capabilities. However, considering the scale and character of the threat Defence's technologically advanced, regionally superior air and maritime forces seek to deter, it is hoped that

this omission is self-evident. Effective deterrence is about perceptions of punishment and denial, and the sum of these costs in the minds of those Australia seeks to deter. The scope of potential Indo-Pacific peer and superior adversaries suggests that singular, surgical strikes will neither deny nor punish in sufficient scale. If developed to maximise the benefits Australia's geography confers, and securely integrated across the joint force, mobile land-based, long-range rocket artillery broadens government options to deny and threaten lethal destruction at range.

An Australian Deterrence Idea

The concept of broadening is enshrined in the continuity of an enduring Australian strategic idea of what might deter an attack on the nation. Possessing technologically advanced systems with the capability to deliver increasingly precise lethality away from Australian shores is a method grounded in an established national deterrence doctrine aimed at denying an adversary 'effective use of the air sea gap'.[5] Elements of Australia's historical strategic defence posture have sought to connect the following dots in the minds of potential aggressors: 'If the effort required to reach our island is not enough to deter you, our superior air and maritime systems will impose costly attrition on your military adventurism—that is, the juice will not be worth the squeeze'. Until now, lethal land power systems managed by the Army have not been a feature of this signalling, and any deterrent value drawn from activities such as Army's extensive and growing Indo-Pacific engagement program is implicit at best, and difficult to measure. These endeavours remain valuable but should not be conflated with the deterrent value of prospective and explicit destruction of valuable forces and infrastructure at range, in an attempt to articulate strategic relevance. From a deterrent perspective, the Army has not been as strategically relevant as its peers but this will evolve in line with the national idea for deterring armed aggression.

The Defence Strategic Update and accompanying announcements make it unambiguously clear: precise lethality at long range remains as attractive a strategic option as it was over three decades ago in *Defence of Australia*, the 1987 Defence White Paper. Significant investment and departmental effort will be expended over the coming decade to enhance and procure new systems, giving Australia the ability to 'hold potential adversaries,

forces, and infrastructure at risk from greater distance'.[6] Holding others *at risk* is something no other Defence White Paper has as explicitly stated, the term being usually reserved to highlight a threat to Australia, or used in relation to the management of complex procurement. In seeking to frame these lethal and destructive consequences in the minds of others, future Australian governments will have at their disposal a land-based strike option that can deter by existing on the edges of the 'air sea gap', rather than having to enter, strike and redeploy; a reality for Australian maritime and air power. This is a first for the ADF: a persistent strike effect without the need for persistent time on station.

As regional maritime commons and airspace become more contested, striking from the edge offers advantages and new options, potentially re-weighting the uncertainty of an 'increasingly complex and contested Indo-Pacific' in favour of future Australian governments.[7] In an effort to complement the array of land, sub-surface, surface, air and space sensors operated by other Defence platforms, mobile land-based, long-range rocket artillery can threaten and deliver lethality from an extensive number of sovereign territory firing points (including the decks of Royal Australian Navy amphibious vessels—*think lily pad*) and host nation locations. Innovative and non-traditional measures to mask the movement and location of systems across the continent will generate surprise and uncertainty. This is more difficult to achieve in the air and maritime domains, where there is a known number of Australian air bases and ports from which these platforms must launch—infrastructure it is reasonable to assume will be saturated with space-based surveillance (at a minimum) during times of heightened tension. Concealable, highly mobile and dispersed land-based rocket artillery could become as difficult to locate and track as needles in haystacks.

This was the US air power experience during the Persian Gulf War in 1991. After a 43-day air campaign against Iraq and Iraqi forces in Kuwait, employing more than 2,780 US fixed-wing aircraft in more than 112,000 individual sorties, the US Department of Defence's 1992 report, *Conduct of the Persian Gulf War*, contains no evidence that a single mobile Scud launcher system was destroyed by aircraft.[8] Despite an increased effort to target mobile Scuds from day three of the air war, the elusiveness of these mobile systems led to a focus on fixed Scud production and storage facilities.[9] However, as the Iraqis had decided to 'remove … most production equipment, components and documents' before the coalition air campaign, final intelligence estimates determined 'actual damage to Scud production and storage facilities [was] less than previously thought'.[10] Further, while then Defense Secretary Dick Cheney hailed the victory a 'triumph of Coalition Strategy, of international cooperation, of technology, and of people',[11] the inability of US air power to hunt and destroy any of the estimated 36 mobile Scud launchers in a country about a third the size of the Northern Territory reveals the potential that mobile long-range rocket artillery systems offer in using up resources and effort, generating two of war's constant maxims: uncertainty and friction. The former adds a 'fog' to clarity and the latter makes 'the apparently easy so difficult'.[12] Such ambiguity and the

'manipulation of uncertainty' can generate, as deterrent theorist Thomas C Schelling offered, 'a threat that leaves something to chance'.[13] These phenomena of war are well known to most strategists and military planners, injecting doubt into the minds of decision-makers considering the use of force against Australia or its interests. Doubt, in turn, feeds fear and reluctance, raising the credibility of Australia's strategic defence posture.

Mutual Support within and beyond Defence

Utilising cross-domain sensors to locate and track adversary forces and strategic infrastructure, while employing cooperative engagement systems to hold them 'at risk' with mobile land-based strike, simultaneously enhances the survivability of finite and expensive aircraft and maritime vessels. As expected, sensor ranges aboard ships, submarines and aircraft exceed the range of onboard weapon systems. Firing weapons which produce a detectable signature exposes Australian platforms to attack by a growing number of supersonic[14] missile threats. Mastering the complicated challenge of achieving secure, cross-domain digital integration to harness the potential of joint integrated fire control is an opportunity to increase reach and lethality while hardening the joint force's shield. This is mutual support on a number of levels. Consequently, a spirit of and commitment to intradepartmental cooperation is key to generating credible deterrence, while concurrently projecting a protective umbrella of latent, yet interlocked, defensive firepower across the immediate region.

Although not its primary purpose, if presented and incepted into the immediate region in an inclusive and transparent way, this capability will benefit the region's strategic community as a whole. Such cohesion could lay the foundations for more formal collective-actor deterrence arrangements, where mutual support extends beyond national boundaries. This would represent an expression of 'the existence of community', offering an otherwise unavailable scale to deliver 'effective responses to violation of community norms'.[15]

Connecting an effective network of teams at all levels across this strategic community will foster an atmosphere of shared responsibility and see Australian rocket artillery and, more broadly, long-range strike become a tool for immediate region stability and security. Moreover, while capability inception, procurement and operational employment mean the first

community among equals is Defence writ large, the reality of Australia's northern geography implies that the next members of this community are its near neighbours. The Defence Strategic Update bounded this geo-strategic reality for Australia when it framed the immediate region as principally, 'maritime and mainland South East Asia to Papua New Guinea'.[16] For Australia to mount a credible land-based lethal deterrent at ranges beyond what is now possible, it will be necessary to acknowledge that rocket artillery launched from Australian territory could enter the geography of the immediate region, events it is reasonable to assume would be concerning to our neighbours. This merits a judicious approach by Army to frame rocket artillery concepts in a language that is suitable for a diverse audience. Even if these analogies are unfairly misconstrued by others, including those sowing misinformation, their descriptive qualities are binary at best and are at odds with contemporary ministerial public sentiments, such as those proclaiming, 'Australia's perspective, Australian values, Australian principles have universal application'.[17]

Army's choice of words to describe the effects of land-based strike should account for the unique interests and domestic political characteristics of Australia's immediate neighbours. Doing so is indicative of Army's capacity to appreciate international and cultural nuance and avoid preparing a Defence capability which is no more than a 'blunt instrument'. As current Chief of Defence General Angus Campbell recently outlined in a discussion on defence-diplomacy cooperation, 'the world doesn't need blunt instruments. It needs really finely polished responses to complex challenges'.[18] Establishing and maintaining credible deterrents toward potential adversaries who are more economically and militarily powerful than Australia meets these criteria. This complexity will be further amplified if Army and Defence appear ambivalent to the interests and perspectives of the immediate region. Increasing self-reliance is not an excuse for an overindulgence in self-interest.

As demographics show, Australia's immediate region is anything but uninhabitable or unoccupied. Instead it is intrinsically connected with Australia and the wider Indo-Pacific. It is reasonable to wonder whether political leaders across the region would recoil at images of themselves residing within or alongside areas with the anecdotal labels of 'no-man's lands' and 'killing zones' ascribed to the potential of modern defensive firepower.[19] The region includes Australia's nearest neighbours and

increasingly important security partners, Indonesia, Papua New Guinea and Timor Leste—the first, home to 3.5 per cent of the world's population[20] and an emerging economic giant; the second, where '5,000 Australian businesses [are] operating directly and indirectly'[21] and where the respective mainlands are 150 km apart;[22] and the third, a nation whose sovereign birth bookended an era of great peace for Defence.

Developing a lexicon and the kinds of behaviours that promote regional cooperation and sharing of responsibility is an effective and respectful way to establish an interconnected strategic community of teams. Rather than being about benign, inoffensive niceties, such a move is more about thinking in terms of partners and broader, dynamic relationships. Deterring attacks and other threatening actions against Australia conveys wider protective benefits for sovereignty across the immediate region. As Army's role is to prepare land power, it has agency to promote a sense of shared responsibility, demonstrating the positive and essential contribution an engaged and present Australian Defence Force offers in terms of stability and peace. For example, adapting the role of the 2nd/30th Training Group, Army's permanently overseas-based unit in Penang, to leverage its 'persistent physical presence' and become a joint and multi-nation integrator, could position the ADF and regional partners to cooperatively 'operate into all five domains'.[23] Reimagining and re-scaling collaboration, (while staying clear eyed to the stress this could place upon traditional information security thinking) maximises Army's partnering potential to 'ensure the future ADF can project military power to shape our environment'.[24]

Unlocking Army's Partnering Potential

Some may see the case for Army as the capability manager of mobile land-based, long-range rocket artillery as a forgone conclusion—effects delivered from the land denoting land power pedigree. In terms of technical expertise, however, it is likely that Navy, Air Force and Joint Capabilities Group are further ahead in their journey to deliver networked systems capable of collaborative and cooperative target engagement, relying on information from other domains and platforms to employ their weapons. Likewise, long-range rocket artillery strike systems could be designed to operate almost exclusively within a joint and cross-domain architecture, not as part

of the Army's traditional combined arms team. It is therefore reasonable to question why Army, with the least experience in delivering lethality from over the horizon, should be responsible for introducing this component of Australia's future strategic defence posture. In the approximately 15 minutes it takes a modern anti-ship cruise missile travelling at 0.9 Mach (310 metres per second) to reach maximum range, a ship manoeuvring at speeds of 28–30 knots (52–56 km/h) could be 13–14 km from where it was first detected, and likely launching decoys or shielding amongst islands, commercial shipping or merchant fishing vessels. This presents an immense technical challenge for the Army, and strategic decisions seldom appear to be about ensuring everyone gets a fair go.

The answer can be found in relationship building and partnering. Army's efforts to expand its international engagement activities are part of Defence's broader strategy to build strong and resilient service-to-service relationships across the immediate region. These increased efforts pre-date the 2016 Defence White Paper and 'demonstrate the pivotal role of the organisation in pursuit of Australia's national interests and the region's prosperity and security'.[25] Perhaps unrealised by many at the time, Army's attempts to be a persistent presence in the immediate region marked the start of its task to *tie in* future land-based rocket artillery systems. International engagement is now institutionalised core business for the service, being described by contemporary Army chiefs as a means to 'achieve unique access',[26] 'sustain Australia's influence and generate security partnerships and build regional security resilience'.[27] But while these advantages may help prevent conflict, they should not be conflated as deterrents of conflict in and of themselves. More accurately, they are condition-setting outcomes of Army's committed sincerity to build trust through transparency with partners like the Papua New Guinea Defence Force and the Tentara Nasional Indonesia—Angkatan Darat (TNI-AD).[28]

Acceptance and openness among the immediate region's strategic community has the potential to do as much for the deterrent effectiveness of rocket artillery as integrated joint fire control systems. The former mitigates those energetic and active variables which could, as critics of the Strategic Update suggest, 'unintentionally reinforce the security dilemma and feed arms racing pressure'.[29] Open, consistent and meaningful defence international engagement underpins open and constructive dialogue at the political level, shaping the conditions for regional responses to regional

challenges. Given Army's modern view of partnering as a means to unlock potential and provide for team success amidst uncertainty, Army stands to engender the access and acceptance mobile land-based, long-range rocket artillery requires among senior foreign military and political leaders.[30] Increasing self-reliance is not the same as 'going it alone' but rather an opportunity for Australia and sovereign partners across the immediate region to pursue shared interests together, adopting defence postures that are mutually supporting. Building relationships through long-range rocket artillery becomes the nexus through which Army's strategic potential is realised, leveraging years of partnering experience to navigate the 'delicate interactions of [the] land and sea factors', therein avoiding 'blunt solutions',[31] and striking a tone and 'sense of strategic community between Australia and its neighbours'.[32] This is also an important opportunity for signalling to revisionist Indo-Pacific powers.

With DFAT, Not Instead of DFAT

Signalling and interpretation of explicit and implied communications across the Indo-Pacific will be an essential component of a 'mobile missile force[s]' deterrence value as part of Australia's broader defence strategic posture.[33] As Schelling noted:

> To fight abroad is a military act but to persuade enemies or allies that one would fight abroad, under circumstances of great cost and risk, requires more than a military capability. It requires projecting intentions.[34]

If a spirit of intradepartmental Defence cooperation is key to unlocking complicated integration challenges, and cooperation with immediate region sovereign partners unlocks the broader deterrent and stabilising potential of long-range rocket artillery, the next team member of this strategic community to be *tied in* is the Department of Foreign Affairs and Trade (DFAT). As Allan Gyngell offered in *Fear of Abandonment,* DFAT's role in pursuing foreign policy has been about the 'creation of institutions that frame Australia's international activities' and how the nation has learned 'to live in a region with very different neighbours and to project its own interest'.[35] If 'foreign policy is the politics whose failure means conflict',[36] Army will benefit from appreciating the role DFAT plays in reinforcing efforts by

government to 'maintain armed forces sufficiently strong to deter assault from abroad'.[37] Much of the deterrent value of mobile land-based, long-range rocket artillery lies in its never being used, remaining powerful through its potential and latency. 'Diplomacy and defence,' as DFAT Secretary Frances Adamson recently observed, 'are two sides of the same coin; representing comprehensive national power'.[38]

Delivering defence capability which adds to comprehensive national power is as tied to understanding the signals others send Australia as it is to ensuring Australian signalling is understood as projected. When asked about the relevance of deterrence in the Strategic Update, former Defence Associate Secretary Brendan Sargeant observed that 'the most interesting thing about deterrence is that it's not you deterring, it's you in a relationship with someone else. And deterrence is how you manage that relationship'.[39] DFAT, by its mandate, is in the business of managing and interpreting Australia's relationships with foreign entities. Those same entities may harbour designs to act against or harm Australia's interests. Whether it be leveraging diplomatic pathways provided by a comprehensive strategic partnership with Indonesia or reinforcing and relaying warnings to potential aggressors, it is DFAT to which the Government will turn in managing diplomatic communication and assessing perceptions. A 2018 RAND study into *what deters and why* regarding US extended deterrence found that 'Clarity and consistency of deterrent messaging is essential', as is a capacity for 'Compromise and concession … to help meet a potential aggressor's interests and deprive it of a sense of imminent threat'.[40] As deterrence is a relationship concerning 'future pain', it offers a degree of bargaining power to both parties.[41] These types of delicate interactions require a capacity to communicate and a willingness to listen, suggesting that any immediate deterrence efforts will be DFAT led and Defence enabled.

In developing mobile land-based, long-range rocket artillery for Australia, Army should account for DFAT's overlapping and unique responsibilities so as to inform a collective approach to building productive dialogue with partners and potential adversaries. This relationship could exist along the entire capability life cycle, not just at times of crisis or when full operational capability is announced. Regardless of whether an interstate relationship is categorisable as being in cooperation, competition or conflict, it is worth noting that ADF senior leadership views Defence contributions as being 'with DFAT, not instead of DFAT'.[42] Army's history of partnering suggests that it is

well positioned to embrace interdepartmental collaboration during all stages of the capability life cycle. Having a mission to 'prepare land power' implies that this is now a necessity. Separately, yet nevertheless of relevance for 'Team Australia', is the requirement for Army to understand DFAT resourcing and its implications for strategic defence posture. It could be observed that a steady decline in funding of Australian diplomacy while simultaneously growing Defence spending suggests something of a strategic incongruity, potentially harming the comprehensiveness of Australia's national power. Such strategic acuity would be indicative of the partnering apex an 'Army in Motion' aspires to, resonating with the hand-in-glove approach senior Australian diplomatic and defence leaders espouse.[43]

Calibrating Army's Rocket Artillery Relationship with US Counterparts

Looking around Australia's contemporary Defence Force, the scale of material cooperation with the US Department of Defense is broad and deep. From combat, maritime surveillance and strategic lift aircraft in the Air Force to Navy's Aegis combat system and Sea Hawk helicopters, and finally the Abrams tanks, M-777 howitzers and Chinook helicopters of the Army, US influence is visibly evident in the ADF (and this is without including the sophisticated US weapons and ordnance these systems employ). Through exchanges of people, platform commonality, munition procurement arrangements and shared digital services and infrastructure for satellite communications, much of the ADF's potency comes from armament cooperation with its much larger US equivalent.

It may therefore seem a little late in the discussion to be considering the US's position within a strategic community of teams. Such debate could be viewed as a foregone conclusion. However, this is not the case, as partnering with the US Department of Defense in the development of mobile land-based, long-range rocket artillery will be subtly different to the traditional partnering efforts Army has pursued with its US Army and US Marine Corps counterparts, pursuing high levels of interoperability in land and littoral operations. The long-range rocket artillery relationship might be less about doing things together operationally, as collective training events such as Talisman Sabre prepare for, and more about maximising the benefits of sharing research to create like capabilities, and performing sovereign roles based on unique national interests. Calibrating this area of the relationship affords government confidence that the ADF is growing its 'self-reliant ability to deliver deterrent effects', vice procuring systems which reduce the nation's capacity to deter independently.[44]

Self-reliance moves beyond the capacity to act or threaten to act; it includes decisions to defer action or to act differently to traditional partners with the confidence that you can leverage the independence and resilience of sovereign defence capabilities. It would therefore appear contradictory, perhaps even self-defeating, for Army to prepare future land power which maintains or increases the nation's degree of capability reliance on its US partner, or where optimum performance is only achievable in US-led coalition settings and where US defence export laws, known as International Traffic in Arms Regulations (ITAR), are adhered to. Such features

diminish Australian efforts to practically and figuratively *tie* these systems into Australia's strategic defence posture and thereby into the minds and cooperative approaches of a strategic community of teams. While US Army aspirations and technical progress in the development of artillery systems that aim to reach targets in the mid-range (about 500–2,000 km),[45] are of great interest to the Australia Army, this facet of the service-to-service relationship could be calibrated to give Defence and Australian sovereign capability 'a technological qualitative edge' beyond the life of contractual arrangements.[46]

Israel has leveraged this edge over time to underpin deterrence 'through a homegrown technological capability that benefits from mutual collaboration between the educational system, the civilian industry and the defence and security establishment'.[47] Israel's experience in developing and sustaining military hardware that deters armed attack, in spite of its being without any 'third-party extended assurances', is encouraging for countries such as Australia.[48] As Army reviews its contribution to Defence strategy, a merging of its efforts to build strong army-to-army connections and its stated commitment to the development of Australian industrial capability may evolve from supporting 'defence export opportunities' to enabling defence industry greater access to the technological edges of tomorrow.[49] Forging increased intellectual and proprietary access confers competitive advantages in sovereign capability, illustrating a maturing of military–industry cooperation. Cultivating this mutual support and homegrown technology could arise from placing Army personnel with US systems experience into Australian businesses or adding Australian business representatives to the delegations of senior Army officer visits, or be as far reaching as adapting the curriculum of Army Cadets from traditional activities[50] to those including rocketry and hypersonic flight. Such changes could also broaden Defence's recruiting pool and prepare future Australian generations for careers in an increasingly technology-dependent Defence Force and Australian defence industry.

Conclusion

In the time it has taken to write this paper, Dr Palazzo published part two of his contribution to the Army's Land Power Forum, titled 'Deterrence and Firepower: Land 8113 and the Australian Army's Future (Part 2, Cultural Effect)'. His perspectives and the thoughts contained in the preceding sections of this paper share a major common point: both discuss an Australian Army that will and must be different from the one we know. The drivers of this change are a combination of shifting power across the Indo-Pacific, the Australian Government's response and the timely re-emergence of artillery as a dominant arbiter in future war—making it an attractive suitor to an embedded Australian idea of deterring through strike. In turn these drivers precipitate a number of 'firsts'. For the first time in modern history, the Australian Army will share the burden of preparing strategically relevant options to deter within a system of connected lethal platforms, allowing government to hold targets at risk from greater range. This requires rearming a service whose identity is enshrined in an idea of close combat between light infantry forces on foreign shores. If integrated across all domains, it will tie together a lethal long-range striking system capable of digesting volumes of mission data from an array of sensors, and launching munitions at moving targets beyond the horizon and across time zones. This is another first for the Australian Army.

However, as some things change, others will stay the same. As future Australian governments prepare to 'push back against intrusions into what we would consider our strategic space or area of interest', the Australian Army can also view this new preparedness requirement through a lens of continuity, given its commitment to building strong partnerships across the immediate region.[51] As the value of generating a persistent presence is realised, mobile land-based, long-range rocket artillery will demonstrate the strategic contribution Army can make as Defence's vanguard for enhanced cooperation, generating access and anchoring Australia's deterrent posture among a strategic community of teams.

This will benefit Australia and its neighbours where the scale and archipelagic geography of the immediate region create planning dilemmas for respective armed forces. Working together provides a scale no one nation can generate alone, and Australia's access to leading-edge technology and commitment to build a sovereign defence industry make Defence an increasingly attractive partner. Developing these connections is as much about Army's embrace of foreign policy as it is about defence policy, where respected partnerships are founded upon having 'futures together' and projecting this collective resolve to the wider Indo-Pacific.[52] While much of the Army's warrior ethos finds solace in imagery of a service that can 'seize and hold ground', the deterrence challenges and relationship management considerations facing Australia are to be addressed in partnership, where our Army can stand in the shoes of others and not only find but hold common ground.[53]

Endnotes

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Moulding War's Thinking: Using Wargaming to Broaden Military Minds

Lieutenant Colonel Nick Bosio

The war with Japan had been enacted in the game rooms at the War College by so many people and in so many different ways that nothing that happened during the war was a surprise … except the kamikaze tactics toward the end of the war. We had not visualized these.

Fleet Admiral Nimitz[1]

Abstract

Unrestricted wargames can build confidence, test mental models, and provide a method to create military experiences outside of live exercises and direct combat operations. By pitting an individual or group against other living beings, these wargames require military professionals to confront the uncertainty of war. The dynamic nature of such wargames helps translate military theory into military practice. This article argues that unrestricted wargaming is a vital component of broadening military officers' minds. By examining US and Japanese wargaming practices, the article proposes that unrestricted wargaming should be incorporated into Australian Army junior officer training courses to help officers test their biases, frame problems and accept alternative viewpoints.

Introduction

Since the end of the Second World War, several academics, including Williamson Murray, have reinforced Nimitz's view, quoted above. These academics agree that the US Naval War College's approach to education and wargaming directly contributed to officers' readiness for war.[2] Research into the US Army War College's interwar education and wargaming indicates a similar outcome for US Army officers.[3] Both institutions used wargaming in two ways. The first was similar to modern military wargames used in planning: a means to test and enhance plans. The second focused more on developing officers' minds and broadening their experiences.[4] Such wargaming often saw students compete against each other, as individuals or as teams.

Although these wargames had rules and tabulated data for units, they were often dynamic. These interwar military wargames have many similarities with the modern tabletop wargames sold in game stores across the Western world. This style of wargaming, known as *unrestricted wargaming*, seeks to develop an individual's potential. By pitting an individual or group against other living beings, these wargames require military professionals to confront the uncertainty of war. The dynamic nature of such wargames helps translate military theory into military practice. Unrestricted wargames can build confidence, test mental models, and provide a method to create military experiences outside of live exercises and direct combat operations.

This article argues that unrestricted wargaming is a vital component of broadening military officers' minds. Such wargaming helps develop thinking dispositions that allow officers to balance alternative viewpoints, and the art and science of war.[5] These thinking dispositions, known as *pluralist habits of mind*, help build 'learning to learn' behaviours.[6] Such habits of mind represent a person's willingness to accept, integrate and use a wide range of views, alternative approaches, and schools of thought to frame and solve problems.[7]

To provide a foundation for this argument, the article first provides a short history of wargaming. Understanding this history helps separate wargaming from pure models and simulations. Recognising these differences also clarifies the two broad outcomes that wargaming can provide military practitioners: *plan optimisation* and *developing potential*. Next, the article

suggests how using wargames only to optimise plans can be dangerous for militaries. The article illustrates these dangers by discussing how the Imperial Japanese military before the Second World War, and the US military before the Iraq War, used wargames purely for optimisation. In both cases, a focus on plan optimisation contributed to limited military officer thinking. The article then explores the use of wargaming by the US Naval War College during the interwar period. This discussion includes an explanation as to why the interwar period remains relevant today. The US Navy's use of wargaming illustrates how unrestricted wargaming helped create a learning-to-learn culture among military officers. Given the US Navy's experience, the article argues that unrestricted wargaming may help cultivate a learning culture that builds a pluralist habit of mind across the officer corps. Finally, the article proposes that unrestricted wargaming should be incorporated into Australian Army junior officer training courses. The article advocates that such wargaming should occur in ab initio training, the Combat Officer Advanced Course and the All-Corps Majors' Course. Developing such a habit of mind may help officers test their biases, frame problems and accept alternative viewpoints.

Wargaming—A History of Learning through Gaming

Several scholars detail how wargaming may help develop military knowledge.[8] For much of history, wargaming was relatively simple in application. Matthew Caffrey observes that the 19th century saw an explosion of wargaming, in both military and civilian areas, leading to the first true 'modern' wargaming system: *kriegsspiel*.[9] Designed by the German military and adopted by most major powers of the time, *kriegsspiel* pitted two players (or teams) against each other over a map table. Although *kriegsspiel* had rules and tabulated data, the game was managed by a 'game master'. The game master's role was both to umpire the game and to represent the friction and chaos of war. Game masters had the power to insert unexpected events, change the rules, or even adjust the tabulated data to demonstrate adaptation and intelligence uncertainties.[10] Through the role of game master, each game of *kriegsspiel* became a unique experience. Late 19th century research into wargaming found that

> … by its [wargaming] practice … they [military officers] acquired studious and industrious habits which they have retained—habits essential and indispensable to those invested with high command.[11]

Nevertheless, *kriegsspiel* could not represent all aspects of war. The fact that a wargame cannot represent all of war leads some to confuse wargaming with simulations.

Wargaming is Live Competition—Models, Simulations and Games

Caffrey's short review of the history of wargames helps clarify four confused (and often incorrectly used interchangeably) terms: models, simulations, simulation games and wargames. A *model* is a representation of the real world. It is an impression of a situation or the thoughts of those viewing the situation.[12] Because it is an impression, 'all models are wrong, but some are more than others'.[13] In other words, no model perfectly represents the real world. Yet a model can be useful if it helps observers understand vital aspects of the situation or context.[14] Although models can be useful, they are a static representation of the world.[15] A *simulation* is a model 'examined over time'.[16] Once again, a simulation is not the real world. As a representation, a simulation is grounded in the impressionistic model that forms the simulation's start-state. Therefore, a simulation is only useful if the model it is based on was useful. A simulation is also 'one-sided'. Simulations do not include injected (live) competition. It is this live competition over time that turns a simulation into a *simulation game*.[17]

A simulation game is the representation of real-world competition based on a model.[18] Such virtual competition may be a simple mass-market board game such as *Monopoly*, *Cluedo* or *Settlers of Catan*. It could be more complicated, as seen in hobby games such as *Magic: The Gathering* (a trading card game where players are opposing great wizards), *18XX* (where players are railroad tycoons) or *Terraforming Mars* (where players act as corporations attempting to terraform Mars). Simulation games may even be as complex as computer-based multi-player market simulators. What separates simulation games from simulations is the real-time interaction between multiple live players. Even computer-generated competition, seen in single-player games, remains a simulation. In these single-player games, the 'competition' experienced is grounded in the model used to develop the computer's responses (programming).[19] It is the injection of real-time live competition that helps define simulation games, wargames, and wargaming's two broad uses. Where the focus of a competitive game is warfare, the simulation game is called a wargame.[20]

Wargaming and Its Uses—One Game, Two Outcomes

Wargaming is not a simulation. A vital component of any wargame is the real-time competition between live players or groups. Without this real-time live-player competition, a wargame is just a simulation. Caffrey defines a wargame as:

> *Simulation game depicting armed conflict. Decisions made by contending parties affect the future state.*[21]

Other scholars and commentators support this definition.[22] The definition also alludes to how wargames may support military personnel.

Wargames may provide two benefits to military practitioners. The decisions made by competing players directly affect the game's situation. These decisions and the changing situation influence the follow-on decisions made by players. These interactions lead to the first outcome of wargaming: *planning optimisation*.[23] Under planning optimisation, wargames are used to test and improve a plan. This style of wargaming underpins the outcomes of course of action analysis within modern military planning. As such, planning optimisation is probably what most modern military professionals associate with wargaming. To enable plans to be tested, wargames often limit decision-making options. These limitations may be placed on one or all sides of the game. However, this is not the only approach to wargaming. A wargame's real-time decision-making can also help *develop potential*.[24]

Wargames may help develop the potential of ideas and military practitioners. This approach to wargaming may enhance military professionals' understanding of war. The use of *Kriegsspiel* by the German military in the 19th and early 20th centuries is an example of this approach.[25] These games assisted military practitioners to test their appreciation of the theory of combat. Such testing helped solidify their understanding of the practice of combat. Wargames that help develop the potential of personnel cannot be constrained like optimisation wargames. Therefore, wargames that seek to develop potential must be unrestricted in their gameplay. However, when a military only uses wargames for optimisation, the military may create a culture that views restricting wargaming as the norm. Such a culture may reinforce a belief that a tactical mindset is appropriate at all levels of war. The Japanese use of wargaming in the interwar period is a good example of this.

Pure Optimisation Wargaming—Reinforcing Tactical Culture for Strategy

Several scholars document the heavy Mahanian influence in Japanese war philosophy, strategy and operational thinking.[26] Mahan was a US admiral of the late 19th century and a prolific writer. Mahan's writings heavily influenced maritime thinking at the start of the 20th century. Because of this, Mahan is considered one of the founding theorists of modern maritime power.[27] Scholars also recognise that much of Mahan's theories is relevant only at the operational or tactical level of war.[28] Nevertheless, Mahan's influence on pre-war Japanese thinking significantly affected the Japanese approach to war and warfare.[29]

Japanese Pre-War Thinking—Tactical Thinking Influences All Levels

Mahan's influence shaped the Japanese approach to wargaming, experimentation and planning. Although less is known about Japanese wargaming and experimentation, the limited academic work indicates that Japan used wargaming to provide one outcome: the enhancement of specified plans. Rather than using wargames to stimulate thinking and develop adaptation in officers, Japanese wargames focused on refining a set concept or plan. Furthermore, Japanese wargames never considered strategic issues or expanded beyond the set goals of the military tactical plan.[30] In effect, such wargaming focused on the synchronisation of tactical capabilities and reinforced a belief in predictive tactical theory. The failure to consider wider or changing situations contributed to Japan maintaining an

> … irrational strategy … Japanese leaders grossly underestimated their enemies, stretched their own forces to the breaking point, and deliberately forced stronger powers to fight[.][31]

Although the culture of the Imperial Japanese military played a major role in Japanese strategic failings, their use of wargaming for plan optimisation reinforced their failure to adapt. These failures were intensified by Japanese commanders who ignored, or even cheated in, wargames because the outcomes did not align with their Mahanian world views.[32] A similar issue can be seen in US military wargaming prior to the 2003 Iraq War.

Iraq War Preparation—Fighting the War the US Wants to Fight

Education, training and experience often influence how militaries use wargaming. Before the Iraq War, US military officers focused on peer-to-peer warfare rather than war as a whole. Such education bred thinking that minimised any war theory not related to nation-state force-on-force warfare. It also minimised the possible effects of paramilitary forces, and advocated for avoiding urban terrain.[33] Wargaming, though growing in technical computer capability, focused on these limited educational outcomes.[34] Although the US State Department undertook a wide-ranging strategic wargame, senior military and civilian leaders ignored its outcomes. Instead, military wargames predominantly focused on enhancing the invasion plan.[35] Such wargames limited 'red force' options and stayed within the confines

of the invasion plan. This included limiting possible Iraqi paramilitary force options.[36] This planning optimisation and limited wargaming approach contributed to the US Military's

> … *institutional bias in favor of Phase III [Invasion], its distaste for stability and support operations, and its expectations based on successful operations in Afghanistan [at the time that] led its leaders to focus on the maneuver operations that would depose the Iraq regime and to give little consideration to the aftermath.*

> … *The plans largely discounted Saddam Hussein's extensive paramilitary apparatus, tribal patronage system, and intra-Iraqi dynamics, all of which would play crucial roles in the ensuing instability and insurgency.*[37]

Pure Optimisation—A Belief in Clear and Unambiguous Problems

In both interwar Japanese and pre-Iraq War United States wargaming, there appears to be a belief that the problems these militaries faced were clear and unambiguous.[38] The decision to limit wargames to specific plans or enemy actions, and failure to account for alternative approaches, suggests these two militaries never tested their perception of the world. Nor does it seem that these militaries allowed alternative viewpoints and experiences, such as in the US State Department wargame, to change commanders' perspectives. Finally, both the Japanese and pre-Iraq War US militaries' approaches imply a focus on enhancing a single solution to all problems. This single solution seems to be applied to all levels of war. Overall, both cases appear to represent functionalist and structured thinking, with limited consideration of context or application of adaptive frameworks. Such thinking led both forces to use wargaming purely to optimise set plans. Given the outcomes of the Second World War and the Iraq War, this may not have been an appropriate approach to developing military thinking about war and warfare. Fortunately this is not the only way to use wargaming. The United States military's use of wargaming in the interwar period helped them adapt thinking. The approach also developed a learning-to-learn culture among military officers.

Unrestricted Wargaming—Testing Context through Early Red Teaming

As already alluded to, the interwar period saw many nations embrace wargaming to test new equipment and ideas and broaden the tactical thinking of military officers.[39] Such efforts led to the successful early-war German mechanised force, which

> … was one of the most impressive innovations in military history, [and] … one of the few instances in modern warfare where tactical virtuosity came close to overturning strategic incompetence.[40]

The above suggests wargaming was rarely used above the tactical, or 'battle', level.[41] Britain, France and Germany all practised degrees of unrestricted wargaming during the interwar period.[42] However, these militaries primarily focused on tactical learning. In fact the German military was specifically directed not to undertake strategic-level wargames by Hitler himself.[43] The reasons for using wargaming only at the tactical level are many. A major factor may have been the ongoing military culture of tactical study at the expense of wider war considerations. Caffrey and Murray separately conclude that the limited use of unrestricted wargaming in these three militaries did not necessarily improve officer thinking prior to war, or adaptation within war.[44] This may imply that any conclusions drawn from the analysis of unrestricted wargaming would only be relevant to the tactical level of war. Fortunately, during the interwar period one nation continued to employ unrestricted wargaming at all levels of war: the United States.[45] The lessons drawn from the US use of expansive unrestricted wargaming may provide additional insights not seen in the French, British or German contexts.

The US Navy and Marine Corps might have suffered from a tactical focus similar to that seen in the British, French, and German militaries. However, US wargames had to include the Washington Treaty's basing constraints.[46] It is the Washington Treaty and its effect on interwar United States and Japanese strategic thought that makes the US use of wargaming relevant to contemporary militaries.

Great Power Tensions—The Interwar Period and Central Pacific Problems

The Central Pacific Campaign and its pre-war lead-up provide some elements analogous to contemporary (2020) Pacific region great power contestation.[47] The Washington Treaty (signed in 1922) placed limits on United States naval forces and military basing rights during the 1920s and 1930s. This treaty reduced the number and size of battleships the United Kingdom, Japan and the United States could build and maintain. Furthermore, it limited the United States from building or enhancing strategic military bases, including larger ports, in key Pacific locations such as the Philippines. Although the treaty created naval parity between the United States and United Kingdom, it also generated a significant dilemma in the Pacific: strategic distance. The United States found itself in a situation where it would have to project power over 5,000 miles to support its national interests across the Pacific. Such projection could be denied by Japanese naval strength.[48] In effect, distance and the growing power of the Japanese Imperial Navy created a form of modern-day 'anti-access effect', forcing US adaptation. Such pre-war limitations have parallels with the modern context of China's rising power and possible anti-access/area-denial capabilities.[49] US interwar adaptations in thinking, military culture and operational approaches are relevant to contemporary growing tensions between the United States, China, and the middle powers throughout the Indo-Pacific.[50] Many of these adaptations were realised in pre-Second World War education and training, with wargaming being a contributing factor.

The Washington Treaty created a range of limitations on United States power projection. Nimitz, while a student at the Naval War College, explained that the

> … operations imposed [in a future Pacific war] on Blue [United States] will require the Blue Fleet to advance westward with an enormous train, in order to be able to seize and establish bases on route. The possession by Orange [Japan] of numerous bases in the western Pacific will give her fleet a maximum of mobility while the lack of such bases imposes on Blue the necessity of refuelling at sea en route or of seizing a base from Orange for this purpose, in order to maintain a limited degree of mobility.[51]

> *Suddenly, military officers could no longer assume 'the American fleet would dash across the Pacific, fight and win a big, climactic battle near Japan'.[52] The issue of logistics confirmed the importance of forward bases. This, in turn, focused officers' minds on three problems: seizing land for bases (predominantly on islands); establishing these bases quickly and effectively; and the national economic lead times necessary to project, sustain, and reinforce such logistical capabilities.[53]*

Officers developed a keen appreciation of how economic, logistic and strategic concerns create time delays that directly affect the sequencing of battles, forces and resources.[54] This complex strategic context was only half the problem. Officers still had to win once the 'Orange Team' was brought to battle. However, little was known of Japanese military capabilities, making it challenging to develop a winning plan that would guide doctrine.[55] The solution was to teach officers adaptation.

Developing Thinking—Learning to Learn through Wargames

Both John Lillard's and Caffrey's separate research outlines how students of the naval and marine war colleges would ask graduates for tips, tricks and ideas on how to do well in wargames. Invariably students would receive conflicting feedback and information. Graduates' advice from one year was often contradictory to the advice provided by another year's graduates. The reason for these discrepancies was that 'the faculty was giving the Japanese different strengths and weaknesses in each wargame'.[56] Constantly changing Japanese capabilities within the wargames produced two key outcomes. It overcame the lack of information concerning the Japanese and, more importantly, forced students to learn how to discover an opponent's capabilities and adapt to them, as Caffrey explains:

> *Unable to simply learn Japanese strengths and weakness before the game, they [the students] had to play in such a way that they could learn them through experience before any decisive game engagements took place. Once they felt they had learned what those strengths and weaknesses were, they would develop a [plan.] … In other words, they were 'learning how to learn.'[57]*

Such wargames tested students' understanding of logistics and sustainment, battle sequencing, time, and the tactics of fleet action.[58] Confusion, friction and chance were simulated through dice and random event cards, thereby adding additional complexity. In the strategic and operational wargames, such events included changing the geopolitical situation, strategic guidance and economic potential, forcing students to adjust their concepts.[59] It is true that such games never fully represented the actual Japanese strategy, tactics or capabilities employed during the Second World War. Yet the changing context of each game instilled in military officers a strong belief in testing context before developing battle plans.[60] It also made students understand that they could never 'know everything', thereby teaching them the importance of establishing confidence in what they knew and what they had to assume.[61] In essence, military officers had to learn how to adapt their principles and rules of warfare to changing situations and contexts. Officers who failed to appreciate this received poor marks and possible career repercussions.[62] Overall:

> [t]he games were not innovations in themselves. Instead, they were a common playing field, a shared experience, a flexible constant, and a proving ground. The games were transformative because the staff and faculty who administered them recognized their educational role and remained adaptable to changing conditions.[63]

Through this approach, wargaming strengthened the descriptive and explanatory power of military experience and theory, and helped students develop a shared understanding.[64] Live wargames, known as fleet problems, further reinforced this shared world view.[65] Overall, the US use of wargaming helped broaden the minds of US military officers, develop their capacity to test context and adjust to it, and inculcate in them the need to balance the principles and rules of warfare with changing context and thinking concerning war.

These outcomes developed the potential of US military officers. The approach helped military officers develop thinking dispositions that enabled them to accept alternative views and develop plans based on these views. In other words, unrestricted wargaming contributed to the development of thinking behaviours similar to a pluralist habit of mind.

Wargaming Shapes War Thinking—Building Pluralist Habits of Mind

The approach of the US Navy and Marine Corps during the interwar period provides a lesson on how to use unrestricted wargaming to develop pluralist habits of mind in military officers. Such a habit of mind accepts that there is a spectrum of world views and alternative approaches. Successful forms of such thinking consider and actively use differing views and paradigms to help learn about a situation, understand context, and frame and solve problems. In the interwar period, wargaming helped generate new thinking and world views in the US officer corps. Such thinking integrated changing situations, contexts, subjective viewpoints, and the science of warfare. In other words, the unrestricted wargaming of the interwar period attempted to develop a military officer's capacity to 'learn how to learn'. Such traits replicate many of the behaviours of successful pluralist habits of mind. The contrast in how wargaming was employed before the Central Pacific Campaign and before the Iraq War is insightful.

Before the Second World War, United States wargaming included significant free play between both sides. Here, wargaming's primary role was to be 'a common playing field, a shared experience, a flexible constant' that provided an educational outcome.[66] Such wargaming forced students to confront assumptions, ground their theory in practice, and cement their understanding through immersive experiences.[67] Furthermore, the competitive and public nature of the wargames (and wider fleet problems) caused many to learn from their mistakes in a similar fashion to real experiences.[68] This style of wargaming develops the potential of individuals and ideas and, as in the case of the pre-war United States, helps foster a learning-to-learn culture.[69] The approach also enabled the United States to explore a range of concepts and innovate their thinking and military culture. Murray, while considering Nimitz's view that the events of the Central Pacific Campaign were not a surprise due to unrestricted wargaming, concludes:[70]

> In the largest sense, Nimitz was right: the navy did foresee virtually every aspect of the Pacific War[.] … But that war followed a pattern as if the ironic gods of history had taken the kaleidoscope of pre-war thinking, planning, concept development, and innovation, given the whole a huge shaking, and then allowed the pieces to play out over the … conflict in a fashion quite different from what the leaders and planning staffs of the pre-war navy had expected.[71]

Even with the surprises of war, the US military was able to test world views and assumptions and adapt thinking and planning. This indicates that unrestricted wargaming contributed to the development of a learning-to-learn pluralist habit of mind. This development is in contrast to the optimisation approach favoured in the lead-up to the Iraq War.[72]

The optimisation focus of Imperial Japan and the pre-Iraq War US appears grounded in the thinking of the plan and the decision-makers. Given the outcomes of the Iraq War, this article submits that such wargames, though useful in discrete situations, do not support a learning-to-learn culture. Nor do such wargames appear to create the immersive environment required to develop effective pluralist habits of mind willing to accept alternative views. Instead, the approach appears to reinforce a singular view that is reliant on set assumptions, rules and predictive theory. The emphasis on the set assumptions and theory seems to reinforce in military officers a world view that discounts changing context. Given that the Australian Army (the Army) rarely uses wargaming outside of the planning construct, the Army may fall into the same thinking seen in Imperial Japan or the pre-Iraq War US military. To break this possible cycle of insular thinking, the Army may wish to incorporate unrestricted wargaming into the current officer training continuum.

Increasing Army's Habits of Mind—Wargaming in Today's Training

There is a view that habits of mind are best formed early in a person's career and life.[73] This view suggests that if the Army wishes to use unrestricted wargaming to enhance pluralist habits of mind, the Army must use it early in a military career. For the officer corps, this early period of development would equate to initial officer training and various subaltern (lieutenant and captain) courses. Three specific courses could be targeted: the final class of officer ab initio training, the Combat Officers Advance Course (COAC) and the All-Corps Majors Course (ACMC).

Regular Army officer ab initio training occurs at Duntroon and consists of three classes. Each class has an average of two field exercise periods of approximately two weeks each. Although there are exceptions, Duntroon (as a training institution) often recognises before the final two-week field exercise of the final class (First-Class) which trainee officers (staff cadets)

are unlikely to graduate. Given this, rather than undertaking another field exercise, this two-week time frame may be better employed as a wargaming period. Leveraging the lessons of the interwar period, these wargames should be similar to *kriegsspiel*. They may even use a home-grown version known as *Up the Guts!*[74], developed by an Army senior non-commissioned officer. Instructors could act as game masters, changing the rules to create tactical dilemmas and confusion. This article argues that each wargame should be a person-to-person competition over a tabletop. This forces players to see each other directly. Such an approach makes the wargame more personal and therefore more likely to be an immersive environment, which helps adjust thinking. Furthermore, face-to-face wargaming creates a psychological dimension, as players may use their mannerisms to bluff their opponent.[75] This introduction to wargaming supports its use in later training courses.

Both COAC and ACMC are possible candidates for wargaming. COAC trains mid-range combat arms captains in combat team, battlegroup and brigade tactics. On COAC a form of wargame, known as a 'post-H-hour decision-making exercise', is run. These computer-based simulation games are restricted to specific enemy courses of action and the student's previously developed plan. Such wargames focus on testing students' command, control and decision-making skills. Exercises like this are important and scaffold students into the three- to four-week final module of planning and decision-making simulation games. Nevertheless, as a restricted wargame, these decision-making exercises may not develop a learning-to-learn pluralist habit of mind. Instead of undertaking small-scale decision-making exercises, unrestrictive wargames may be a better medium of generating pluralist habits of mind in mid-ranking combat arms captains. Such wargames can build tactical confidence. They may also provide a form of 'lived experience' outside of live exercises and direct combat operations. These habits of mind may then be leveraged to broaden an officer's thinking at ACMC.

Senior captains undertake ACMC prior to promotion to major. These officers are likely, upon promotion, to undertake a range of crucial command, planning and staff leadership postings within Army. The capacity to test mental models and assumptions becomes critical in these roles. So is the skill of balancing and moulding alternative viewpoints. The current ACMC focuses on the planning process. This focus is critical to develop a common lexicon and planning approach among all field-rank officers. However, the methods of training on ACMC may not help students learn how to best adapt these planning methodologies in different situations, or how to use them outside of operational scenarios. Nor does the course necessarily provide the same 'common playing field, a shared experience, a flexible constant' that interwar US military unrestricted wargaming helped generate to develop alternative thinking dispositions in the officer corps.[76] Introducing unrestricted wargaming into the early stages of Army's officer training may help officers develop a pluralist habit of mind that supports their learn-to-learn ability. Such a habit helps military personnel consider alternative viewpoints, test planning and mental assumptions, and develop mental experiences outside operational tours.

Conclusion

In conclusion, this article argues that unrestricted wargaming can provide a useful way for practitioners to test their assumptions and mental models. This testing can lead practitioners to accept and integrate alternative views into plans and thinking. Such alternative views help practitioners develop a learning-to-learn culture. This article calls such an approach a pluralist habit of mind, which could be enhanced through wargaming. The article clarifies that wargames are not simulations. Simulations do not replicate real-time live competition. In contrast, a wargame requires real-time competition between live players. The article highlights that this real-time live competition could provide two outcomes: the development of individuals and ideas, and the optimisation of military plans. Both forms of wargaming are explored through a series of illustrative case studies.

The article contrasts how wargaming was employed before the Central Pacific Campaign and the Iraq War. In the former case, US military wargaming included significant free play between both sides. Here, wargaming provided a common and shared experience. These wargames forced students to confront assumptions, ground their theory in practice, and cement their understanding through immersive experiences similar to real-world exercises. This style of wargaming helped develop the potential of pre-war US military officers and fostered a learning-to-learn culture. Meanwhile, wargaming was used primarily to optimise plans by the Imperial Japanese military and by the US military before the Iraq War. Such optimisation restricted player options and wargame rules. The article discusses how these restrictions may have contributed to the strategic problems of Imperial Japan during the Second World War, and the United States during the Iraq War. These restricted wargames, though useful in discrete situations, did not seem to support a learning-to-learn culture. Instead, the case studies suggest that these wargames reinforced existing world views that discounted changing context. The article notes that this is a risk for the Australian Army.

The Australian Army currently uses wargaming primarily to optimise plans. The article suggests that the Army introduce unrestricted wargaming into three courses: ab initio officer training, the Combat Officer Advance Course (COAC) and the All-Corps Major Course (ACMC). The article advocates that the final field exercise period of ab initio training and the existing post-

H-Hour decision-making exercises of COAC should be replaced with unrestricted tabletop wargaming. Because the students on ACMC are likely to be promoted into key command, planning or staff leadership roles, the article encourages Army to investigate the use of wargaming within ACMC. Using unrestricted wargaming may help military officers to consider alternative viewpoints, test planning and mental assumptions, and develop new mental models. During today's rising strategic tensions and great power contestation, increasing military professionals' learning-to-learn pluralist habits of mind may be the intellectual edge needed to ensure strategic competition does not become war.

Endnotes

1   Reportedly stated in a private letter to the President of the Naval War College after the Second World War. Cited by the Secretary of Navy, Donald Winter. See Donald C Winter, 2006, 'Remarks by Secretary of Navy', news release, at: https://www.navy.mil/navydata/people/secnav/winter/SECNAV_Remarks_NWC_Current_Strategy_Forum.pdf (this link is no longer accessible)

2   The literature on this is broad. The following provides a summary: Craig Felker, 2006, *Testing American Sea Power: U.S. Navy Strategic Exercises, 1923–1940*, Texas A&M University Military History Series, (College Station, Texas: Texas A&M University Press); Williamson Murray, 'US Naval Strategy and Japan', in Williamson Murray and Richard Hart Sinnreich (eds), 2014, *Successful Strategies: Triumphing in War and Peace from Antiquity to the Present* (Cambridge, UK: Cambridge University Press); Peter R Mansoor, 'US Grand Strategy in the Second World War', in Murray and Sinnreich (eds), 2014; John Lillard, 2016, *Playing War: Wargaming and U.S. Navy Preparations for World War II* (Lincoln, Nebraska: Potomac Books); Matthew B Caffrey Jr, 2019, *On Wargaming: How Wargames Have Shaped History and How They May Shape the Future*, Newport Papers No. 43 (Newport, Rhode Island: United States Naval War College).

3   Both Gole and Mansoor consider the US Army War College as a central theme of their works. See Henry G Gole, 2003, *The Road to Rainbow: Army Planning for Global War, 1934–1940* (Annapolis, Maryland: Naval Institute Press); Mansoor, 'US Grand Strategy in the Second World War'.

4   Caffrey discusses the two broad styles in greater detail. See Caffrey, *On Wargaming*, 282–283.

5   For a brief definition of war as an art of science, see Nicholas J Bosio, 2019, 'Principally Right: Addressing the Challenge of Thinking', Land Power Forum (Australian Army Research Centre), 28 October 2019, at: https://researchcentre.army.gov.au/library/land-power-forum/principally-right-addressing-challenge-thinking. Also see Michael Howard, 'Jomini and the Classical Tradition in Military Thought', in Michael Howard (ed.), 1965, *The Theory and Practice of War: Essays Presented to Captain B.H. Liddell Hart* (London: The Camelot Press), 8; Azar Gat, 2001, *A History of Military Thought: From the Enlightenment to the Cold War* (Oxford: Oxford University Press), 255–256; Antoine Bousquet, 2009, *The Scientific Way of Warfare: Order and Chaos on the Battlefield of Modernity*, Critical War Studies (London: Hurst & Company), 240–243.

6   Although it was Costa and Kallick who brought the term 'habits of mind' into wider use, the phrase was a part of philosophical discussion and leadership theory prior to its wider use. For discussion in education, philosophy, leadership theory and war studies, see Barbara Mackoff and Gary Alan Wenet, 2000, *Inner Work of Leaders: Leadership As a Habit of Mind* (New York: Amacom) (leadership theory); Gole, *The Road to Rainbow*, 158 (war studies); Arthur L Costa, 'Describing the Habits of Mind', in Arthur L Costa and Bena Kallick (eds), 2008, *Learning and Leading with Habits of Mind: 16 Essential Characteristics for Success* (Alexandria, Virginia: Association for Supervision and Curriculum Development) (education theory); Angelo Bottone, 2009, *Philosophical Habit of Mind: Rhetoric and Person in John Henry Newman's Dublin Writings*, Zeta Series in Christian Theology (Bucharest: Zeta Books), 144–151 (philosophy); Williamson Murray, 2011, *Military Adaptation in War: With Fear of Change* (New York: Cambridge University Press), 2.7–2.9, 4.29–4.30 (war studies); Williamson Murray, 2011, *War, Strategy, and Military Effectiveness* (New York: Cambridge University Press), 7.15 (war studies); Frederick D Aquino, 2012, *An Integrative Habit of the Mind: John Henry Newman on the Path to Wisdom* (DeKalb, Illinois: Northern Illinois University Press), 3 (philosophy); Patrick Sullivan, 2014, *A New Writing Classroom: Listening, Motivation, and Habits of Mind* (Logan, Utah: Utah State University Press), 151–153 (general use and education Theory).

7   This definition leverages the definition of Costa and Kallick, as well as the traits summarised in Sullivan. See Sullivan, *A New Writing Classroom*, 152–153; Arthur L Costa and Bena Kallick, 'Habits of Mind: Strategies for Disciplined Choice Making', *Systems Thinker*, 2018, at: https://thesystemsthinker.com/habits-of-mind-strategies-for-disciplined-choice-making/

8   Nineteenth century military research discusses this. Caffrey, McGrady and Fielder summarise the modern research in this area. See Anon., 'Foreign War Games', in United States Adjutant-General's Office, 1898, *Selected Professional Papers Translated from European Military Publications* (Washington: U.S. Government Printing Office), 261–265; Caffrey, *On Wargaming*, 11–17; Ed McGrady, 'Getting the Story Right about Wargaming', *War on the Rocks*, 8 November 2019, at: https://warontherocks.com/2019/11/getting-the-story-right-about-wargaming/; James Fielder, 'Reflections on Teaching Wargame Design', *War on the Rocks*, 1 January 2020, at: https://warontherocks.com/2020/01/reflections-on-teaching-wargame-design/

9   Caffrey's work provides a summary of this history and the key references. See Caffrey, *On Wargaming*, 11–23.

10 The broad outline of how *kriegsspiel* was developed and implemented is outlined in Anon., 'Foreign War Games', 72–73, 244–258.

11 Anon., 'Foreign War Games', 249.

12 Peter B Checkland and Jim Scholes, 1990, *Soft Systems Methodology in Action: A 30-Year Retrospective* (Chichester: John Wiley and Sons), 6; John D Sterman, 2000, *Business Dynamics: Systems Thinking and Modeling for a Complex World* (Boston: McGraw-Hill Higher Education), 846–50; Lars Skyttner, 2001, *General Systems Theory: Ideas and Applications* (London: World Scientific Publishing), 90–91; Caffrey, *On Wargaming*, 262.

13 This is attributed to George E Box, a world-renowned statistician of the 20th century. Sterman makes the same point. See Sterman, *Business Dynamics*, 846.

14 Checkland and Scholes, *Soft Systems Methodology in Action*, 36–44; Sterman, *Business Dynamics*, 36–37, 845–846; Skyttner, *General Systems Theory*, 90; Alan C McLucas, 2003, *Decision Making: Risk Management, Systems Thinking and Situation Awareness* (Canberra: Argos Press), 132–142.

15 Caffrey, *On Wargaming*, 262.

16 Sterman, *Business Dynamics*, 37–38; Skyttner, *General Systems Theory*, 39, 91; Caffrey, *On Wargaming*, 262.

17 Skyttner, *General Systems Theory*, 91; Caffrey, *On Wargaming*, 262.

18 Ibid.

19 Cooperative board games are an exception here, as the decisions made by the cooperative players create a dynamic situation similar to that seen in competitive games.

20 Caffrey, *On Wargaming*, 262–263.

21 Caffrey, *On Wargaming*, xxvii.

22 For summaries see McGrady, 'Getting the Story Right'; Fielder, 'Reflections on Wargaming'.

23 Caffrey, *On Wargaming*, 282–283.

24 Anon., 'Foreign War Games', 249; Caffrey, *On Wargaming*, 282–283; McGrady, 'Getting the Story Right'.

25 This is covered in 19th century analysis of wargaming, Murray's analysis of military effectiveness, and Caffrey's overview of wargaming use. See Anon., 'Foreign War Games', 60–66, 249; Murray, *War, Strategy, and Military Effectiveness*, 7.14–7.16; Caffrey, *On Wargaming* 46.

26 Gat, Heuser and Nolan summarise this research and detail the links between Japanese interest in Mahan and Japan's war preparations and thinking. See Gat, *A History of Military Thought*, 455–456; Beatrice Heuser, 2010, *The Evolution of Strategy: Thinking War from Antiquity to the Present* (Cambridge, UK: Cambridge University Press), 265–266; Cathal J Nolan, 2017, *The Allure of Battle: A History of How Wars Have Been Won and Lost* (Oxford: Oxford University Press), 14–17, 511–512.

27 Nicholas J Bosio, 2018, *Understanding War's Theory: What Military Theory Is, Where It Fits, and Who Influences It*, Australian Army Occasional Paper, April 2018 (Canberra: Australian Army Research Centre), 37–38, 41.

28 Till provides an overview of the key Mahanian concepts and their influence on naval and maritime thinking. This is known as the 'blue water tendency'. See Geoffrey Till, 2009, *Seapower: A Guide for the Twenty-First Century*, 2nd Edition (London: Frank Cass Publishers), 51–56. Also see Gat, *A History of Military Thought*, 67, 458; Jan Angstrom and JJ Widen, 2015, *Contemporary Military Theory: The Dynamics of War* (New York: Routledge), 76–77, 130–131, 35–36.

29 Gat, *A History of Military Thought*, 455–456; Heuser, *The Evolution of Strategy*, 265–266; Nolan, *The Allure of Battle*, 14–17, 511–512.

30 Vego provides a short description of this. Caffrey provides more detail, explaining how Japanese wargaming lacked political or strategic consideration and was used predominately for tactical plan analysis, not the development of flexible tactical thinking. See Milan N Vego, 2008, *Operational Warfare at Sea: Theory and Practice* (Abingdon: Routledge), 211–12; Caffrey, *On Wargaming*, 56–57.

31 Christon I Archer, John R Ferris, Holger H Herwig and Timothy HE Travers, 2002, *World History of Warfare* (Lincoln, Nebraska: University of Nebraska Press), 521.

32 This is explained by Vego and Nolan with respect to submarine and aircraft usage. It also occurred during logistical wargames to determine force viability. See Vego, *Operational Warfare at Sea*, 211–12; Nolan, *The Allure of Battle*, 518.

33 Discussion of this is provided by Davidson and the official war history. See Janine Davidson, 2010, *Lifting the Fog of Peace: How Americans Learned to Fight Modern War* (Ann Arbor, Michigan: University of Michigan Press), 195–202; Joel D Rayburn and Frank K Sobchak (eds), 2019, *The U.S. Army in the Iraq War: Invasion, Insurgency, Civil War*, Vol. 1 (Carlisle Barracks, Pennsylvania: US Army War College Press), 247–250. Also see William Terdoslavich, 'From Shock and Awe to Aw Shucks', in Eric Haney and Brian M Thomsen (eds), 2006, *Beyond Shock and Awe: Warfare in the 21st Century* (New York: Berkley Caliber), 17–22; Murray, *Military Adaptation in War*, 2.37.

34 Caffrey describes the boom in wargaming within the United States and around the world during the 1990s. His work demonstrates the focus on conventional warfare and the modelling of tactical capabilities. See Caffrey, *On Wargaming*, 71–117.

35 James Fallows, 2006, *Blind Into Baghdad: America's War in Iraq* (New York: Vintage Books), 51–60 (Future of Iraq Project), 60–63 (wargames); Terdoslavich, 'From Shock and Awe to Aw Shucks', 33–35.

36 Although he lauds the pre-Iraq War wargames, his description of how 'red' played paramilitary forces shows either that the wargames were restricted or that the 'red' players chose not to freely use these assets. See Caffrey, *On Wargaming*, 179–180.

37 Rayburn and Sobchak, *US Army Iraq War - Vol 1*, 247.

38 Hopkins outlines how, in September 1941, Japan's top naval officers believed that 'the Pacific War could be decided by a single great naval battle'. Nolan's and Vego's work confirms this view and how it persisted throughout the war. This view for pre-Iraq War military thinking is explained in the official history by Rayburn and Sobchak. See William B Hopkins, 2008, *The Pacific War: The Strategy, Politics, and Players that Won the War* (Minneapolis, Minnesota: Zenith Press), 35; Nolan, *The Allure of Battle*, 519–523; Vego, *Operational Warfare at Sea*, 217; Terdoslavich, 'From Shock and Awe to Aw Shucks', 11–12 (quotation), 21–22 (shock and awe in Iraq); Rayburn and Sobchak, *The U.S. Army in the Iraq War*, 247.

39 Murray, *War, Strategy, and Military Effectiveness*, 7.15–7.19; Caffrey, *On Wargaming*, 43.

40 Murray, *War, Strategy, and Military Effectiveness*, 7.15 (quotation).

41 Lillard outlines how the US Naval War College would, every year, re-enact the Battle of Jutland specifically to teach students how to wargame, unlike the UK Naval College, which sought to create a better outcome. Caffrey's detailed research into wargaming across history, with particular focus on late 19th and 20th century wargaming, describes the use of wargaming by major powers during the interwar period. He notes the tactical and domain specific focus of Germany, the United Kingdom, France, the US Army Staff College, and Japan. The only exception in this list is the very select US Army War College, which undertook strategic wargames (though fewer operational games). See Lillard, *Playing War*, 46–47; Caffrey, *On Wargaming*, 43–52, 56–57; Gole, *The Road to Rainbow*, 29–33.

42 Caffrey, *On Wargaming*, 43–47.

43 Ibid., 46.

44 Murray provides extensive analysis through his discussion on red teaming within the different powers of the interwar period. Caffrey reinforces these findings with his summary research. See Murray, *War, Strategy, and Military Effectiveness*, 7.4 (French thinking), 7.7–7.12 (German thinking), 7.19 (British thinking); Caffrey, *On Wargaming*, 46–47.

45   The author acknowledges the limitation of considering only one successful case study. The
      case study meets the requirements of an illustrative case study as it demonstrates '… the
      empirical relevance of a theoretical proposition by identifying at least one relevant case'.
      See Jack S Levy, 'Case Studies: Types, Designs, and Logics of Inference', 2008, *Conflict
      Management and Peace Science* 25, no. 1: 6–7. Further analysis of other successful cases,
      and the lessons drawn from unsuccessful use of unrestricted wargaming, can be inferred
      from Caffrey's and Murray's works. This may be a future area of research.

46   Murray, 'US Naval Strategy and Japan', 10.9–10.10; Caffrey, *On Wargaming*, 52.

47   The Central Pacific also relates to Australia's national interests (along with the South-West
      Pacific Campaign). This is identified in a series of Australian Government white papers. See
      Department of Defence, 2013, *Defence White Paper 2013*, ed. Commonwealth of Australia,
      Defence White Paper, (Canberra, ACT, Australia: Australian Government Publishing Service,
      2013), 7–16, 25, 31; Department of Defence, *Defence White Paper 2016* (Canberra:
      Commonwealth of Australia), 16–18.

48   Murray, 'US Naval Strategy and Japan', 10.7–10.10.

49   The modern concern with anti-access/area-denial (A2/AD) is covered in a range of opinion
      pieces, analysis, and military future concepts. The concept of A2/AD is summarised as
      capabilities that 'are designed either to prevent an adversary's access to a particular region
      (anti-access) or to contest its freedom of movement within that theatre (area denial)'. See
      Henry J Hendrix, 2013, *At What Cost a Carrier?*, Disruptive Defense Papers, March 2013
      (Washington, DC: Center for a New American Security); Malcolm Davis, 'Towards China's
      A2AD 2.0', *The Strategist* (Australian Strategic Policy Institute), 24 November 2017,
      at: https://www.aspistrategist.org.au/towards-chinas-a2ad-2-0/; Anon., 'Using Clever
      Technology to Keep Enemies at Bay', *The Economist*, 25 January 2018, at: https://www.
      economist.com/special-report/2018/01/25/using-clever-technology-to-keep-enemies-at-
      bay; Ben Ho Wan Beng, 'Are Aircraft Carriers Still Relevant? Another Take on the A2/AD vs.
      Carrier Debate', *The Diplomat*, 15 November 2018, at: https://thediplomat.com/2018/11/
      are-aircraft-carriers-still-relevant/

50   Eliot A Cohen, 'The Strategy of Innocence? The United States, 1920–1945', in Williamson
      Murray, MacGregor Knox and Alvin Bernstein (eds), 1994, *The Making of Strategy: Rulers,
      States, and War* (Cambridge, UK: Cambridge University Press), 461–464; Murray, *War,
      Strategy, and Military Effectiveness*, 7.13–7.15; Murray, 'US Naval Strategy and Japan',
      10.2–10.3, 10.12–10.13.

51   Murray outlines that Nimitz presented this in one of his two war college thesis documents.
      Cited in Murray, *War, Strategy, and Military Effectiveness*, 7.15.

52   Caffrey, *On Wargaming*, 52.

53   Edward S Miller, 2007 (1991), *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897–
      1945*, (Annapolis, Maryland: Naval Institute Press, 1991), 168–169; Hopkins, *The Pacific
      War*, 10–11, 19; Murray, *Military Adaptation in War*, 2.31–2.32; Murray, *War, Strategy, and
      Military Effectiveness*, 7.15; Caffrey, *On Wargaming*, 52.

54   Cohen, 'The Strategy of Innocence?', 442; Hopkins, *The Pacific War*, 10, 22; Caffrey, *On
      Wargaming*, 52.

55   Peter P Perla, 'Operations Research, Systems Analysis, and Wargaming: Riding the Cycle
      of Research', in Pat Harrigan and Matthew G Kirschenbaum (eds), 2016, *Zones of Control:
      Perspectives on Wargaming* (Cambridge, Massachusetts: MIT Press), 179; Caffrey, *On
      Wargaming*, 52–53.

56   Lillard, *Playing War*, 49–53; Caffrey, *On Wargaming*, 52–53 (quotation on page 53).

57 Caffrey, *On Wargaming*, 53.

58 MacGregor Knox and Williamson Murray (eds), 2001, *The Dynamics of Military Revolution 1300–2050* (New York: Cambridge University Press), 10.8; Murray, 'US Naval Strategy and Japan', 10.21; Lillard, *Playing War*, 46–47, 129–131.

59 Lillard provides a detailed description of the gaming system, including team roles, weather, intelligence development, and adjudication. Caffrey and Perla provide a summary of key elements used for friction and changing contexts. Cohen notes how geopolitical factors were included and changed in wargames. See Caffrey, *On Wargaming*, 52; Perla, 'Operations Research, Systems Analysis, and Wargaming', 178–79; Cohen, 'The Strategy of Innocence?', 441; Lillard, *Playing War*, 58–64, 66–67.

60 Murray, 'US Naval Strategy and Japan', 10.22–10.23; Lillard, *Playing War*, 129–131; Perla, 'Operations Research, Systems Analysis, and Wargaming', 179.

61 Murray, *War, Strategy, and Military Effectiveness*, 1.13; Murray, 'US Naval Strategy and Japan', 10.22–10.23; Lillard, *Playing War*, 64–65; Perla, 'Operations Research, Systems Analysis, and Wargaming', 179.

62 Murray, 'US Naval Strategy and Japan', 10.22; Caffrey, *On Wargaming*, 52.

63 Lillard, *Playing War*, 137.

64 This is a similar outcome to that advocated by other multi-discipline theorists concerning the use of systems thinking approaches to generate a common language and understanding, thereby synthesising subjective and interpretive world views. See Barry Newell and Katrina Proust, 2009, *I See How You Think: Using Influence Diagrams to Support Dialogue*, Working Paper (Canberra: Australian Centre for Dialogue), 2–4; Barry Newell, 2012, 'Simple Models, Powerful Ideas: Towards Effective Integrative Practice', *Global Environmental Change*, no. 22: 779–782.

65 For full research and analysis, see Felker, *Testing American Sea Power*, 107; Lillard, *Playing War*; Caffrey, *On Wargaming*, 54.

66 Lillard, *Playing War*, 137.

67 The use of immersive experiences here relates to the definition of a 'game' within wider literature: '… a voluntary activity, separate from the real life, creating an imaginary or immersive world'. See Sara I de Freitas, 2006, 'Using Games and Simulations for Supporting Learning', *Learning, Media and Technology* 31, no. 4: 344 (definition of game); Lillard, *Playing War*, 137.

68 This relates to early 19th century research and Felker's conclusion. Caffrey explains the utility of wargaming in a military context. This is similar to research that indicates how human interaction in games can modify mental models through exploratory learning, or 'a mode of learning whereby learning takes place through exploring environments, lived and real experiences, with tutorial or peer support' (de Freitas, 'Using Games and Simulations for Supporting Learning', 344). For a summary of current analysis of analogue and digital games for learning development, see Katie Salen (ed.), 2008, *The Ecology of Games: Connecting Youth, Games, and Learning* (Cambridge, Massachusetts: MIT Press). Also see Anon., 'Foreign War Games', 60–66, 249; Felker, *Testing American Sea Power*, 107, 137; Vicki Phillips and Zoran Popović, 2012, 'More than Child's Play: Games Have Potential Learning and Assessment Tools', *Phi Delta Kappan* 94, no. 2: 27–30; Caffrey, *On Wargaming*, 277–289.

69 Caffrey, *On Wargaming*, 282–283.

70 See the epigraph of this article.

71 Murray, 'US Naval Strategy and Japan', 10.39.

72 Caffrey's opening discussion on General Wallace is a good example of this category in action. See Caffrey, *On Wargaming*, 1–3.

73 A summary of this is in Nicholas J Bosio, 'Want the Edge? More "ME" in "PME"', Land Power Forum (Australian Army Research Centre), 27 February 2015.

74 This system was developed in collaboration with several members of the ADF Wargaming Association. It uses 6 mm scale miniatures of ADF and doctrinal enemy capabilities and is focused at platoon and combat team level—known as 'squad-based' within the wargaming community.

75 Surprisingly, this was a key point made in 19th century research into wargaming summarised in Anon., 'Foreign War Games', 265–266. Also see Salen, *The Ecology of Games*; Phillips and Popović, 'More than Child's Play', 27–30; McGrady, 'Getting the Story Right'.

76 Lillard, *Playing War*, 137.

The Weight of the Australian Army's Cyber Body Armour

Major Jack Cross

Abstract

The Australian Army is facing a shifting operational landscape, where nation state actors are pushing boundaries in cyberspace. Largely the approach by the Australian Army to protect its networks within cyberspace has followed the broader Australian community and government by prioritising information assurance and reacting with defensive actions. This article contends that this approach is not suitable in modern warfare as it essentially cedes the initiative to the enemy and may be missing the actual intent of the enemy in the first place. In the future it may be impossible for any entity to fully protect their networks from attack, and options to manoeuvre more freely in cyberspace should be explored to decrease risk in a more proactive and aggressive way.

Introduction

In 2011 the Australian Army learnt a lesson. After years of operating in Iraq through largely vehicle-based operations, the in-service body armour (MCBAS) had evolved to maximise survivability of soldiers. When the operating environment changed and Australian soldiers began conducting more dismounted combat operations in Afghanistan, it was quickly discovered that MCBAS was extremely heavy and decreased agility, endurance and the overall capability of the Australian soldier.[1] By treating the risks of the present, the risks of the future had been increased; and today the Australian Army finds itself in a similar predicament in cyberspace. The focus of cybersecurity within the Army is largely centred on industry-based information assurance practices and has led to a penchant for governance, risk and compliance actions to protect sensitive information.[2] This focus, however, has resulted in a number of encumbered communications systems that are beginning to make command and control slower.[3] Like the Army did in 2011, the organisation needs to assess whether this focus on information assurance is appropriate in the future, and whether mobility or lethality in the cyber domain are areas which require further development.

This article will describe the factors that have influenced the development of the Australian Army's cyber security capability and the changes in the contemporary operating environment that are beginning to pose problems for this capability. It will also describe the actions of some major cyber adversaries and question the actual intent of those organisations and the impact that they are having on the Australian Army's ability to command and control. Finally, the article will recommend some alternative approaches to cyber security that are more manoeuvre focused and could be added to the overall security mix as part of a more holistic and risk-managed approach.

The Evolution of Army's Approach to Cybersecurity

There have been two main drivers of the current state of security for the information networks that are utilised within the Australian Army. One has been the traditional approach to communications security (COMSEC), which historically has centred around the use of encryption in radio networks; and the second is a focus on information exchange requirements. The combination of both of these drivers has resulted in the majority of communications networks within the Army being weighed down by multiple layers of cyber body armour, which in turn is having adverse effects on the ability of the Army to manoeuvre in cyberspace.

Encryption has been a part of military communications for thousands of years, starting with simple cyphers employed by the ancient Greeks and evolving to the Advanced Encryption Standard (AES) that protects communications within military communications networks today.[4] In the early 20th century the use of encryption to protect radio transmissions was the main, if not only, COMSEC principle employed within the Australian Army. The other elements of COMSEC, such as terrain shielding and emissions control, were often overlooked or forgotten over time. This trend in the Australian Army was amplified by the actions of the US Army, who over the same period had significantly relaxed their emphasis on passive electronic protection procedures and begun operating with Australian forces more regularly in the Middle East.[5] To a degree this relaxation was effective as the electronic warfare (EW) assets in this environment could only target the radio transmissions that travelled through the air, and if they were unable to break the encryption, then they could not discern the information within. Communication networks have substantially evolved since this time and are now interconnected through a variety of mechanisms—not just through radio transmissions.[6] As such, there are a variety of vectors that can be used by adversaries to target sensitive military information. Modern EW and cyber techniques are more akin to manoeuvre than code breaking, thus requiring more than good armour to combat effectively.

A shift of focus from COMSEC to information security (INFOSEC) can be observed in industry. Modern banks and large companies have realised that even with huge cyber security budgets, it is largely impossible to fully protect their network from attack. They have therefore moved effort away from protecting everything to prioritising the areas of absolute importance

and accepting more risk in areas they can afford.[7] In a resource-constrained environment, with other major capital projects all pushing for their share of the Defence budget, this approach is not only more effective but also more supportable for the organisation in the long term. Additionally, by lowering the security classification of some networks, one also reduces the governance overheads that come with managing those networks.[8] This involves critically analysing the nature of information being shared over the network in question, determining the freedom of action and allowing a commander to accept or transfer risk accordingly.

These steps will assist in shedding the cyber armour that the Army has placed on itself, but a key difference between the military and industry is that the military is able to 'shoot back'—or indeed 'shoot first'—in cyberspace. In this sense the Army has an opportunity to emulate the path that it took to reduce the risk to soldiers in 2011, when it implemented lighter body armour across the organisation and traded protection for lethality. In order for such a change to be effective in a cyber context it is important that planners shift their minds to manoeuvre instead of security.

Key to shifting this way of thinking is understanding the current focus on information exchange, and the adverse effects that this focus is having on the agility of the Army's communications networks. After many years of operational experience in the Middle East, the Army has been shaped towards facilitating office-like information and communications technology. Skype, SharePoint and email were used to increase efficiency and information flow between fixed headquarters in forward operating bases during the counterinsurgency focus of the 2000s.[9] As the Army shifted its focus to more traditional brigade-level manoeuvre operations in subsequent years, the challenge for the communications specialists was how to deliver the same services in a more mobile and agile package. The Battlefield Management System (BMS) was pursued to solve this problem. Instead of requiring strategic, office-based computer networks, a tactical and mobile network was designed to enhance the communications capabilities of the Army at brigade level and below.[10] This network has come with its challenges (some of which could be solved by moving away from Type 1 encryption as explained below); but it demonstrates how the Army understood that being fixed in forward operating bases with large servers and satellite bearers was not going to be an effective way to operate in the modern battle space.

These steps are encouraging, but ultimately are still reactive in nature and, to a degree, permanently surrender the initiative to the enemy. In addition, the discussions within the Army at this point in time are still anchored in the physical nature of communications systems and their mobility in the battle space. The next logical step is to be just as agile in the cyber and electromagnetic domains as the Army is attempting to be in the physical domain. Once this step has been taken, it will be important for the Army to use this agility and capacity to become more lethal and move away from the passive approach that exists currently.

The Evolving Threat

In 2011 not only did the environment and operational requirements in which the Australian Army was deployed change; so too did the enemy. The enemy that Australia is facing in cyberspace is similarly changing today. In recent times the Bureau of Meteorology, federal parliament and the Australian National University have been victims of sophisticated cyber attacks.[11] The majority of discussion regarding the intent of the advanced capabilities used in those situations have posited that the 'enemy' was seeking to gain access to valuable information. Whilst this is likely true, there are important second- and third-order effects of these attacks that are largely absent from general discourse. Generally, in the aftermath of a cyber attack the organisation that was targeted reacts by expelling the threat and then implementing a raft of additional security controls to stop similar attacks from being conducted in the future.[12] If the intent of the enemy is to gain information, then largely this approach is appropriate, albeit completely reactive. But what if the intent of the attacks was actually focused on increasing the governance and management overheads of the IT industry? This article proposes that the actual goal of these state actors is to influence the standards and procedures employed on the more sensitive and highly classified networks, through cyber-probing attacks on unclassified networks.

The Australian Cyber Security Centre (ACSC) leads the efforts of the Australian Government (including the Australian Army) to improve cyber security.[13] As such, the way in which information security is governed within the Army is the same as it is in broader Australian society. As trends and practices develop in one sphere, they influence the other. By attacking unclassified networks, the enemy is eliciting a known response: the ACSC recommending that organisations adopt additional network security controls.[14] These recommendations are then adopted by the ADF and subsequently the Army, thus adding to the management and governance overheads of their networks. These overheads require resources, personnel and time to implement and operate—or, in other words, add additional layers of cyber body armour. This armour degrades command and control of the Army by making the networks increasingly complex to manage and difficult to communicate across.

The third-order effect is that Australia influences the network standards of other countries, in particular those in the Five Eyes Alliance, through considerations of interoperability.[15] Therefore, seemingly benign attacks on civilian unclassified networks can even affect multiple other countries as well as Australia. A simple example of this is the password requirements that most computer systems have, which require a user to change their password each month and use a combination of letters and numbers. This requirement was identified by a security researcher in a study and was subsequently adopted by the US, which then required other nations to do the same if they wanted to share information with US networks. Unfortunately the person who came up with these password requirements has since stated that those password requirements probably haven't improved security at all and have only made people forget passwords at regular intervals.[16]

These second- and third-order effects from sophisticated cyber attacks are far more damaging than any single instance of information compromise. The tactics that the Australian Army will have to employ in order to effectively coordinate cyber defence against this new enemy will require more than simply implementing security controls. As in other manoeuvre operations, the environment and enemy will need to be analysed in detail before a response is formulated.

Moving Away from Cyber Security towards Cyber Manoeuvre

One of the initial areas where a manoeuvrist approach can be applied to the Army's communications networks is in tactical communications. The majority of the Army's radio communications networks are encrypted to the highest standards, which have been assessed by some commentators as 'overkill' for the sensitivity of the information passed over those networks.[17] If the Army were to reduce the level of standardised encryption at the brigade level and below to lower commercial standards, it would be able to realise a significant number of efficiencies from the cost per unit of each radio to the overall governance and fleet management requirements. Additionally, this would generate an opportunity in that other communication devices and methods would be easier to implement at the tactical level if commercial encryption standards were employed. Mobile devices, 5G technology and

the broader internet are all part of the modern battle space, and being able to manoeuvre within this environment will be key in reducing the risk that using lower encryption standards entails.

If this is not managed carefully there is a significant risk that soldiers can expose their organisation to attack both virtually and physically. This was seen in the Ukrainian military in 2014–2016, when a number of artillery units used an open-source Android application for processing targeting data more quickly. This application was posted on an internet blog site and quickly compromised by Russian hackers, and the Ukrainian artillery locations were subsequently geolocated and destroyed.[18] If these devices had been managed by the Ukrainian military and hosted on an internal network, this cyber attack would have been less likely to occur. Indeed if this had been the case, the Russian hackers and EW assets would only have known that mobile devices were in use within the battle space, which would not have been enough information to expose the Ukrainian positions.

The COMSEC mindset has left the Army vulnerable in the modern operating environment, as it fails to take into account the electronic signature which is left behind. An example of this can be seen in the following scenario. If a tactical element of the Army was employing a network that utilised exclusive high-end military encryption in South-East Asia, this would probably look strange to a modern EW or cyber state actor. This would be due to the lack of availability of both the military sections of the electromagnetic spectrum and high-end encryption to the general public, or to those nations' militaries. The presence of the abnormal has been an indicator of threat in the battlefield for a long time, and it is no different in cyberspace. As such, if a network is employed that uses commercial standards, there is more ambient noise in which that network can hide.[19] Therefore, the risk of compromise can be reduced by using camouflage and concealment, as opposed to technically hardening a system. For this approach to be successful, commanders in the future should make decisions prior to a mission commencing about what they want their electronic signature to look like at various stages of the battle and be prepared to shift it to suit the mission, environment and threat. Similar methods of deception can also be used within the networks themselves to increase mobility internally. This implies that the Army should be more accepting that a level of compromise is likely in the modern context, which is another shift in attitude away from the COMSEC approach of the past.

From the standpoint of a computer network, Army has taken a similar overburdened approach as with tactical communications networks. The implementation and operation of security controls within an information systems environment is a difficult and time-consuming task.[20] By not taking a layered and nuanced approach to classification, the Australian Army has inadvertently increased the cyber body armour it has applied to itself. The Army (and ADF more broadly) has made the assessment that the majority of operational communications are sensitive and has subsequently classified its networks that store that information to the highest levels,[21] thereby putting the highest priority on confidentiality. In doing so, the organisation has created myriad networks with stringent controls that require a great deal of effort to maintain. Again, the proliferation of threats and vulnerabilities, such as 'insider threats', social media and signals intelligence will make the impenetrability of these networks almost impossible to maintain in perpetuity.[22] Potentially a more effective way forward is to reduce the scope of the network hardening efforts to the truly important information and increase the efforts going into proactive measures to disrupt or degrade potential adversaries.

In an Army context, this creates the potential for BMS to become the line of demarcation between the national secret networks employed at higher headquarters. At battle group and below, availability, capacity and flexibility are considered more valuable than confidentiality. Risk can therefore be taken at these lower levels and, if the networks are logically separated, be more closely managed at higher headquarters. The intent of these activities should not be to prevent but to delay, as that is far more achievable in the modern environment. Additionally, a layered approach can also reduce the overall burden of cyber governance and free up effort for the Army to be more manoeuvrist in other areas of its networks.

Honeypots in cyberspace are sacrificial computer systems designed to attract cyberattacks to gain information about system vulnerabilities and attackers. The use of honeypots as a means to be more proactive in cyber defence is one area that can be explored with this additional capacity. Honeypots within cyber security have been effective in complementing traditional intrusion detection systems by providing a more active and in-depth view of an adversary's activities.[23] In essence these honeypots can be used to attract an attacker by looking like valuable information, which, to continue the thread of military analogies, works quite similarly to a dummy

position. What is important to note here is that the approach of a honeypot is more manoeuvrist than attritionist in nature, and reduces the spread of defensive effort across the entire network. In addition, it accepts that the network may not be impenetrable and that a level of compromise in the future may be unavoidable.

Deception is not the only area in which improvements can be made to the Army's movement away from cyber security and towards manoeuvre. As in other areas of the Army, the cyber defence capabilities will be required to shoot back at their adversaries to achieve victory. The defensive cyber capabilities which the Army produces in the future should also focus on actively disrupting the offensive cyber capabilities of the adversaries that are targeting them. A number of European nations have been dealing with persistent and capable cyber adversaries for a number of years and have adopted this approach.[24] As with defensive routine in an infantry setting, the Army does not just focus on digging trenches and developing the defensive position. Risk in this context is reduced by active patrolling and other offensive activities; it is no different in cyberspace. The defensive

cyber teams employed by the Army in the future can be used to disrupt the access their adversaries have in the operating environment, or to identify high-value targets to be destroyed kinetically. This use is a paradigm shift from the current focus of the Australian offensive cyber capability, which to date has been used in support of counter-terrorist activities.[25] Coordination between the defensive teams who work internally within Army networks and the offensive teams who action targets externally will be critical in achieving a complete defensive effect—especially in periods of open conflict.

Conclusion

The adoption of information and communications technology within the Army has led to some great improvements of information flow and business efficiency. However, as the operational threat landscape has evolved, these networks have become increasingly vulnerable to attack and compromise. The response by the Army to protect the networks has been greatly shaped by its experience in combating conventional EW and the provision of information to a commander. Unfortunately this response falls short of its aspiration, as the defensive and reactive themes that have manifested essentially cede the initiative to the adversary. Indeed the majority of actions do not analyse the intent of the enemy at all. In order to achieve a more holistic cyber defence effect, the Army needs to take a manoeuvrist approach and take proactive steps to minimise risk. This will involve assessing the importance of various information flows and establishing a layered defence that will reduce the burden of the cyber body armour currently worn by the Army. Once this armour has been shed, the additional capacity can be used to add deception and counterattacks to the overall defensive effort, allowing the Army to more effectively manoeuvre in the cyber domain. As for the Australian soldier in 2011, these efforts will lead to a more effective capability in the modern operational environment.

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Are We Failing the Government's $1.37 Billion Defence Innovation Strategy?

Captain Richard Williamson

Abstract

In late 2019, the Australian Minister of Defence Industry commissioned a review into the Centre of Defence Industry Capability to be conducted in early 2020. This article contributes to the broader discussion on the way the Defence Innovation Hub and Next Generation Technology Fund have performed from the perspective of an Australian Army officer. Under headings borrowed from key statements in Army's futures statement *Accelerated Warfare,* this article will discuss how centralising innovation functions since 2016 has caused a loss of focus on the warfighter's problem set, removed collaboration on innovation priorities, and produced all-encompassing ambiguous priority areas which are disjointed from the soldier's future warfare concerns. This article concludes with recommendations for an online portal, accessible to registered users of all ranks, through which users can search, review and recommend unsolicited proposals. This portal would support industry with clear, verifiable and unambiguous 'problem statements' aligned with current project gaps and requirements, and provide successful innovations with an actionable procurement pathway.

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Introduction

Current processes are not responsive to need; the Department is over-optimized for exceptional performance at the expense of providing timely decisions, polices and capabilities to the warfighter. Our response will be to prioritise speed of delivery, continuous adaption, and frequent modular upgrades. We must not accept cumbersome approval chains, wasteful application of resources in uncompetitive space, or overly risk-averse thinking that impedes change. Delivering performance means we will shed outdated management practices and structures while integrating insights from business innovation.[1]

The extract above was articulated by former US Secretary of Defence James Mattis in the 2018 United States of America National Defence Strategy under the heading 'Delivering Performance at the Speed of Relevance'. In Australia, the Australian Government is investing heavily in new procurement programs, including a $1.37 billion innovation strategy to enhance Australian Defence Force (ADF) capability. Three years into this 10-year strategy, this article seeks to cast a critical lens over this program and question whether the Government's Defence innovation strategy is 'delivering performance at the speed of relevance'. The article explores the sometimes-ineffable process of innovation from the perspective of defence industry, and the subsequent effectiveness of the Defence Innovation Hub and the Next Generation Technology Fund to facilitate innovation for members in Defence.

The article begins with a description of the current driver of innovation—how ideas enter the current innovation ecosystem—before discussing the concept of organisational innovation to achieve capability overmatch. It discusses industry as a fundamental input to capability and the way Australia's Five Eyes partners have integrated industry to achieve their innovation priorities and, based on this success, propose a remodelling to align Australia's driver to innovation. To conclude, it suggests ways the Department of Defence and Department of Industry could enhance the access of small enterprises to innovation funding, create sovereign capability and, importantly for uniformed readers, provide a measurable capability enhancement to our fighting men and women in accordance with specified tasks of the key Army statements *Army in Motion* and *Accelerated Warfare*.

'Ready now'

In 2015 the First Principles Review (FPR) was critical of the Department of Defence's capability development construct, which it believed created a disconnect between customers and the purchaser, as well as multiple and unnecessary handover points which increased complexity and risk.[2] The FPR recommended that Defence establish a single end-to-end capability development function[3] and recommended that Defence partner with academia and industry to promote innovation.[4]

In the following year, 2016, the Australian Government released its Defence Industry Policy Statement. This statement recognised industry as a fundamental input to capability, and established the Centre for Defence Industry Capability (CDIC), tasked explicitly to help transform the Defence–industry relationship and facilitate access to Defence's new innovation programs for small to medium enterprises.[5] These new innovation programs saw the materialisation of the $640 million Defence Innovation Hub (DIH) and the $730 million Next Generation Technology Fund (NGTF)—a combined $1.37 billion innovation opportunity over 10 years.

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The DIH and NGTF adopted broad, equivocal descriptions of their priority areas to shape an industry response towards preferred innovation themes. The DIH runs an open call for proposals against defined innovation priorities, while the NGTF is more conservative, releasing calls for submissions intermittently throughout the year against what it terms 'collaboration vehicles'. Any submission to the DIH or NGTF is assessed against each program's priority areas, an example of which is 'better understanding the online, digital and cyber environments, to identify and predict risks to strategic interests in order to support and guide decision making'.[6] In the case of the NGTF, one priority area is simply described as 'Space Capabilities'.[7]

The generalised description of priority areas supports an unofficial philosophy of 'Technology-Push' regarding innovation, whereby industry responds with what it interprets as Defence needs to meet the published priority areas. This philosophy is useful to mitigate cognitive bias by institutionalised members who have become indoctrinated in the ways and means of their highly disciplined training. Yet one criticism of the Technology-Push philosophy is the disconnect between what industry perceives Defence may *want*, and the deliberate military planning and appreciation process which has analysed what Defence members actually *need*.

Priority areas described in broad, equivocal statements can provide flexibility to enable disruptive and unconventional thinking; however, this has unintended consequences for stakeholder perceptions, contracting and milestone reporting, due to a weakness in adhering to the principles of requirements-engineering. If we compare the DIH and NGTF priority descriptions to the principles of 'requirements writing' as taught by the UNSW Capability Systems Centre, we quickly observe how statements such as '… identify and predict risks to strategic interests in order to support and guide decision making' or 'Space Capabilities' fail to be clear, verifiable and unambiguous according to the teachings of the ADF's own academic military academy.[8]

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'Technology is not the sole answer'

In the US 2018 National Security Strategy, Mattis makes the observation:

> … success no longer goes to the country that develops a new technology first, but rather to the one that better integrates it and adopts its way of fighting.[9]

Closer to home, the Chief of the Australian Army, LTGEN Burr, acknowledges a similar challenge, observing in his futures statement *Accelerated Warfare*:

> Technology is not the sole answer. Our challenge is to underpin technological change with a joint warfighting philosophy linked to future investment, force structure, mobilisation and logistics transformation to be relevant, adaptable and survivable in the modern operating environment.[10]

Both these statements allude to the importance of internal reform to meet the challenges of future warfare, with the acknowledgement that innovation is more than a physical product; to be truly effective it must come with organisational change. Organisational change for a government department subject to a culture of hierarchy, discipline, and governance could easily be considered unattainable, yet the ADF does have a proven capacity to pursue innovative change and procure disruptive technology into the hands of soldiers.

One example of this was a project called LAND129, which in 2018 conducted a nationwide delivery of unmanned aerial vehicles (UAVs) with accompanying training and formal qualification for every full-time, part-time and Army Cadets unit in Australia—from training institutions to combat brigades and from military polices to cooks.[11] While there were tactical constraints due to the cyber risk of the commercial off-the-shelf equipment,[12] the intent was not the hardware acquisition per se, but rather to innovate the organisational and employment concepts of every warfighter. LAND129 was arguably the vanguard of the Chief of Army's future concept to 'leverage emerging technology … integrating new technologies within the joint force'.[13] Through the LAND129 example, Defence demonstrated how we may adapt and innovate beyond just a procurement model. The physical UAV product was not the solution; nor was it an innovation—remote aerial

systems have been used in warfare since 1849.[14] Rather, the solution was the ability of LAND129 to integrate the UAV into every facet of the fighting force and have Army's best asset—its people—learn, adapt and innovate its future force.

The Chief of Army's command statement *Army in Motion* states 'Potential exists in every corner of Army', and the Minister for Defence has previously commented 'Our people are our best asset'.[15] Yet assessment of a DIH proposal is made by a committee consisting of Band 1 APS and 1-Star uniform members in the Hub Investment Advisory Group[16]—the military equivalent of centralising innovation to a Brigade Commander. This is contrary to commentary in *Army in Motion*, which goes on to state that 'we have many hidden talents and soldiers with innovative ideas with which to pair technology and tactics'. The assessment of good ideas, disruptive thinking and innovative approaches should not be restricted to the staff officers in Russell Offices.

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There may be good reasons for controlling access to innovative and emerging technology. One reason traditionally raised is the need for proposals to be marked commercial-in-confidence and the desire for industry to protect their intellectual property. Yet 'Commercial-in-Confidence' remains equivalent to an 'Official: Sensitive' classification[17]—a low security classification for which all Defence members are vetted. Accessing and assessing capability is not without precedent in Army: the online Report on Deficient or Unsatisfactory Materiel, better known as RODUM, is an example whereby any soldier of any rank can view and report on every piece of materiel in Army's inventory—and at an equivalent classification level of Official: Sensitive. This is in contrast to the DIH and NGTF, whose information management system is not accessible through the Defence Protected Network and which maintains tightly controlled access privileges even for capability development staff. Why are there additional access restrictions for innovation?

Probity is the restriction commonly cited in relation to Defence–industry engagement. However, detailed policies already exist within Defence for probity, industry engagement and conflicts of interest.[18] These policies define probity as acting with integrity, honesty and ethical conduct, and provide clear guidance for industry engagement throughout the procurement process. Furthermore, restricting access because of probity implies a mistrust of the perceived ethical standards of ADF members. Contrast this to the Combating Terrorism Technical Support Office in the United States, which allows any member of Five Eyes nations to register and review all submissions to their broad agency announcements.[19] This leads to deeper questions as to why it is easier to access the innovation portal of a foreign nation than our own sovereign Defence Innovation Hub. LAND129 has demonstrated the power of decentralising innovation, yet the DIH and NGTF continue to maintain centralised control with no open, transparent and searchable database, denying our soldiers with hidden talents the capacity to pair technology and tactics, as demanded by *Army in Motion*.[20]

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'Partnerships through teaming'

As I mentioned at the beginning of this article, a cornerstone of the 2016 Defence Industry Policy Statement was the recognition of industry as a ninth fundamental input to capability (FIC). FICs are commonly defined as the essential inputs that are combined in order to achieve capability.[21] This recognition was widely applauded by defence industry, and for many industry insiders reflected an overdue reshaping of Defence's relationship with commercial business.

Yet for Defence, the practicalities of this fundamental change to capability are unclear. Doctrine, a means of underpinning the guidance and knowledge for Defence, remains unchanged with the Capstone and Executive series of Australian Defence doctrine publication *Preparedness and Mobilisation* continuing to list only the previous eight FIC areas.[22] This is perhaps due to the uncertainty of practically integrating industry into the single end-to-end capability development function as demanded by the FPR. This guidance vacuum has left a significant amount of interpretation by capability managers as to what role industry should play, and how, in serving the Defence mission.

This lack of guidance can be seen manifesting in the little-known Performance Exchange Scorecard, which provides insight into the relationship between Defence and the industry sector. The 'Top 5 Industry Partner Issues' reported in the latest scorecard were: [23]

1. Slow decision-making is affecting performance

2. Procedures are still too cumbersome

3. Need more events for exchange of ideas

4. Lack of results-focused culture—still process focused

5. Too much paperwork for the level of complexity.

Importantly, when discussing Defence–industry relationships, issues 1, 2 and 5 were rated equally from the perspectives of both Defence and industry members. This is interesting in terms of reflecting that Defence *wants* to innovate and the Government has gifted $1.37 billion to industry to *support* Defence to innovate, yet the relationship between Defence and industry continues to be slow, cumbersome and overly complex. Why? How can

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Defence integrate industry as a FIC while simplifying processes, exchanging ideas, increasing the speed of relevance, and simultaneously empowering and supporting our junior leaders as directed by *Army in Motion*.[24] To achieve this, the Defence organisation needs to innovate—not through equipment or technology, but organisationally and attitudinally with regard to integration of industry into the Strategy and Concepts stage of the Capability Life Cycle (CLC).

I challenge any ADF member to consider the hypothetical response they would have received in 2016 if they had submitted a concept to their chain of command for a single-person jetpack. That year was before any high-profile publicity stunts took place and when this technology was still considered the bastion of science fiction and spy movies. Undoubtedly, they would have experienced substantial resistance and ridicule in proposing the adoption of such a new concept, similar to Everett Rogers's 'diffusion of innovation'[25] (also known as the Innovation Adoption Curve). Indeed, the concept was raised in a 1964 edition of the *Army Journal*[26] and resisted progression past the first stage of the Innovation Adoption Curve for 55 years—that is to say, until 2019, when Flyboard inventor Franky Zapata demonstrated its military applicability at the French military's Bastille Day parade on 14 July 2019.[27] This very public and awe-inspiring stunt was broadcast around the world, immediately capturing the public's imagination and catapulting the concept into the minds of military planners and strategists. Now suddenly the concept of a single-person jetpack was not ridiculous at all.

What the Bastille Day parade displayed was *not* just the incredible capability of the Flyboard invention; instead the French military demonstrated an example of a truly integrated industry partner working as a fundamental input to military capability. By involving military members early in exploration of new concepts in the CLC—from desktop assessment of DIH proposals to more practical exploration of concepts as proposed through the Innovation Warfighter series[28]—Defence can challenge the organisation's preconceived ideas and cognitive biases early in the life of an innovative concept.

The ADF should not need a foreign military parade to challenge our preconceived ideas. By integrating industry into the Strategy and Concepts stage of the CLC, our industry partners can be working on the technological problem while our Defence members are concurrently responding by preparing, experimenting and adapting[29] to the eventual

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innovation. This organisational concept has been publicly demonstrated by our United States and British partners integrating jet-propulsion concepts with US law enforcement and the UK Royal Marines[30] for tasks such as call-for-fire or rapidly deployable overwatch on previously inaccessible urban terrain.[31] Are the Australian Department of Defence and the CDIC comparable to the French, US and UK programs? That is not conceivable in size or expenditure. Yet CDIC has an identified focus area of 'Facilitating Innovation'.[32] Currently this facilitation starts and ends at the DIH; instead this facilitation needs better teaming with Defence as its military partner.

'Thinking of new ways to operate'

We previously argued that the priority areas of the NGTF and DIH are too broad and equivocal for industry to understand Defence's actual technological requirements. This obscuration has some merit, as there is an inherent sensitivity to publicly advertising capability gaps, because of the risk of exposing the ADF's critical vulnerabilities to targeting by a potential hostile adversary. While this has sound reasoning, we should link this cognitive process to *Army in Motion*, which directs us to challenge such preconceived positions by 'thinking of new ways to operate, by experimenting, innovation and accepting risk'.[33]

To assist us in this challenge, let us consider the US Special Operations Command. Every year, the Special Operations Force Acquisition, Technology and Logistics Center outlines its developmental and acquisition lines of effort at the Special Operations Forces Industry Conference in a week-long unclassified, publicly accessible town hall style conference. This is despite the many threats and state actors with hostile intent against the US. Even with this existential threat, the capability gaps of the US elite special forces are still published online.[34]

This is a demonstration of an alternative to the Technology-Push philosophy unofficially adopted by CDIC through the DIH and NGTF. The alternative is a 'Market-Pull' philosophy which empowers Defence to advertise its gaps, needs and capability problems for industry to subsequently solve. This assists industry by providing clear, verifiable and unambiguous

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requirements. More importantly for Defence, Market-Pull follows a deliberate appreciation process to identify the capability deficiency. It therefore has an immediate customer within the Defence organisation who wants to integrate the solution into their organisation area, thereby fostering early ownership and integration.

The concept of Market-Pull is not without precedent in the ADF. 'Plan Jericho' is the Royal Australian Air Force's project to develop augmented intelligence capability to protect Australia from technologically sophisticated and rapidly changing threats.[35] As part of the implementation model, Plan Jericho established offsite labs with partnered universities which are essentially physical spaces for service members to collaborate, discover, test and prototype opportunities, ideas and technologies.[36] Current Army initiatives involving Good Idea Expos, hackathons[37] and the recent MakerSpace initiative[38] are examples of the Australian Army pursuing similar objectives to the Plan Jericho model and fostering early ownership and integration. These are positive engagements and contribute to the Defence ecosystem, but arguably they still lack an identifiable procurement pathway to commercialise a 'concept' to a 'capability'. Only by implementing industry as a FIC to these Market-Pull opportunities will we provide capability off-ramps to move good ideas to an available, employable and sustained solution across the Services.

With the alternative philosophy of Technology-Push, CDIC resurrects problems identified by the FPR (a disconnect between the customer and the purchaser) as it searches for a customer within Defence for the technology. In the case of Market-Pull, the customer is already identified and waiting. Could this be a contributing factor to explain why, after four years of operation, there continue to be no items from the DIH which have been introduced into service in Defence? This criticism could be seen as unfair. Followers of these programs may highlight the DIH Special Notice mechanism and the aforementioned priority areas, which all help to shape industry's response to a Defence problem. Yet, after four years, the DIH's own website lists just five Special Notices[39] and, as demonstrated earlier in this paper, the priority areas provide little to no clarity as to the scope or complexity of the problem.

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'Understand what Defence needs'

Let us consider Army's Special Operations Command and its capability enhancement program Project Greyfin—a 20-year, $3 billion program—announced by the Government in August 2019.[40] We assume that a prioritised list of capability, equipment and infrastructure was outlined in the business case presented to the Government in order to achieve Gate 2 approval. This assumption is based on the Government's own media release in which the Minister for Defence was quoted as saying the project would procure:

> … the best body armour; weapons; diving, parachuting, roping and climbing systems; medical search and rescue; communications; human performance training and support.[41]

Where can we find this published list outside a classified government submission or a vague media release? It would be reasonable to assume the answer is that it is published on AusTender, yet this occurs only at such time as the Commonwealth is scheduled to acquire in a 12- to 18-month timeframe. No industry partner can turn a developmental product to an off-the-shelf, production-ready product in such a short time frame. We must consider time a scarce commodity. If Defence is to prepare for increasing volatility, uncertainty, complexity and ambiguity as outlined in *Accelerated Warfare*, then it must devote time to industry to research, invest, innovate and respond to its emerging requirements.

Considering the Minister for Defence's Greyfin announcement, ADF soldiers in special operations must have a problem with diving systems, or else the Minister would not be allocating taxpayer funding to buy 'the best'. So where is Greyfin's diving-themed problem statement to shape industry's research into and development of this system while we wait for specifics to be released on AusTender? CDIC recognises such an initiative as a key factor in building success, stating:

> Defence is making its requirements clearer so that Australian businesses can understand what defence needs and invest accordingly in their own capabilities.[42]

But NGTF priority areas such as 'Space Capabilities' are anything but clear or easily understood. The Defence Innovation Network (DIN)—a New South Wales state-based innovation program—has recognised this dilemma and

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regularly calls for defence-themed 'problem statements' in which to conduct rapid feasibility studies of new ideas and develop these ideas into concepts or technology that can attract further investment from the government or industry.[43] For instance, instead of the NGTF priority of 'Space Capabilities', the DIN expands this into a workable problem statement under the banner of 'navigation in denied environments'. This nests within the space priority area, yet focuses the industry response towards a real, verifiable and unambiguous end state.

'Unlock our full potential'

The 2016 Defence Industry Policy Statement identified the disparate nature of innovation across Defence, and the department subsequently established the Defence Innovation Hub to aggregate the five separate innovation streams into one portal.[44] The effects of this change have been to remove grassroots visibility and influence on innovation priorities, reduce the focus on warfighters' perceived problems, and produce ambiguous priority areas which are difficult for industry to address. Assessment of innovation proposals has become stovepiped within Defence, resulting in delays, a lack of ownership, and mistrust through lack of transparency. Defence can address these problems to refocus on capability effects by doing three things. First, it can remove organisational restraints to provide any Defence member monitored access to the information management portals of the DIH and the NGTF, matched to their role and position (similar to the RODUM portal or the Combating Terrorism Technical Support Office). Second, it can re-invent the portal interface to enable rapid online ranking and discussion of industry-submitted proposals, allowing all ranks and trades to contribute to the assessment process. Third, it can re-focus the Defence priority areas for inclusion of unclassified 'problem statements' to direct industry's focus towards innovative proposals and subsequent research and development efforts.

By removing barriers and increasing the number of Defence members who are able to access, search, assess and comment on innovation proposals, Army can expand its innovation ecosystem to include all ranks and trades to support the *Army in Motion* concept of pairing technology and tactics with the hidden talents of our soldiers. By providing clear, verifiable and unambiguous 'problem statements' aligned with current

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project gaps and requirements, we will begin to integrate industry as a FIC—not purely as product delivery tool but as an integrated and collaborative partner. This avoids overinvesting in unsuitable products for the warfighter, as the end user is an early contributor to the team. We will 'fail fast' instead of overinvesting in progressive and disjointed phases of product development. Importantly, Army will be able to maintain the recommendations from FPR and integrate innovation into a single end-to-end capability development stream to ensure innovation concepts—should they prove successful and suitable to the ADFs future warfare requirements—are aligned with an actionable procurement pathway from which the problem statements are drawn.

These simple changes will pull the CDIC innovation strategy inside Defence, create ownership, reduce unnecessary handover points, deliver performance at the speed of relevance and enable our people to lead, inspire and make a difference. Our people are our competitive advantage and, with these changes, will assist to pull the future towards us.[45]

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Rifle Company Butterworth 1970–2020: Origins, Role and Future Possibilities

Lieutenant Colonel Richard Niessl

Abstract

In November 2020, Rifle Company Butterworth (RCB) will celebrate the 50th anniversary of the first infantry company deployment to Royal Malaysian Air Force Base Butterworth. This longstanding deployment has contributed to the training and development of nearly 25,000 soldiers who have gained the essential skills required to operate in complex jungle environments. While RCB's 50th anniversary is a conspicuous achievement, it is part of a larger story of the Army's involvement in Malaya and then Malaysia over the past 80 years. This commitment has enhanced Army's capacity to operate in our primary operating environment, built enduring relationships with the Malaysian Army, supported the establishment of a sovereign and prosperous nation and contributed to a stable region.

RCB deployments continue to provide Army with excellent opportunities for international engagement. Through participation in major exercises with Malaysia, Singapore, Thailand and Brunei, soldiers from RCB gain a deeper understanding of the region and improve the level of interoperability with many key partners. There is no doubt that over the past 50 years, RCB

deployments have achieved excellent results, yet perhaps there are new opportunities for Army's presence at Butterworth to enhance training and regional engagement. As the headquarters for RCB deployments, 2/30 Training Group is responsible for planning and coordinating all rotations to Butterworth. Just as 2/30 Training Group was a step-up from earlier liaison sections supporting RCB deployments, consideration could be given to enhancing the role of 2/30 Training Group to optimise Army's international engagement opportunities.

Introduction

On 10 November 1970, the advance elements of C Company, 1st Battalion, The Royal Australian Regiment (1 RAR) arrived at Royal Malaysian Air Force (RMAF) Base Butterworth.[1] Having travelled from their barracks in Singapore, these soldiers arrived in northern Malaysia, an area familiar to the Australian Army from its earlier deployments during the Malayan Emergency.[2] Adjacent to the historic trading centre of Penang Island, Butterworth has hosted nearly 25,000 Australian soldiers, who have generally deployed for three-month tours of duty, over the past 50 years. Focused on section,

platoon and company training, these soldiers have developed essential skills while training in the tropical jungles of Malaysia. These rotations have also improved cultural understanding and interoperability with our key partners in Malaysia, Brunei, Thailand and Singapore.

The history of the Australian Army's presence in Malaysia is extensive, and dates back to the 8th Division's operations against the Japanese during the Second World War. Following the Japanese defeat in 1945, the Malayan Communist Party fought to gain independence from the British through violent attacks designed to paralyse the economy. Tin mines, rubber plantations and public transport were all targets of the communist terrorists.[3] In 1948 the British declared a state of emergency and two years later the Royal Australian Air Force (RAAF) deployed transport and bomber aircraft, followed by Army's deployment of an infantry battalion in 1955.[4] Successive battalions deployed to Malaysia for the next two decades, gaining immense knowledge of the culture, terrain and tactics for operating in jungle environments. From these battalion deployments, the first infantry company was established at RMAF Butterworth in 1970, a deployment that has now endured for five decades.

Just as it is today, the strategic context leading to the establishment of RCB in 1970 was complex and uncertain. Yet just as in 1970, the benefits of an enduring Australian presence in South-East Asia, providing mutual benefit to Australia and Malaysia, are clear today. As November 2020 marks the 50th anniversary of the first Australian infantry company deployment to Butterworth, it is important to understand the historical factors that led to the establishment of RCB, the purpose of these rotations and the potential options for future training and engagement.

The Beginning

The first rifle company deployment to Butterworth was limited to a single month with the soldiers of C Company 1 RAR travelling to Butterworth from their barracks in Singapore.[5] At the time, 1 RAR was assigned to the 28th Commonwealth Brigade which in turn was part of the British Commonwealth Far East Strategic Reserve. This multinational force consisted of navy, army and air force elements from Britain, New Zealand

and Australia designed to protect Malaya from internal and external communist threats.[6] In his initial directive, Commander 28th Commonwealth Brigade tasked the first Butterworth Company to 'assist in enhancing ANZ [Australian and New Zealand] political and diplomatic influence in the area and to assist in the development of Malaysia's military forces'.[7] The focus on building influence through training alongside the Malaysian Army was the priority in 1970 and this remains the case 50 years later.

Not long after the 28th Commonwealth Brigade commenced sending infantry companies to Butterworth, the brigade was integrated within ANZUK (Australia, New Zealand and United Kingdom) Force based in Singapore.[8] For the next two years, infantry companies from ANZUK Force were detached to serve at Butterworth.[9] However, unlike modern RCB rotations, these tours were not continuous. In January 1971, floods in Malaysia delayed the arrival of the infantry company while three breaks of one month each were factored into that year's schedule to accommodate the needs of parent units.[10] Moreover, during the period March 1971 to July 1973, 'NZ contributed a company on rotation as part of the ANZUK rotation plan' and on at least one occasion the British Army contributed soldiers to form a composite Australian/British company.[11] These dynamic arrangements continued until September 1973, when ANZUK Force was disbanded with British, New Zealand and Australian army elements returning to home locations. Hence company rotations to Butterworth during the first three years were much shorter, were often interrupted and consisted of a combination of Australian, New Zealand and British troops.

Following the disestablishment of ANZUK Force in 1973, the Australian Government remained committed to an ongoing Army presence at Butterworth. Accordingly, the Australian Chiefs of Staff prepared a plan to ensure future deployments would continue, albeit from Australia.[12] Plan ASBESTOS, the joint service plan for ongoing RCB deployments, made clear that the United Kingdom, New Zealand and ANZUK Force would not be involved in future rotations. RCB was to become a bilateral arrangement, deployments were to be continuous three-month rotations and the company was to be deployed from Australia.[13]

Origins of Rifle Company Butterworth

While RCB will celebrate its 50th anniversary in November 2020, the Australian Army presence in Northern Malaysia has had a much longer history. Beginning in the Second World War, the 8th Division undertook operations against the Japanese in Malaya. Not long after the Japanese defeat in 1945, all three services returned to Malaya in support of British operations as part of the Malayan Emergency throughout the 1950s.[14] The RAAF were the first to deploy, with Dakotas from 38 Squadron and Lincoln Bombers from 1 Squadron despatched to Singapore in 1950.[15] Five years later, 2 RAR deployed to Northern Malaysia and established its initial barracks on Penang Island. In 1957, the Federation of Malaya gained independence from the United Kingdom, yet despite this momentous change continued to welcome significant Commonwealth support.[16] For instance, in 1958, the Royal Air Force handed control of the Butterworth air base to Australia, facilitating the RAAF's long-term presence in Northern Malaysia. This also created the initial connection between the Australian Army and Air Force elements, with Australia's infantry battalion based on Penang Island and RAAF squadrons only 5 km away at Butterworth.

With the subsequent deployment of Sabre fighters, the RAAF conducted missions from Butterworth 'against communist terrorists in their jungle camps' while Australian battalions patrolled local villages and surrounding jungle along the Malaysian–Thai border.[17] For several years, the RAAF and Army undertook security operations from their bases in Northern Malaysia in support of British efforts to defeat the communist insurgency. While not deployed as a joint task force, the Army and Air Force nonetheless operated from the same part of Malaya against a common threat to strengthen Malayan government control.

With the state of emergency drawing to a close on 31 July 1960, the Australian Government did not wish to lose the security gains made in the preceding decade. Combined with a policy of 'forward defence', Australia committed to retaining forces in South-East Asia to deter the spread of communism.[18] For this reason, the RAAF remained at Butterworth and 1 RAR continued security operations along the Malayan border with Thailand until being replaced by 2 RAR (for its second tour of Malaya) in 1961.[19] However, from 1961, Australian battalions were relocated to their parent formation, 28th Commonwealth Brigade, and were based at Terendak

near Malacca. Despite the official conclusion of the state of emergency, security operations continued, and in 1961, 2 RAR was allocated under the command of the 1st Malayan Infantry Brigade. A significant moment, this was the first time Australian forces had been placed under the command of an Asian commander.[20]

In 1963 the Federation of Malaya was renamed Malaysia and, just as the lingering threats from communist terrorists in Northern Malaysia began to wane, new challenges from an assertive Indonesia started to emerge.[21] Following a request from the Malaysian Government, 3 RAR in 1965 and then 4 RAR in 1966, along with supporting combat engineers, deployed to Borneo.[22] Referred to as the Indonesian Confrontation, these Army elements contributed to British-led operations to deter Indonesian aggression into East Malaysia.[23] With ongoing concerns over external and internal threats to Malaysia, the Australian Government resolved to maintain an infantry battalion presence in the region. In 1967, 8 RAR deployed for its two-year tour of duty prior to the arrival of 1 RAR in April 1969 and then 6 RAR in July 1971.[24] The latter two battalion rotations were based in Singapore until December 1973, at which point 6 RAR returned to Australia. This capped off 18 years of service by Australian infantry battalions in Malaysia and Singapore. During this time, the threat from communist insurgency was defeated, an independent Malaysia created and the threat of Indonesian expansionism deterred.

Thus, by the time the first Australian rifle company arrived in Butterworth in November 1970, Australia had already supported 15 years of battalion rotations to Malaysia. There is no doubt that RCB's 50th Anniversary is a conspicuous achievement. Yet the enduring contribution of Army support to Malaysia from 1955, and the mutual benefit this commitment provided to Australia, Malaysia and the broader region, is equally noteworthy. While the roles of the battalion rotations and RCB deployments were very different, collectively they contributed to the establishment of a sovereign and prosperous Malaysia, improved regional security and built enduring cooperation between our two nations.

In contrast to the improving situation in Malaysia, security assessments in Vietnam continued to deteriorate throughout the 1960s. Confronted by an aggressive Communist North Vietnam, the Australian Government commenced deploying forces to South Vietnam in 1962.[25] By 1968, the Australian commitment had grown substantially, with the 1st Australian

Task Force based in Nui Dat consisting of three infantry battalions and supporting arms numbering over 8,000 soldiers.[26] Adding to these security challenges were British and American policy announcements that changed the region's security framework. Firstly, British Prime Minister Wilson's 1968 announcement of the intention to withdraw forces from 'East of Suez' resulted in the closure of a vast network of British bases, including the eventual withdrawal of most British forces from South-East Asia.[27] A year later, President Nixon's 1969 announcement that:

> … as far as the problems of military defence, except for the threat of a major power involving nuclear weapons … the United States is going to encourage and has a right to expect that this problem will be handled by, and responsibility taken by, the Asian nations themselves.[28]

With this statement, known as the Guam doctrine, President Nixon made clear his expectation that Asian nations, and by extension Australia, were to take greater responsibility for their own security arrangements.[29]

By the end of the 1960s the British, who had led the successful Malayan Emergency had announced their withdrawal from the region; the US had made clear their expectation of improved sovereign security capacity throughout Asia; communist terrorist threats (while declining) remained in Northern Malaysia and across the border in Southern Thailand; the threat of future Indonesian aggression remained a possibility; and the ADF was increasing its commitment to counter the communist threat in South Vietnam.[30] Given these challenges and uncertainties, it was important to ensure the achievements of the preceding two decades were not lost with a premature retirement of the entire Australian Army presence from Malaysia. An enduring presence of both RAAF and Army elements in Northern Malaysia was seen as a critical contribution to ongoing stability.

Hence in December 1971 a meeting of officials from Malaysia, Singapore, New Zealand, Britain and Australia was held in Kuala Lumpur. The five powers met to formalise arrangements for the ongoing provision of security and to confirm an undertaking that in 'the event of any form of armed attack … or threat of such an attack against Malaysia or Singapore, their Governments would immediately consult together …'[31] At the conclusion of the December 1971 meeting, official notes were exchanged, which became known as the Five Power Defence Arrangements (FPDA). This

included approval for the ongoing Australian presence in Butterworth of 'two squadrons of fighter aircraft … and from time to time an infantry company'.[32] The agreement also dealt with the use of local facilities, training, taxation and criminal jurisdiction.[33] Rather than being the catalyst for the ADF deployment to Malaysia, the FPDA served to authorise the continued presence of RAAF squadrons that had been based at Butterworth since 1958 and rifle company rotations that had been in place for over 12 months.

Rifle Company Butterworth Role

With the disestablishment of both the 28th Commonwealth Brigade in 1971 and its successor, ANZUK Force, in 1973, a new plan for an enduring rifle company presence was required. This was achieved through Australian Joint Service Plan No. 1/1973—Plan ASBESTOS.[34] Approved in August 1973 by Admiral Smith, Chairman of the Chiefs of Staff Committee, Plan ASBESTOS directed the infantry company at Butterworth to 'conduct training and participate in exercises … with units of the Malaysian Armed Forces' and 'be available if needs be, to assist in the protection of Australian assets, property and personnel'.[35] In a similar fashion to Commander 28th Brigade's initial directive, the Chiefs of Staff focus for RCB was to undertake company training and to exercise with the Malaysian Army.

Two other features of Plan ASBESTOS are noteworthy. Firstly, RCB was required to 'assist in the protection of Australian assets, property and personnel at Air Base Butterworth'.[36] To be clear, base security was the responsibility of a group of over 260 Malaysian Military Police posted to RMAF Butterworth.[37] These elements were further supported by RAAF Police Auxiliaries operating near the flight line and RAAF Service Police patrols throughout the married quarters precinct.[38] Yet remnants of the Communist Terrorist Organisation remained in safe havens just across the border in southern Thailand.[39] Moreover, in an assessment of the security situation in 1971, a group of up to 20 communist terrorists were believed to have been operating in Kulim, 20 km east of Butterworth.[40] Although the Joint Intelligence Organisation considered an armed attack unlikely, the threat of an incursion onto Butterworth Air Base remained possible.[41] For this reason, RCB was to remain prepared to support security arrangements should the need arise. Secondly, the infantry company was placed under the operational command of the RAAF Commanding Officer at Butterworth.[42]

This had implications for how the company undertook its training and the time RCB could spend away from Butterworth. Given his concern over possible communist terrorist activities in the area, the RAAF Commanding Officer directed RCB to remain largely 'within the wire' at the initial expense of company collective training and exercises with the Malaysian Army.[43]

This was a source of friction for early deployments, given the high expectations of extensive jungle training and exercising with the Malaysians.[44] Yet through the persistence of successive company rotations, and particularly the work of the RAAF defence adviser in Kuala Lumpur, new opportunities for training emerged. In 1974, the defence adviser secured access for the company to train at the Malaysian Army Combat Training Centre (PULADA) at Kota Tingi.[45] Unfortunately, with at least a full day of travel from Butterworth to Kota Tingi, the Butterworth Commanding Officer insisted that training be limited to single platoon rotations. Nonetheless, PULADA provided excellent primary jungle for platoons to enhance their skills and capability.[46] The 1974 end-of-tour report from C Company 5/7 RAR explained that the deployment was 'enjoyed by most members … the high point being the field training in PULADA … with commanders at all levels reaping the benefit of getting to know their soldiers better'.[47]

Over time, Defence staff acquired additional access to training areas in Gurun and Langkawi, along with numerous ranges in the Butterworth area.[48] As these training areas were much closer to Butterworth, restrictions on company training were eased, with most of the company increasingly allowed to train 'outside the wire'. These opportunities were improved further when the first major bilateral exercise with the Malaysian Army, Exercise SCORPION, was introduced in 1977. This allowed A Company 3 RAR to train alongside the 9th Battalion, Royal Malay Regiment, in Mersing, leading to improved interoperability, jungle fighting skills and cultural understanding.

Coinciding with greater training opportunities, the overall security situation in Malaysia continued to improve throughout the 1970s. At the same time, the Australian presence in Vietnam began a period of drawdown, with the final soldiers of the 1st Australian Task Force withdrawn in early 1972.[49] As the situation in South-East Asia changed, a new Australian defence strategy began to emerge. In contrast to the earlier 'forward defence' approach, the new strategy placed emphasis on a 'defence of Australia' posture.[50] For these reasons, RAAF squadrons were steadily withdrawn from Butterworth in the 1980s, and a year after the publication of the

1987 Defence White Paper the last Mirages of 79 Squadron returned to Australia.[51] From this point on, RCB became the largest Australian military presence at Butterworth, solely focused on training and exercising with the Malaysian Army.[52]

Moving Ahead

Since its inception 50 years ago, RCB has maintained its focus on jungle training, developing junior leaders and exercising with the Malaysian Army. During these tours, soldiers and officers have gained immensely from opportunities to develop their leadership and professional skills. As the Company Sergeant Major of B Company 3 RAR deployed to RCB in 1997 explained, 'more is gained by the section and platoon commanders from a three month deployment to Malaysia than they would gain over 12 months in a normal Australian battalion environment'.[53] Most infantry companies have had the opportunity to train at PULADA, and since 1977 RCB has participated at least annually with the Malaysian Army in a major bilateral field training activity.[54] RCB rotations have also benefited from opportunities to deploy outside of Malaysia to undertake collective training with the Royal Thai Army, the Singaporean Armed Forces and the Royal Brunei Land Forces. During recent periods when the Army has had to turn its focus to distant conflicts, RCB has ensured an ongoing presence in South-East Asia, developed the Army's capacity to operate in the tropical jungle environment and strengthened ties with several key partners in our near region.

The command, local planning and coordination of RCB's training and participation in international exercises is undertaken by 2/30 Training Group, also located at RMAF Butterworth.[55] This small headquarters element bears the name of the Australian 2/30 Battalion (8th Division) involved in the Gemas ambush against advancing Japanese forces near Johore in Southern Malaya during the Second World War. The 2/30 Training Group replaced the former Land Command Liaison Section (LCLS), which had coordinated activities on behalf of RCB during the period from 1987 to 2007, and 65 Ground Liaison Section before that.[56] The evolution from the LCLS to 2/30 Training Group included a small increase in permanent staff, leading to improved capacity for international engagement and collective training. Specifically, this enabled 2/30 Training Group to take a greater role in planning the utilisation of RCB in training exercises with Malaysia, Singapore, Brunei and Thailand.[57]

In addition to the routine deployment of infantry companies to Butterworth, rotations occasionally consist of other combat arms and combat support elements. In some instances, the non-infantry sub-units have been supported by the supplementation of a small training team, allowing the achievement of most of the infantry training objectives while gaining the cultural and professional benefits of a deployment to South-East Asia.[58] Additionally, the specialist skills of a broader cross-section of the Army enabled new forms of international engagement. As Major Alexandra McDonald, Officer Commanding RCB 127, explained in 2019, 'the different capabilities added a few new tools to the belt, and can engage new and wider audiences in the region'.[59] This included contribution to minor construction projects, offensive support activities and the incorporation of Military Police into training exercises.[60]

While there have been a variety of company group deployments to Butterworth, RCB rotations have generally remained focused on infantry section, platoon and company level training within a jungle environment. For instance, during the deployment of A Company 7 RAR in 2014, soldiers undertook a progression of training that commenced with the development of individual skills through local range practices near Butterworth, followed by jungle training at Sik and Kulim national parks. Soldiers were exposed to the difficulties of operating in jungle environments, and the challenges that come with operating in dense and mountainous terrain in extremely hot and humid conditions.[61] These conditions are not widely available in Australia, and hence the opportunity to develop the essential skills to operate effectively in this environment is invaluable. Having completed this training, the collective skills and capability of the company were then demonstrated during their participation in Exercise Haringaroo, a major international engagement exercise held with the Malaysian 15th Battalion at Negeri Sembilan south of Kuala Lumpur. Later in their deployment, the company undertook collective field firing exercises at PULADA before moving to Singapore to train at the Murai Urban Training Facility.[62] This well-structured and challenging training program not only developed the individual skills of each soldier but also allowed the collective sub-unit to achieve specific Army Training Level standards. While relatively inexperienced company groups may deploy to Malaysia, they always return better trained, more cohesive, and certified at a training level that contributes to the broader requirements of their parent unit and brigade.

RCB rotations have also had a vital role in developing the skills and capability of Army Reserve soldiers. Prior to deploying to Operation ANODE in 2009 (Regional Assistance Mission to the Solomon Islands) soldiers from the 5th Brigade deployed as part of RCB rotation 88. These soldiers undertook the routine package of jungle training at PULADA, followed by urban training in Singapore.[63] However, they also had the opportunity to adjust the training program to prepare for their subsequent deployment to the Solomon Islands. Communications, military self-defence and junior leadership courses ensured the company was well prepared for their forthcoming mission. In describing the benefits of RCB training, Brigadier Brereton stated that his soldiers had gained an extraordinary range of new skills, and that their experience in Malaysia had encouraged a 'further dozen Reservists to make the leap to fulltime service in the ARA'.[64] Like many earlier rotations,

this deployment exceeded expectations. Not only did the soldiers develop their individual and collective jungle warfighting skills; the company built relationships with Malaysian and Singaporean partners and completed essential preparation prior to its operational deployment to the Solomon Islands, and the broader Army gained a dozen highly motivated and well-trained soldiers to serve in the permanent force.

The Australian presence at Butterworth has also been used to support a number of contingency operations. During the evacuation of Australian and approved foreign nationals from Cambodia as part of Operation VISTA in July 1997, ADF elements at RMAF Butterworth were used to support this mission. This included elements from RCB who supported the reception and forward movement of evacuated civilians from Cambodia using the nearby Penang International Airport.[65] Butterworth was also used as a staging and logistics hub during Operation SUMATRA ASSIST, the ADF humanitarian mission to Aceh following the 2004 tsunami. In both cases, access to RMAF Butterworth and its Australian staff and facilities enabled a rapid and successful ADF response, and in both cases Australia was the only foreign nation permitted to use Butterworth.[66] Moreover, since 1981, the Malaysian government has permitted the use of RMAF Butterworth as a base for RAAF surveillance flights. This allows Australian aircraft to conduct vital surveillance of the North Indian Ocean and South China Sea in contribution to regional security and stability.[67] The ongoing access to Butterworth and support provided by the Government of Malaysia demonstrates the value of the partnership between our two nations, and the strategic benefit from Australia's enduring presence at RMAF Butterworth.

While each RCB rotation has achieved numerous training and international engagement objectives, risk is associated with every deployment. Tragically, on 23 September 1993, five soldiers from 5/7 RAR were killed and a further six injured when the Army truck they were travelling in collided with a bus near PULADA.[68] On another occasion, RCB soldiers were tasked to guard the wreckage of a RAAF Mirage that had crashed 5 km north of Butterworth.[69] While every effort is made to successfully develop the skills and capability of the soldiers deployed to Butterworth, inherent risks remain when undertaking demanding training. The service of these soldiers will not be forgotten.

Future Possibilities

A cursory glance at the Indo-Pacific geography reveals the 'deep strategic security and economic interests' shared between Australia and South-East Asia.[70] As such, it is important to identify new opportunities to enhance familiarity with our primary operating environment and develop closer relationships with our regional partners. This is particularly important in a region characterised by increasing strategic competition, growing assertiveness of major powers and accelerated military modernisation.[71] Recognising the challenges faced in the Indo-Pacific region, the Government has called for a renewed focus on South-East Asia with the goal of building stronger relationships, influence and cooperation.[72]

In an increasingly competitive strategic environment, Major General Ellwood, Commander 1st Division, explains that 'co-operation is the most powerful way to maintain a prosperous region where sovereignty is guaranteed and international rules and norms are protected'.[73] With 50 years of continuous training and international engagement experience in South-East Asia, future RCB rotations coordinated by 2/30 Training Group provide a unique platform from which to enhance cooperation.

Given 2/30 Training Group's central role in planning and coordinating Rifle Company Butterworth's international engagement activities in Malaysia, Thailand, Singapore and Brunei, there is potential for its role to be enhanced to become a regional international engagement training centre. This could include responsibility for planning and coordinating all of Army's conventional training across South-East Asia. Being located centrally within the region, and with unique access to key exercise planners with our regional partners, 2/30 Training Group is well positioned to enhance its support to Army by taking a greater role in planning conventional training across South-East Asia. Working closely with the defence staff in each partner nation, 2/30 Training Group could support new opportunities to optimise the use of RCB for broader engagement across the region. The implementation of this approach would go a long way to achieving the intent envisaged by the 2016 Defence White Paper. This strategic guidance called for the ADF to 'participate more regularly in multinational exercises and the overseas presence of Defence personnel [to] gradually increase over time'.[74]

As a regional international engagement training centre, 2/30 Training Group could also be used to support the preparation of Army elements for their regional training or exercise commitments. Acclimatisation, language and cultural preparation could be undertaken at Butterworth. Army elements preparing for combined exercises, joint teams preparing for multilateral activities or small teams preparing to undertake mobile training team tasks could all benefit from tailored preparation provided by 2/30 Training Group. Additionally, 2/30 Training Group could be utilised to coordinate humanitarian assistance and disaster relief seminars, short- and long-term language courses, and specialist individual training. The export of some courses from Army's Jungle Training Wing in Tully to Malaysia could also be considered. These initiatives would not only provide significant benefit to preparing Australian elements but also contribute to enhanced cooperation with the Malaysian Army. That is, these activities could be specifically designed in consultation with Malaysia to include soldiers from both nations, enhancing relationships and mutual capability at the same time.

The evolution of 2/30 Training Group could also provide opportunities for Army to enhance future RCB rotations by deploying a broader combination of capabilities. With a desire for greater combined arms training, future RCBs could increasingly reflect a balanced combat team with the possible inclusion of joint fires, engineers, military police and medical staff, amongst others. The 2019 combined arms sub-unit rotation provides a strong case for this approach. Not only did a wider range of Army capabilities gain invaluable experience from their jungle training; the additional capabilities of the combined arms sub-unit facilitated new opportunities to engage with a wider spectrum of the Malaysian Army. Working collaboratively with Army, 2/30 Training Group could be given the scope to suggest changes to the RCB team structure to facilitate enhanced engagement opportunities with the Malaysian Army and our regional partners. Not only would this support improve engagement; it could also allow the testing and development of new force modernisation tactics and procedures. Working in partnership with the Malaysian Army, new capabilities could be trialled and tested in the Malaysian jungle environment, providing further benefit to both forces.

Conclusion

Created to sustain an Australian Army presence in Northern Malaysia, RCB was originally directed to focus on collective training and exercises with the Malaysian Army. This has remained the primary purpose of subsequent RCB rotations, with jungle training undertaken across the Malaysian Peninsula and, from 1977, field training exercises with the Malaysian Army. While 50 years of company deployments is a conspicuous achievement, these rotations are part of a larger story of the Army's involvement in Malaysia over the past 80 years. In this time the Australian Army has supported Malaya and then Malaysia against the threat of communist insurgency, contributed to the establishment of a prosperous and independent nation, deterred external aggression from Indonesia, developed extensive jungle fighting skills and built deep relationships with the Malaysian Army. During recent periods when the Army's attention has focused on distant conflicts, our enduring presence in Butterworth has helped maintain a strong understanding of our primary operating environment and key regional partners.

While acknowledging the significant outcomes achieved by Rifle Company Butterworth over the past 50 years, current strategic guidance calls for Defence to do more in South-East Asia. Enhancing the role of 2/30 Training Group could be a way for Army to contribute to this goal by optimising the capacity of an existing deployed organisation. The familiarity of 2/30 Training Group with the region could be harnessed to identify and develop new engagement opportunities while facilitating a more consistent combined arms approach to training. For the past 50 years, RCB rotations have contributed to Army's capacity to operate in a tropical jungle environment while building essential relationships with Malaysia and our regional partners. With a renewed emphasis on Australia's primary operating environment, the true opportunities provided by the Army's ongoing presence at RMAF Butterworth could just be emerging.

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Opinion Piece

How's Recruit Development Wing?

Corporal Gabrielle Hammond

If you were to ask any soldier if the Australian Army should lower its standards in order to allow more women to join, you would receive a resounding 'no'. From recruit to RSM, although diplomacy may vary, no soldier would be willing to argue that the standards developed to reflect job requirements within the Army should be reduced. As biscuit company Arnott's says, 'there is no substitute for quality'. However, in 2012, Defence senior leadership made a unified statement of cultural change through the release of the cultural statement 'Pathway to Change: Evolving Defence Culture Strategy'. This strategy is a conclusive metric informed through independent and government reviews into gender and culture related issues within Defence, which acknowledges that gender inequality is an organisational hindrance as well as a moral issue. Independent reviews such as the 2011 Broderick review into Defence culture presented results that drew a strong conclusion between gender diversity and capability. The findings of the Report on the Review into the Treatment of Women in the ADF, tabled in August 2012, made 21 recommendations for reforms to the recruitment and retention of women—all of which were accepted by the Chief of Defence and three service chiefs.

In short, the Australian Government elected by the people of Australia, through the Minister for Defence, announced several reviews into aspects of Defence culture, and found that the services need to diversify—that is, recruit and retain more women (and Indigenous members). It has been decided and is happening.

So the question which arises is how to do this. The need for diversity saw the birth in 2016 of the Recruit Development Wing (RDW), a wing of the Army Recruit Training Centre (ARTC) focused solely on developing and implementing programs to attract, recruit and increase diversity at the lowest level: recruits. RDW has developed and implemented several unique programs, each focused on bridging the enlistment requirement gap to attract female and Indigenous recruits, one of which is the Army Pre-Conditioning Program (APCP), to which I was recently attached following three years of training Army recruits in standard recruit training platoons at the 1st Recruit Training Battalion (1RTB). The APCP was designed to attract women who do not yet have the required physical or mental resilience to commence recruit training at 1RTB. These women are 'marched in' under a provisionally enlisted status from not achieving the enlistment standard at Defence Force Recruiting, and commence their course at RDW. They are required to meet the regular entrance standards of the Pre-Enlistment Fitness Assessment (PFA), comprising 8 push-ups, 45 sit-ups and level 7.5 on the beep test, at RDW to be eligible to commence the Army Recruit Course. They are, however, individuals who have volunteered to be subject to the Defence Force Discipline Act and service law, and forfeit many freedoms to spend approximately seven weeks building up their physical fitness, confidence and resilience before commencing their journey at 1RTB, to become a soldier in the Army. They voluntarily spend more time at Kapooka, under the same restrictions as 1RTB recruits and the same sufferance of recruit life, with perhaps a little less bed-making, initially.

Why would Army want to recruit women who lack mental resilience? How will they cope on the battlefield? They aren't the kinds of soldiers I would want in my Army. Why don't we recruit people who can meet the standards, not lower the standards? These are some of the comments and thought processes I have encountered during my brief time at RDW, usually through conversing with my peers who have had no experience of or exposure to RDW. These are attitudes and beliefs of serving members with experience, often in influential positions as instructors or in the chain of command. Reflecting on these comments, it is fair to say there aren't many people who have spent time at RDW. The wing is quite new in terms of Army training establishments and so it can be expected that there is some ignorance or naivety to provoke the above statements.

My responses to these kinds of statements, from my experience and exposure, are as follows.

Why don't we recruit people who can meet the standards? The Army *is* currently recruiting people who *can* meet the physical standards and *do have* the mental resilience to join the Army. They start their training usually on a Tuesday, day zero at 1RTB. The issue is that there aren't enough women signing up who fit into this category. The women who want to join the ADF and meet this standard are enlisting; however, their numbers are too low, in accordance with the demands of the opening paragraph. The women who don't meet this build, but still want to enlist, provisionally enlist to do additional time to build up to this level to join. The women who are at this standard who aren't enlisting *don't want to*. We can't make them, because that's conscription—we stopped doing that a little while ago.

How will they cope on the battlefield? Let's consider why they may be at RDW in the first place: physical or mental resilience. If anything, they have been exposed to *more* mental resilience-building activities built into the course; they have had *more* opportunities to practise various coping strategies whilst in a controlled environment; they spend *more* time under the continuous stress associated with recruit training. It seems, if anything, that their stress inoculation may consequently be higher than, if not on par with, a recruit from 1RTB. Then after 1RTB, I imagine, they would experience the exact same training, pre-deployment package and preparedness as any other soldier expected to face the battlefield. They abandon their 'orange tab' on completion of their program and blend right into a standard recruit training platoon and off into the wider Army.

They aren't the kinds of soldiers I would want in my Army. The people who truly take ownership of the Australian Army are alluded to in Army's mission statement: 'Army is to prepare land forces for war in order to defend Australia and its national interests.' The democratically elected government of Australia is Army's '1 up', if you please, from where our mission statement is derived. Hence, the true owners of the Army are the people of Australia, whose interests we serve to protect and who, through exercising their political expression and by means of the Minister for Defence, create the priorities and actions of government. These are the very same people who have expressed that they want gender equality and diversity in the Services—see the opening paragraph above. So the participants of the RDW program and the female instructors conducting the APCP are in fact

the soldiers the voting public want in the Australian Army. I would suggest that anyone who has a deeply rooted concern or disagreement with this information would likely find their views to be in isolation from the majority of Army's thinking, with the focus on building capability for the future and meeting the demands of the public.

Why don't we recruit people who can meet the standards, not lower the standards? The *only* assessment the provisionally enlisted trainees completing the APCP are required to pass (to meet the provision of their enlistment) is the PFA. If the trainees fail to meet the standard, they are afforded another opportunity aligned with ARTC reassessment policy, and if they cannot meet the standard after reassessment, they are not enlisted. They leave. The standard is not lowered. The physical enlistment standard of the PFA (8 push-ups, 45 sit-ups and 7.5 on the beep test) becomes the end goal, the 'Holy Grail', the end state for these trainees, and to lower it would disappoint each and every one of them who work towards it.

Training individuals who have volunteered to join the Army yet lack self-confidence and mental resilience presents its own challenges. Recruit Instructors (RIs) traditionally take recruits with a somewhat steady character and resilience, and enforce the military environment and 'regimentality' through tough training, breaking down individuality to a degree and 'bulldozing space' for teamwork, mateship, determination and myriad 'soldierly qualities'. The introduction to service life is confronting and the adaptation to cultural norms of the Army is keenly supervised and guided by the RIs responsible for the end product, the 'firm-foundations soldier' equipped with enough knowledge of the Army societal cues to get through the first week of their Initial Employment Training. This relies heavily on the individual having the strength of character and confidence to become compliant, even if through friction and resistance, to this process. Those recruits who don't comply or who resist the process completely submit their Resignation of Own Request and depart. RDW trainees do not have this self-confidence or courage yet. They are more fragile and have vulnerabilities that mean they may struggle more than others with this initial process at the commencement of their training. The unknown courage these individuals do possess is evident by virtue of the fact that they have put themselves into this expected confronting environment despite their lack of self-confidence. They have volunteered to be uncomfortable and to give it a go, an enduring quality of the Australian soldier.

As a part of their training, the recruits are exposed to many facets of Army life, including Army history, Army environmental survival techniques and navigation, and barracks routine and drill. This is all done around two physical training sessions a day, aimed at passing the PFA. Their barracks training leads up to peaks of intensity not dissimilar to that imposed by RIs at 1RTB. This gradual increase in training is deliberate and exposes the trainees to the environment they will shortly be in, on completion of the APCP. It acts as another resilience-building technique. The confidence and character that builds in these women, many of whom have far deeper issues—often societal, financial or familial, and often a mix of all three—is impressive, as well as their physical capability progression. The way they carry themselves and their eagerness to learn and develop as a soldier is refreshing and they are regularly overheard discussing earlier lessons while 'foam rolling' (a recovery technique used to decompress and relax stiff muscles) or critiquing one another's personal drill during their recovery time. Though they may begin not as fit as they might wish, their motivation and drive is as good as any.

To steer away from the technique of building recruits that has been reiterated for decades (despite being dynamic and modern, the basic principles endure) and guide trainees through their initial time in the Army without instilling a false sense of comfort or familiarity takes a skilled individual. Instructors at RDW require a genuine interest in the development of the individuals on the course, yet need to remain professional and distant enough to not foster overfamiliarity and reliance. The hierarchical nature and discipline of the Army needs to be impressed on the trainees; however, instructors cannot lose their humanity. Tact, creativity, firmness, compassion and professionalism are all essential for an instructor at RDW. Often, due to course sizes, there are significantly fewer staff allocated to a course, and so the pressure and responsibility for each individual is amplified. They will also foster in the trainees initial impressions of what the Army is and the appropriate way to conduct oneself.

There is no escaping the principle of leading by example. Staff are expected to participate in physical training sessions with the trainees (at least one a day), keep their dress and bearing to a high standard, and keep their interactions with trainees professional and empathetic without babying them. Section commanders will often work 'day on / day off' driving the platoon, frequently delivering more platoon-level training than section-level

training. Many of the RDW programs are in their infancy, and organisationally some of the course tools such as lesson plans and Learning Management Plans are still being refined. Yet the platoon staff of these programs, in particular the section commanders, through their creativity, networking and resourcefulness continue to meet and deliver the course content to a high standard, as well as inspiring the trainees they are responsible for. The staff I had the pleasure of working with in my time at RDW were commendable.

Finally, I would like to address the stigma associated with RDW. My recruits with their orange tabs were often referred to as the 'fat camp' and other labels that can only be overheard or initiated by recruits who have heard such things from their staff. The fact is that the majority of APCP recruits do not align with these immature labels and they simply need guidance on technique, strength development and directed, consistent training and building mental toughness. For anybody who has the privilege of leading soldiers, it is a poor reflection of oneself to allow them to have such ignorance about diversity. These people, regardless of which program they are a part of, have volunteered themselves to spend an additional amount of time as a recruit to address their shortfalls to make it into the Australian Army. They have chosen to leave their comfort zones to spend more time eating at the recruit mess, making beds repeatedly, enduring tough training, away from loved ones and complying with an imposed routine to fix what it is about themselves that is not yet good enough to allow them to enlist in the Army. To recognise your own weaknesses and take affirmative action to rectify it is an incredible feat for anybody and should be praised. These volunteers who, just like you and me, are willing to devote this time in their lives to serving in the Army should be welcomed with open arms.

In conclusion, I have learnt many things from my short time at RDW. I have been exposed to the nature of delivering these programs, the hardship experienced by the staff and the true grit possessed by the recruits, and am humbled to have had the opportunity to do so. To the course I was privileged to be a part of, APCP 25, thank you for your uniqueness, your relentless sense of wonderment and curiosity, and the overall will to win.

Opinion Piece

Breaking Good: Capitalising on the JPME Reforms through Creative Practice

Lieutenant Colonel Mick Cook

There is a difference between requiring an individual or a team to *think creatively* about a problem and allowing an individual or team to *use creativity* to solve a problem. The former is as useful as telling someone to innovate without providing them with a licence to fail; the latter enables them to apply the resources available in novel ways to achieve the mission. Creativity is a process, not an output. The recent reforms in joint professional military education (JPME), begun under the Ryan Review in 2016, list creative thinking and the use of creativity as key outputs; however, none of the framework documents or practitioner guides identify the need to engage in a creative practice during education and training to achieve this. The Army and, more broadly, the Australian Defence Force (ADF) has the opportunity to 'break good' by embracing the integration of creative practices within its training and education frameworks.

The Ryan Review identified areas for improvement in training and education in 2016. It also provided a roadmap on how the Army could begin to address the identified shortfalls. This initial step by a single service has gained momentum, and now, just over four years later, the broader Defence organisation has had a renaissance in the way it views individual

and collective JPME. It is undeniable that the last four years have been good for the development of the service members and public servants who are the beneficiaries of the new training and education frameworks. However, as Anthony Brandt and David Eagleman have argued, some of the best innovations our species has had come from a time when people weren't content and decided to break good to pursue excellence.[1] I believe that now is the time to build upon the revolution in professional military education (PME) and break good by incorporating something the majority of our conservative organisation may find uncomfortable: creative practice. However, before I explore the concept of breaking good with creative practice, it is essential to understand how Defence articulates its position on the education of its personnel, particularly how it intends to achieve the stated aims within its JPME frameworks.

The Ryan Review, led by the Director-General Training and Doctrine, then Brigadier Mick Ryan, began with a historic overview of Army education, training and doctrine over the period covering the post-Vietnam era to 2016, and finished with a list of recommendations for implementing the changes needed to modernise the education, training and doctrine practices of the Army. It also mentions the word 'creative' five separate times. Three of these references are to creative thinking,[2] one is for creative work[3] and the other refers to applying creative methods to how the Army trains its people.[4] Those references that focus on creative thinking and problem-solving assume that creativity is an output of the education; however, the Ryan Review does not address how the output of creativity will be developed throughout the training continuum.

The other two references refer to creative processes or engagement (work) but again do not identify how creativity will be developed or measured. It is worth noting that some of the sections of the Ryan Review discuss methods of education that may be interpreted as employing creativity, such as gamification; however, as I will argue, often the creative process of learning models such as gamification has been concluded before the students engage with the material. The creation of the game is a more effective creative practice that will develop a student's creative thinking, not participation in a predefined game with limited opportunities for creative expression. It is essential to note that the Ryan Review was a strategic review that provided recommendations; the next stage would be to produce a strategy to implement the identified recommendations and ensure the revised education frameworks achieved the goal of developing creative and critical thinkers for the Army.

In 2017 a paper titled *Evolving an Intellectual Edge* was released to provide a clear strategy for PME in the Australian Army. This document applies the common 'ends, ways, and means' strategic framework for developing objectives, methods and resources to implement the changes identified in the Ryan Review. The 'Intellectual Edge' PME strategy is a short, pithy document that provides a methodology for developing key professional development initiatives within the Army. It also provides metrics for measuring the development, progress and results of professional development programs. In terms of strategic documents, *Evolving an Intellectual Edge* provides both a clear raison d'*être* for professional development and a strategy for improving PME across the Army. Notably, it also mentions the term 'creative', only once and specifically about the combination of the knowledge gained through professional development.[5] The focus on creative thinking, emphasised throughout the Ryan Review, is missing from the implementation strategy. It is also missing from the operational and tactical documents that were developed to support the implementation of the Ryan Review recommendations.

Land Warfare Procedures—General 7-1-2 (LWP-G 7-1-2): The Instructor's Handbook is a training, rather than education, focused publication designed to provide Army instructors with a necessary reference to understand, design, and deliver military training. *The Instructor's Handbook* provides an excellent overview of the military training environment. It provides a repository of suitable instructional techniques, enabling the Army instructor to avoid stagnation through a lack of variety in content delivery. The term 'creative' is used, again, to emphasise a skill required—this time of the instructor. This is the only reference to 'creative' within the document; however, following on from the use of gamification in the Ryan Review, *The Instructor's Handbook* does provide alternative instruction delivery models that, at first glance, appear to incorporate creative practices. These delivery models include role play and playlets and, for a conservative organisation such as the Army, seem to take a creative approach to training and education content delivery.[6]

These techniques, however, are not designed as a creative practice or a process to foster creativity. Much like the use of games, they are designed to reinforce other modes of content delivery and add to the experiential learning models favoured by militaries. *The Instructor's Handbook*, much like the Army online learning portal *The Cove*, is an example of the positive changes and significant investment the Australian Army made in developing its personnel through a PME strategy. The Ryan Review and the subsequent policy changes in the Army paved the way for the ADF, and broader Defence Enterprise, to build a JPME program that met the needs of a broader workforce.

Major General Mick Ryan, now as the Commander of the Australian Defence College, has spearheaded the ADF and Defence organisation education and training reform. This has led to several key documents that provide a strategic framework for meeting the training and education requirements of the future Defence environments. These strategic frameworks also have a focus on creativity and creative thought and, like their Army counterparts, fail to provide a model that incorporates creative practices into the education process. Instead, they repeat the focus on creativity as an output of the education process.

The Defence Enterprise Learning Strategy 2035, released in 2020, provides an overview of the strategic direction, strategic objectives, resourcing, and responsibilities for ensuring that the training and education programs within the Defence Enterprise are fit for purpose in meeting Australia's future strategic challenges. Much like its Army predecessors, the Defence Enterprise Learning Strategy focuses on developing an intellectual edge through high-quality training and education.[7] However, unlike the Ryan Review, the intellectual edge outlined in the Defence Enterprise Learning Strategy doesn't include creative thinking and problem-solving as a key output of the education process. This is not surprising, however, because this document sets the overall scene, allowing for the details on implementation to be covered in associated operational documents such as *The Australian Joint Professional Military Education Continuum* (JPME Continuum).

The JPME Continuum outlines how the ADF and Defence Enterprise will develop the intellectual edge through its training and education framework. The JPME Continuum mentions creativity concerning thinking, problem-solving, and education delivery eight times.[8] All eight refer to creativity as a critical output of the learning process, rather than the use of creative practices as part of the learning process. In this way, the JPME Continuum echoes its Army predecessors and is further reinforced by publications authored by Major General Ryan.[9] It is clear, from the Ryan Review through to the JPME Continuum, that creativity is valued as a vital component of the intellectual edge that will help the ADF and Defence Enterprise. It is also clear that Defence views creativity as an output and, as such, has no current model for incorporating creative practices into its training and education delivery models.

The JPME revolution begun in Army and carried through to the wider ADF and Defence Enterprise has been successful primarily because it has sought to directly address shortfalls in the training and learning models that need to prepare the organisation for future strategic challenges. None of the policy documents dwell on definitions; in fact, the majority of the documents are written in clear, straightforward language to avoid the jargon that is a hallmark of military doctrine. However, the lack of a definition of the terms 'creative' and 'creativity' in this case lead to a misconception of the value of creativity in developing the intellectual edge. Specifically, creativity has more value as a learning process to develop an intellectual edge in the members of the ADF and Defence Enterprise. This is counter to the use of the term as an output of the learning process in the training and education documents discussed above. It is time for the ADF and Defence Enterprise to break good—reposition creativity as a crucial part of the learning process, rather than an output. First, however, a definition of creativity is required.

Defining a term as common as 'creativity' can be challenging, especially when attempting to place it in a specific context outside of its regular use. The two Macquarie Dictionary definitions of creativity are not helpful for our purpose. The first states that creativity is 'the state or quality of being creative' and the second is less helpful, stating that creativity is 'creative ability'.[10] Macquarie's definitions of creative, 'having the quality or power of creating' and 'resulting from originality of thought or expression', are more helpful, but still come up short concerning the training and education of Defence personnel.

Sir Ken Robinson explores many definitions of creativity in the context of education in his book *Out of Our Minds*. He offers a definition that applies to the use of creativity in the learning models of the ADF and Defence Enterprise. The definition put forward by Robinson states that creativity is 'the process of having original ideas that have value',[11] and he goes on to emphasise the critical elements of 'original', 'value' and 'process'. Creativity, Robinson continues, 'is a process more often than it is an event'.[12] This distinction, or rather gradation, is essential. The determination of *creativity as an output* of the training and education reforms of the ADF and Defence is not incorrect; however, it is not as useful for learning as the view of *creativity as a process*. The incorporation of creativity in the learning process through the introduction of creative practices can break good on the current JPME reforms and develop the thinking the intellectual edge will demand of future members of the Defence Enterprise.

The term 'creative practice', much like the terms 'creative' and 'creativity', has a multitude of definitions that are often specific to the field in which they are being discussed. One key point, however, is that creative practice does not necessarily refer to the introduction of artistic applications for aesthetic purposes. Creative practices are focused on the discovery of knowledge and learning for education and application in other fields. A useful corollary is the application of other academic fields, such as maths or history, to achieve tangible outcomes. Creative practice is, in essence, a process of applied creativity to achieve a substantial learning or research outcome. The use of creative practices is not new to the ADF or Defence Enterprise; however, it is not an often used, or understood, model in the training and education institutions and workforce across Defence.

Two recent, and similar, examples of creative practice use within the Defence Enterprise are the science fiction writing competition run on the Australian Defence College's JPME web portal, *The Forge*, and the ADF's Robotics and Autonomous Systems 2040 creative writing for capability development competition.[13] Both of these are examples of engaging in a process to generate value through original ideas. It is unlikely that pre-2016 a creative writing competition would have been conducted to inform the development of future capabilities being explored by a branch of the Joint Capabilities Group. This positive development can be exploited further by incorporating other forms of creative practice across the JPME Continuum. Another critical element of a creative practice is ensuring those engaging

in the creative process are provided boundaries within which to be creative and mentorship to guide them through the creating process. The introduction of limits and mentorship is essential in ensuring the creative practice is of value to the participants.

The final example of creative practice for training and education is an activity that I ran as part of the recent Logistics Officer Basic Course at the Army School of Logistics Operations. The program was designed as an eight-week course that centred around students developing a single sentence which defined war. Each week students participated in an hour-long workshop that introduced a new topic on the theory of war and participated in a discussion during the workshop and in an online classroom on their draft definitions. After the eight weeks, the students presented their final definition to the class. This is an example of a limited out, a single sentence, creative practice program that can increase the learning outcomes of an established Defence training and education program. By focusing on the creative process to deliver a small, manageable creative output, the students engaged in theoretical material that would generally be delivered less engagingly. The delivery of this program was not resource intensive, using tools already in use on the course and requiring a minimum of one hour of engagement with the students each week.

Creativity is more often a process than an output. The inclusion of creativity as an output in the learning frameworks of the ADF and Defence Enterprise highlights the importance Defence leadership places on the role creativity plays in developing the intellectual edge. Unfortunately these frameworks don't provide a methodology for achieving creativity as an output. By incorporating creative practices and reframing creativity as a process within the learning models, the ADF and Defence Enterprise can provide the workforce with the intellectual edge needed to meet the strategic challenges of the future.

Endnotes

1   A Brandt and D Eagleman, 2017, *The Runaway Species* (Edinburgh: Canongate Books), 144.

2   Brigadier Mick Ryan, 2016, *The Ryan Review: A Study of Army's Education, Training and Doctrine Needs for the Future* (Canberra: Commonwealth of Australia), 52, 53, 123.

3   Ibid., 50.

4   Ibid., 27.

5   Australian Army, 2017, *Evolving an Intellectual Edge: Professional Military Education for the Australian Army* (Canberra: Commonwealth of Australia), 4.

6   Australian Army, 2017, *Land Warfare Procedures—General 7-1-2: The Instructor's Handbook* (Canberra: Commonwealth of Australia), 141, 143.

7   Department of Defence, 2017, *Defence Enterprise Learning Strategy 2035* (Canberra: Commonwealth of Australia), 11.

8   Department of Defence, 2020, *The Australian Joint Professional Military Education Continuum* (Canberra: Commonwealth of Australia), 16, 18, 22, 25, 37, 50, 57, 60.

9   M Ryan, 2019, *An Australian Intellectual Edge for Conflict and Competition in the 21st Century*, Centre of Gravity Series Paper 58 (Canberra: Australian National University), 4, 10; M Ryan, 2020, 'The Intellectual Edge: A Competitive Framework for Future War and Strategic Competition', *Joint Forces Quarterly* 96: 7.

10 Macquarie Dictionary iOS application, accessed 30 August 2020.

11 K Robinson, 2017, *Out of Our Minds* (Chichester: Capstone), 129.

12 Ibid., 129.

13 Australian Defence College, 'ADC Sci-Fi Writing Competition 2020', *The Forge,* accessed 30 August 2020, at: https://theforge.defence.gov.au/adc-sci-fi-writing-competition-2020; The Central Blue, 'Call for Submissions: Robotics and Autonomous Systems 2040', accessed 30 August 2020, at: http://centralblue.williamsfoundation.org.au/call-for-submissions-robotics-and-autonomous-systems-2040-the-central-blue-the-forge-and-grounded-curiosity/

Book Review

Trust and Leadership: The Australian Army Approach to Mission Command

Edited by Russell Glenn

University of North Georgia Press, Dahlonega, 2020, ISBN 1940771692, 408pp

Reviewed by Dr Albert Palazzo

Nations may wage wars, but soldiers conduct missions. There was a time when such a distinction did not exist. Warriors slashed and thrust at each other with swords and spears, and when one side broke and ran the battle, and often the war, was over. Today, however, the waging of war is far more complex and prolonged and occurs over far greater distances with a vast array of weapons and systems and with forces of much larger number. Battles are rarely decisive, as Cathal Nolan argues in *The Allure of Battle*. Instead, war is made up of innumerable tasks, each a small step towards the objective and conducted by commanders who cede authority to their subordinates up to the limits of trust. This is the essence of 'mission command'.

Trust and Leadership, the title of Russell Glenn's excellent collection of essays, captures the role of mission command in the Australian Army experience. Trust and leadership is the key to imbuing a force with the ability to employ mission command to manage the scale and complexity of modern war. Commanders must have the skill to convey in clear and understandable language what he or she wants a subordinate to achieve and then stand aside, allowing the subordinate to get on with the job. In return, the subordinate must demonstrate that they have the competency to warrant this trust. Without either, mission command cannot succeed. Although this point is made by each author, from Peter Pederson on the First AIF to Chris Field on the Queensland floods, such is the range of examples that each chapter adds novel insights that strengthen the experience of how the Australian Army employs mission command.

As the authors illustrate, mission command is a transactional form of leadership that is heavily dependent on the interaction between the personalities of the commander and the subordinate. The degree of liberty given to a subordinate is in direct proportion to the faith a leader has in the junior's ability, and in a long war, as Antony Rawlins illustrates in his chapter on Iraq, the personalities can change, resulting in a re-evaluation of trust. But this does not mean that in shorter commitments mission command relationships are more stable. John Caligari outlines the learning that took place during Operation SOLACE in Somalia: as junior leaders improved, their liberty to make independent decisions increased. It is on operations where a leader's true measure is revealed and those who excel gain in trust whereas those who do not find themselves more tightly controlled. The authors pound home the observation that mission command, like most things in war, is an art based on shifting relationships between soldiers aimed at the attainment of the objective, a point that goes to an essential requirement for success—unit cohesion.

Since mission command is a key technique of the soldier's craft, the reader would not be surprised that most of the chapters were written by military professionals. However, Glenn balances the analysis with contributions by several academics, including Meghan Fitzpatrick on Korea and Peter Dean on the South-West Pacific theatre during the Second World War. Both discuss the challenges of applying mission command as the junior partner in a coalition, an analysis of considerable relevance for those serving today.

For the military professional *Trust and Leadership* is mandatory reading. Soldiers at all grades need to understand how mission command can be optimised so that they can manage the complexities of current and future wars. Soldiers of other nationalities will also benefit from a different perspective on a common command technique. The 12 interpretations presented here are either by historians of the first rank or by senior officers of the scholarly bent. They are uniformly of a high standard and Glenn has done a superb job of harmonising different authors into a powerful and consistent message. This book will also find a welcome place on the shelf of the serious student of Australia's military past, because to understand the method commanders used to achieve their objectives helps to explain how the Army wages wars. It is rare for a book to offer relevance for two different audiences. It is testimony to the importance of *Trust and Leadership*, and to the knowledge of its contributors, that it does so.

Book Review

This Is Not Propaganda: Adventures in the War against Reality

By Peter Pomerantsev

Faber, 2019, ISBN: 9780571338634, 300pp

Reviewed by Major Lee Hayward

This is Not Propaganda is by no means an easy read. This is not because it is not well written but because Pomerantsev takes the reader on a difficult and confronting journey through a subject that has not really established itself in the Western consciousness. The subject is information warfare, and how effectively authoritarian figures are able to use information to manipulate and control entire populations. Pomerantsev explores societies where information has become the most potent, misunderstood and underrated weapon of warfare. He has interviewed disinformation experts in countries including the Philippines, the former Yugoslavia, Syria, Mexico and Russia, and he uses their knowledge and insights to illustrate the alarming effects disinformation can have on a population.

The book blends biography and investigative journalism into six sections, interspersed with family memoirs. While the personal touches make the book more relatable, the one criticism of this book is that as it moves

between memoir and interview it can be confusing to follow. However, it is worth persevering. The book raises many important, disturbing questions about information and technology, challenging any argument that 'the internet has set us free'.

This first part of the book introduces the reader to the phenomenon of 'troll farms', with a focus on the Philippines and Russia. The author provides first-hand accounts of the level of coordination and analysis that goes into the operations of these farms, interviewing those who work in the farms as well as their victims. Part two explores how powerful authoritarian regimes from Russia to the former Yugoslavia were able to harness the power of information to undermine and threaten the very freedoms information and technology were supposed to bring. Pomerantsev's interviews with pro-democracy revolutionaries provide valuable lessons on the way disinformation is used to distort truths or undermine messages, causing confusion and chaos.

Parts three and four explore the reality of what is commonly understood to be a 'post-truth world'. The author not only relates just how easily truth and fact can be distorted but also highlights how little value is placed on truth in the international arena. In doing so, Pomerantsev invites the reader to contemplate the uncomfortable question of why it is that videos and live footage of Russians in Ukraine or atrocities and human rights violations in Syria do not result in global outrage on a massive scale.

Online populism is the focus of part five, reminding the reader that it is not only autocratic nations and their populations that are exploiting or exploitable by disinformation. Pomerantsev relays stories from the United Kingdom to show how religious extremism, and even polarisation between those on either side of the Brexit debate, can be attributed, in part, to online disinformation campaigns. In the final part of the book, the author offers solutions as to how interested individuals can do more to cope with or fight against the problems of disinformation.

I would recommend this book to anyone interested in developing a deeper understanding of how disinformation can undermine societies from within and from outside, rewrite history and be used to control countries more effectively than physical force. This is not, however, a light read or a book for those who are not yet ready to understand that information is not just propaganda.

Book Review

On Obedience: Contrasting Philosophies for the Military, Citizenry and Community

By Pauline Shanks Kaurin

Naval Institute Press, 2020, ISBN 9781682474914, 274pp.

Reviewed by Chaplain Nikki Coleman, PhD

One of the central values of the military is that soldiers, sailors, airmen and women will obey all legal orders. Without obedience, it is argued, there will be chaos on the battlefield, and the good order and discipline of the military will be eroded to the point where it can no longer function. The image of the solider disobeying orders, laying down their weapons and refusing to fight is a strong one that I am sure keeps many a sergeant major awake at night. It is surprising then, that this central value of obedience, which undergirds so much of the military ethos, is not mentioned in the values statements of most of the world's leading militaries. Similarly, up until now, there has been very little discussion of the nature of obedience and its impact on military members themselves.

Pauline Shanks Kaurin's new book *On Obedience: Contrasting Philosophies for the Military, Citizenry and Community*, starts a discussion that is long overdue. The first half of the book is an in-depth and nuanced philosophical treatment of obedience in the context of the military and the broader civilian political community and the second half of the book looks at more practical and concrete implications of obedience.

While those of us who are short on time might be tempted to skip the first half of the book and go straight to the practical applications, that would be robbing us of some vital discussions around the issue of obedience, which should be something that is vital to the understanding of all military members. All members of the military, from the Private all the way up to the Chief of the Defence Force must obey orders, either of their commanding officer or NCO, or in the case of the Chief of the Defence Force those orders given by the Prime Minister and Governor General.

One of the great strengths of Shanks Kaurin's work is that she has defined obedience, which raises the question for me, that given how central to military culture obedience is, how is it in 2020 that we have not moved beyond a dictionary definition of obedience? The definition offered by Shanks Kaurin is that obedience is '*the intentional and voluntary carrying out of orders or commands, given by a commander or other authority figure who represents legitimate political authority in action*', but also recognises that it is a starting point for the discussion on obedience, as a wider debate on these issues is long overdue.

Shanks Kaurin also poses many questions for us to consider –

- Where exactly is the line between obedience and disobedience? Is there a moral obligation (as opposed to legal obligation) to obey or disobey an order?

- Is the 'slow roll' in carrying out an order by subordinates a type of disobedience, a delayed or renegotiated obedience or something else entirely?

- How should we think about obedience in contemporary political communities?

Just as we shouldn't have favourite children, perhaps we shouldn't have a favourite chapter of a book, but I have to say, that chapters seven and eight of this book got me very excited about this topic and wanting to open up the discussion of this topic further. It is in this section that Shanks Kaurin moves into the practical and concrete examination of obedience and asks us to consider how we each think and relate to obedience as a virtue. In particular, there is an emphasis on judgement, discretion and obedience as a kind of negotiation, underpinning the relational aspect of obedience and loyalty in the military profession.

Writing about obedience in military culture from a philosophical perspective could very easily veer into the 'impressive on my bookshelf but not actually read' category of book; however Shanks Kaurin's accessible writing style, combined with her liberal use of case studies throughout the book, makes this not only a good reference for discussion on obedience, but makes it a vital book for professional military education and professional development. This book had me itching to highlight and underline passages, as well as put exclamation marks and notes in the margins. As someone who is also a researcher working on obedience (my own book is coming out with Routledge in 2021), I was delighted to find that I was learning new things about the topic of obedience, especially in regards to connections that Shanks Kaurin has made that I had not previously seen.

Book Review

No Visible Bruises: What We Don't Know About Domestic Violence Can Kill Us

By Rachel Louise Snyder

Scribe, Melbourne, 2020, ISBN 9781925849820, viii+307pp

Reviewed by Chaplain Darren Cronshaw

In the face of the reality and suffering of family and domestic violence (FDV), over the last decade Defence has increased support and referral services for those affected, and developed focused training for all members. As a chaplain, I am eager to understand the complex dynamics that trigger or allow FDV to occur. How we can better help victims to access help? How can we better help soldiers avoid abusing their families and help perpetrators develop healthy and respectful behaviour? And how can those in command, mental health and chaplaincy roles foster a culture more conducive to reducing the incidence of FDV? These are critical personnel questions that led me to the book No Visible Bruises.

Rachel Snyder is an investigative reporter who over the last decade has sought out stories and experiences of those affected FDV. She prefers to use the label 'intimate partner terrorism', maintaining that part of the problem is seeing the issue as 'domestic' rather than the 'criminal' and even 'terrorist' behaviour that it is. The book offers some helpful global

overview of the issue. Snyder quotes former UN Secretary-General Kofi Annan labelling violence against women and girls as 'the most shameful human rights violation'. A UN report explained that 50,000 women were killed by partners or family members in 2017, making home 'the most dangerous place for women'. The global statistics are staggering, but the most impactful contribution of this book is the stories of the lived experience of individual victims, perpetrators and responders.

The first section focuses on the realities and experiences of victims. The narrative of victims like 'Michelle', who was killed with her two children by 'Rocky', illuminates the folly of asking 'Why didn't the victim leave?' Such questioning disregards the multilayered forces at work, often including alcohol, addictions, mental health, poverty, narcissism, manipulation, loss of agency, power imbalances and coercive control. The better question to ask, Snyder suggests, is 'How do we protect this person?' Interwoven with the stories are some of the best tools developed over recent decades, especially Jacquelyn Campbell's 'Danger Assessment', which maps indicators and timelines to warn service providers of those most at risk. Neil Websdale's obsession with after-action reviews of what goes wrong in responding to FDV also made fascinating reading. The section includes insights into the kind of 'code language' victims may use and helpful questions to ask.

Snyder turns her focus from victims to perpetrators in the second section. It is a brave journalistic move to ask about violence from the perspective of abusers. These stories show the effects of toxic masculinity and describe some programs that cater for abusers. For example, an 'RSVP' program developed for use in prisons uses a manalive™ curriculum, principles of restorative justice and a peer-led group to help men realise their attitudes about male roles and the lies they have been told about violence. Snyder weaves theoretical and therapeutic frameworks into the narratives.

The three that I particularly appreciated were, first, Brené Brown's work which shows how shame is organised by gender: for women it often involves a competing set of expectations regarding family, relationships and work; whereas for men it is usually about not being perceived as weak. Second, Ellen Pence's 'Power and Control Wheel' illustrates how an abuser uses various ways to exercise control: fear, isolation, emotional abuse, using children, bullying, denial and blame, financial control and verbal threats, as well as brute force. Third, David Adams has identified that perpetrators are often clinically narcissistic—obsessively concerned with their own needs

and not aware of their impact on their victims. He also notes that friends of perpetrators are often surprised to hear of their FDV. They can be charming and funny and do not necessarily display their anger to the world. Adams comments, 'The most surprising thing is that [abusers] seem like normal guys. The average batterer is pretty likable'. In organisations like Army, this is one of the big hindrances to identifying abusers, because colleagues tend to think, 'He's a good guy and good at his work' and then overlook character flaws, misogynist attitudes and dysfunctional behaviour.

The third section describes stories of change-makers on the front line who respond to FDV and FDV homicide—advocates, helpline counsellors, refuge shelter providers, the #MeToo movement and law enforcement. One important lesson is that FDV needs to be confronted and disrupted at the misdemeanour phase—we need respect for women at all levels, and for disrespect and inappropriate behaviour to be called out wherever it occurs. Snyder has learned from and celebrates heroes like Detective Martina Latessa, a dedicated FDV detective in Cleveland. Latessa emphasises the importance of listening to victims—inviting their voice and not treating them as weak and powerless: 'These victims of domestic, they never have a voice. They can't have an opinion at home. [Abusers] tell them shut up; don't talk to me … So if I sit down with them you'll see them struggle to get the story out.' Latessa warned Snyder she 'cusses' to underline her point about the need for patience and listening as part of good investigative technique: 'Sometimes policemen and detectives need to shut the fuck up and listen.'

The main value of No Visible Bruises is the opportunity it gives readers to listen to the voices of victims, perpetrators and responders. It offers sobering, heartfelt, tragic but helpful perspectives that have informed my chaplaincy support and character training. I recommend it to other chaplains, service providers and commanders across Army and Defence.

> *For confidential support for anyone affected by family and domestic violence, phone 1800RESPECT (1800 737 732). Defence members are encouraged to reach out for support through their chain of command, chaplains and/or Defence Community Organisation (DCO) on 1800 624 608 or defencefamilyhelpline@defence.gov.au.*

Book Review

A Research Agenda for Military Geographies

Edited by Rachel Woodward

Elgar, 2019, ISBN 9781786438867, 215pp

Reviewed by Major Cate Carter

Military geography uses tools and techniques of the discipline of geography to solve military problems. In essence, it studies military operations through a geographic lens. As the editor of this volume, herself a leader in military geography, tells us, 'military geographies invite study at scales from the global and international, through the national and regional, to specific urban areas or rural localities, through to the distinctively local and individual'. It is indeed a rich and fascinating area of inquiry.

The book consists of 13 chapters, written mainly by American and British scholars but with welcome contributions from researchers in Canada, South Africa and Singapore. It is the work of these last two authors that I read first, and that I think will strike a particular resonance with Australian Army readers. Chih Yuan Woon's chapter, 'Towards an Everyday Military Geography: Materialities, Actors, Practices', uses the Armed Forces of the Philippines and a case study of military intervention in Mindanao to

observe military civilian interactions involving local communities. Woon uses examples of 'everyday' encounters between soldiers, locals, objects and spaces to break down the way the military is seen as a homogenous and sometimes threatening force into one which instead represents the agency of individual soldiers. The author specifically focuses on the activities of the soldiers of Eastern Mindanao Command in locating their peace-building activities in the homes, villages and children's spaces of Mindanao.

In a chapter titled, 'Spirituality and African Military Geography: Soldiers' Deployments', Edmore Chitukutuku and Godfrey Maringira write about the way that soldiers of the Zimbabwe National Army engage with their landscapes of deployment. They argue that in the African context, 'military geography is also understood as being concerned with phenomena that we cannot see, that we have not heard and cannot be touched'. In their study, the authors explain how the Zimbabwe guerrilla fighters' spiritual understanding of the landscape (to which the fighters attribute their success in the War of Liberation) has been passed down to the members of the new Zimbabwe National Army who 'evoke and engage with ancestors … in their engagement with landscapes of deployment so that they can live safely and operate in it'. The authors offer examples of the kinds of control the invisible terrain has over soldiers, in captivating stories of prohibited places, places where fires could not be lit, meaning associated with certain animals, and protection rituals carried out by ZNA Commanders. As one ZNA Lance Corporal reports: 'Here in Africa, we are not only faced with our guns and other war artillery when out there in the bush but we are also fighting against spirits and principalities of darkness, which dwell in these landscapes.'

Continuing the theme of 'places with attributed meaning' is Brittany Meché's chapter on the deserts of the African Sahel (the countries bordering the Southern Sahara). Meché asks why arid spaces have become targets for military governance and promoted in colonial and orientalist terms as harsh, inhospitable and 'inherently dangerous'. The Sahel, she claims, has become 'a type of security laboratory where a number of powerful states and international organizations experiment with forms of intervention at multiple scales'. This thought-provoking chapter discusses the way development information is 'repackaged' as a security threat and promptly given a military solution. The author warns that such practices will only exacerbate climate change driven conflict in the future.

Other chapters include accounts of ways in which military activities interact with the law, genocide, nuclear warfare, economics, aerial spaces, theatre, military masculinities, and environmental politics. Some are exceedingly readable for people unfamiliar with the subject (bravo Craig Jones (law) and Matthew Kearns (military masculinities)!); others are less accessible. However, only the most dedicated student of military geography needs to read the whole book. Everyone else should take the chapters that relate to their field of interest, apply the ideas to an Australian setting and start a conversation with those scholars to incorporate a military geographical perspective into their work!

The final chapter, however, is a must read. Matthew Rech and Richard Yarwood imagine post-military geographies—spaces which have been uncoupled from their military origins and roles. They do this through an ethnographic commentary of their visit to Plymouth at the UK public celebration known as 'Armed Forces Day'. Drawing on Martin Shaw's 1991 book *Post-Military Society*, the authors consider the continuation of the post-Cold War practice of restructuring social and cultural life from a 20th century military society to one in which military workforces and infrastructure transition to civilian use. At a time when we are caught between post-war transition of veterans and calls to mobilise the citizenry and Reserve, such ideas are indeed timely. This collection of diverse military scholarship is essential mind-broadening reading for all current military practitioners and scholars.

Book Review

Vietnam Vanguard: The 5th Battalion's Approach to Counter-Insurgency, 1966

Edited by Ron Boxall and Robert O'Neill

Australian National University Press, 2020, ISBN 9781760463328, 430pp

Reviewed by Major Andrew Maher

Vietnam Vanguard is an important work in the documentation of experience, lessons and perspectives from Australia's experience in the Vietnam War. The book uses a collection of personal narratives, woven together by the editors to provide insight into life in an infantry battalion on operations. Its anecdotes seem timeless, with a hint of the larrikin behaviour for which Australian Diggers are renowned. This gives a sense of comfort, like an old worn horse-blanket, similar to the style of many war novels of this time. For some, this might be positive, reflecting old memories of their own service or experiences. For me, I had hoped for more.

Despite the title, the first two chapters offer little discussion about insurgency and counterinsurgency theory. A 'theory of victory' in 5 RAR's approach is therefore absent from the initial discussion, in particular an explanation of the mechanism of Giap's vision of 'People's War' and how

ordinary peasants were intimidated, coerced or cajoled into supporting the insurgents. Examination of the adversary's strategy, evidenced through events, is instead annexed. The resultant understanding of 5 RAR's 'counter-insurgency' approach of wresting control of the population from the communists is therefore limited.

Oddly, an article written by the Commanding Officer of 5 RAR, Lieutenant Colonel John Warr, is also annexed and receives almost no reference from within the narrative. This article, published by the *Australian Army Journal* in November 1967, is excellent in introducing the counterinsurgency approach undertaken by 5 RAR and the lessons learnt through the process. Indeed, the promulgation of such lessons is recognised in Warr's Distinguished Service Order citation. That this is the final aspect with which the reader engages is most disorientating given the stated purpose of the book.

Vietnam Vanguard might have been far better organised by leading with Warr's own words about his guidance based upon his understanding of the enemy. If this were followed by the annexed explanation of the Viet Cong's history of operations prior to the arrival of 5 RAR, the reader would be very well orientated to what comes next. This approach places the tactical vignettes in the appropriate context. Therefore, to those interested in reading this book, I recommend such an approach.

The book only superficially discusses how Australia's partners in the province pursued their assigned roles, and thus the full picture of the counterinsurgency strategy applied in Phuoc Tuy remains opaque. Indeed, it is not until well into the book that discussion of adviser roles emerges— again, despite the emphasis placed in Warr's article on the necessity of such presence to prevent Viet Cong control over the population. That these advisers were thrown into unenviable situations by the necessity of operations illuminates further concerns about just how effective unity of effort was through the integration of counterinsurgency forces at the provincial level.

The focus of the book is clearly the aggressive employment of light infantry patrols to hunt insurgents—a focus that is somewhat disquieting in what I expected to be an examination of 'the 5th Battalion's approach to counter-insurgency'. *Vietnam Vanguard* thus prompts the reader to the conclusion that the 'lessons re-learnt' conducting counterinsurgency in Afghanistan were in fact 'lessons not completely learned' by the

Australian Army. In this sense, this book serves as a highly useful addition to the literature, challenging a myth of Australian expertise and informing the debate regarding how Australian counterinsurgency doctrine developed, was applied and evolved—albeit that such a conclusion is an indirect one.

An alternative title for this book, and a useful contribution to understanding the contemporary challenges faced by the Australian Army, would have been 'Vietnam's Vanguard: The 5th Battalion's Challenges in Mobilising for an Ambiguous War'. I say this as the book illuminates the severe equipment and manning challenges created by Defence policies over the post-Second World War period prior to the decision to increase the military commitment to Vietnam. Operations officer Max Carroll notes that 'several hundred reinforcements' marched into the unit in January and early February 1966, with the advance party deploying from 20 April 1966. With this single sentence, the scale of the mobilisation challenge—from administration to individual training, to collective training for battalion-level operations—faced by 5 RAR is made evident. This theme is then reinforced by the hundreds of anecdotes from all ranks woven throughout the book.

A further interesting lesson from the book pertaining to mobilisation is that of illuminating the development of officers and NCOs for war. Warr was initially posted into 5 RAR in May 1965 as a Major, having completed staff college, in the Executive Officer role. In January 1966, he was promoted to Lieutenant Colonel and assumed command. Two of 5 RAR's Majors had completed staff college, one of whom, Max Carroll, was the Officer Commanding Support Company, and therefore he assumed the Deputy Commander role. This pattern of subordinates organisationally being prepared to assume the role of their commander is a common but unstated theme throughout the book.

In *Vietnam Vanguard*, the editor's approach is admirable. By spanning broadly and deeply across ranks and trades, the book provides a kaleidoscope of perspectives. This approach illuminates the way in which the complexity of war manifests in a personal way for the individuals involved. This compilation therefore differs from many other books on the Vietnam war, by being more than a top-down reflection of command and strategy, and a bottom-up reflection of trial and trauma. In sum, *Vietnam Vanguard* commendably presents a holistic reflection of the history of the 5th Battalion's operations in Phuoc Tuy in 1966.

Authors

Nicholas Bosio

Lieutenant Colonel Bosio is currently a Directing Staff at the Australian War College. In 2019, he was Chief of Army Scholar researching military and systems thinking. He was also the Commanding Officer of the 6th Engineer Support Regiment. His postings cover tactical, campaign and strategic positions in command and staff roles, both within Australia and on operations. In 2015, he was the Chief of Campaign Plans, Combined Joint Task Force—Operation Inherent Resolve (Operation OKRA).

Nicholas Brown

Lieutenant Colonel Brown is a General Service Officer with a regimental background in Combat Engineering. He has enjoyed a broad range postings, including a two year secondment with the United States Indo Pacific Command, Hawaii. Since completing Command and Staff College in 2015 he has been focussed almost exclusively on developing Army's relationships with international partners and industry. He is currently a Chief of Army Scholar.

Mick Cook

Lieutenant Colonel Cook is an Australian Army Reserve officer currently posted to the Australian Army Research Centre. During his military career he has undertaken roles in training and education development. Mick won the 2019 Futuro Award at the University of Canberra for his teaching in the undergraduate program and is a member of the UNSW Defence Research Institute.

Jack Cross

Major Cross has served in Special Operations Command for six years and has been responsible for the management and deployment of sensitive communications and information systems throughout this time. Most recently he deployed as an Electronic Warfare and Liaison Officer in 2016 as part of Operation OKRA. As such, his views are grounded in practical experience of both defending and attacking modern communications networks.

Gabrielle Hammond

Corporal Hammond enlisted into the Australian Regular Army in January 2011 as an Operator Movements in the Royal Corps of Transport and in 2013 transferred as a Groundcrew Mission Support Operator in the Australian Army Aviation corps. She has been posted to JMCO Townsville, the Australian Defence Force Academy, 5th Aviation Regiment, 1st Recruit Training Battalion and 1st Aviation Regiment. She was posted to 1RTB for three years from 2017 to 2019 and in 2019 she was temporarily attached to the Army Recruit Training Centre in the Recruit Development Wing as the Platoon Sergeant for Army Pre-Conditioning Program 25.

Richard Niessl

Lieutenant Colonel Niessl is an Infantry Officer in the Australian Army. He has operational experience in East Timor, Iraq and Afghanistan. Lieutenant Colonel Niessl deployed to Rifle Company Butterworth rotation 38 as a Platoon Commander with B Company 3 RAR in 1997, and is currently serving as the Staff Officer Grade One, Southeast Asia at Headquarters 1st Division. He holds a Bachelor of Arts (Honours), Master of International Relations and Master of Security and Defence Studies. Lieutenant Colonel Niessl gratefully acknowledges the assistance provided by Ms Megan Screen from Defence Library Services, Brisbane, in supporting his research for his article.

Richard Williamson

Captain Williamson has 15 years' experience as a combat arms officer and has spent the last five years working on Defence-sponsored procurement projects. His current role is heavily weighted towards the Strategy and Concepts phase of the Capability Life Cycle and leverages close involvement with international, state-based and federal innovation programs. He recently completed his Masters in Systems Engineering at the Canberra campus of the University of New South Wales, with a specialisation in testing and evaluation.

About the Australian Army Journal

Today, the *Australian Army Journal* is published by the Australian Army Research Centre but was original founded by Colonel Eustace Graham Keogh in 1948.

Enlisting in the AIF in 1916, as an underage 17 year old, he sailed with the 3rd Reinforcements of the 1st Australian Wireless Signal Squadron and served as a driver during the Mesopotamian campaign. He served again during the Second World War as a Major in the 2/24th Infantry Battalion during the campaigns in Greece, Crete and Syria, and later New Guinea.

After the war, and various staff and training roles, he was given the task of editing, publishing and distributing the Army Training Memorandum which was a training journal. Keogh later turned this into the *Australian Army Journal* and was its first editor.

The original, and now enduring, aims of the *Australian Army Journal* included stimulation of thought and encouragement of the study of military thought, and to provide the foundations for an Australian military literature to which officers were encouraged to contribute. So proficient was Colonel Keogh in fulfilling this through the *Australian Army Journal* that his role expanded and soon he was writing lectures, speeches, and other special articles for the journal, as well as a number of books.

The annual E.G. Keogh Visiting Chair (a travelling event hosted by the Australian Army Research Centre) is named in Colonel Keogh's honour.

How to Contribute

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For the latest guidance on writing for the Australian Army Research Centre, please visit **researchcentre.army.gov.au**

About the Australian Army Research Centre

The Australian Army Research Centre (AARC) was established in mid-2016 in accordance with the wishes of the then Chief of Army Lieutenant General Angus Campbell. It is the successor to the Land Warfare Studies Centre. It sits as a Directorate within the Army's Future Land Warfare Branch in the Land Capability Division of Army Headquarters.

Role

The AARC conducts research and analysis, fosters debate and advocates the value of the joint land force to Government, academia and the public.

Charter

The AARC is dedicated to improving the Army's understanding of the profession of arms. Its purpose is to promote the contribution of the land force to joint operations in peace and war. The AARC conducts applied research on the employment and modernisation of Army with particular reference to Australia's circumstances and interests. It raises the level of professional debate on war and its challenges within the Army, the nation and international audiences. The AARC enhances the professionalism, leadership and ethical awareness of Australian soldiers and officers.

To disseminate ideas and to promote debate, the AARC maintains a vibrant publication and seminar program.

The AARC contributes to Army's understanding of the future character of war and the advancement of land power through a number of initiatives. These include:

- organising and conducting the Chief of Army's Land Forces Seminar as a part of the Land Forces;

- contributing to the development of strategic concepts, strategies, and force structure options;

- assisting in the development of Army doctrine and facilitating its incorporation into future Australian Defence Force joint doctrine;

- managing the E.G. Keogh Visiting Chair and the Staff Ride Programs;

- managing the Army Research Scheme; and

- mentoring the work of the Chief of Army Scholars and Honours Students.

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