ADF
Australian Defence Force

Australian Journal of Defence and Strategic Studies

Vol. 5 No. 2

Australian Journal of Defence and Strategic Studies

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The *Australian Journal of Defence and Strategic Studies* is published twice a year by the Department of Defence.

It is the flagship academic journal of the Australian Defence Force.

Editorial review board

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Editor: Dr Cathy Moloney
Managing editor: Fiona Mackrell
Design: Linden Graphics
Printed in Australia by Elect Printing
Front cover image by lim_pix under licence via Shutterstock (ID 1020754705)

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National Library of Australia
ISSN 2652-3728 (PRINT)
2652-3736 (ONLINE)

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Australian Journal of Defence and Strategic Studies

Volume 5, Number 2, 2023

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Editorial

In the weeks leading up to this issue's release, topics that usually dominate the Australian national security landscape have been sadly overwhelmed by the savagery of the Israeli-Palestine conflict, displacement and regional struggles in Azerbaijan and Armenia, and the ongoing war between Russia and Ukraine. In these times, we can be too easily distracted from persistent concerns that require our attention, and the scholars and commentators who invest in keeping our understanding of these important topics relevant and up to date. Therefore, this issue reflects on a wide range of topics that often times can pass under the radar as our attention is drawn to the urgent. It is in our interest to appreciate that the following articles and commentaries address and acknowledge long-term matters that are equally as important to our understanding of Australian national security interests: domestically, regionally and globally.

Our peer-reviewed articles cover a spectrum; beginning with Associate Professor Hashim's article countering the long-held view within strategic studies scholarship that claims traditional conventional war between states (inter-state war) is now 'dead' and intra-state wars constitute the new reality and the future. The focus of his article addresses the argument that conventional war has been superseded by other kinds of war and argues that the role of conventional war in the future is uncertain.

Given conventional warfare is the basis for the majority of military planning, understanding our alliances and our regional partners is quintessential for Australian strategic thinkers and campaigners. To this end Peterson, Barton, Azbarzadeh, Roose and Hewes offer an illuminating view of Australia's nearest neighbour – Indonesia. Their article explores two potential scenarios: how might Indonesia respond if China launched a military 'reunification' campaign against

Taiwan or if China sought to unlawfully capture territory in the South China Sea? They conclude that Indonesia would, in either scenario, benefit from – and most likely pursue – deeper engagement with the United States and Australia, among other Western countries, thereby ensuring greater collective balance against China.

Indeed, with ongoing research now broadening the scope of what constitutes national security issues, Hughes, Longden and Simsek argue that the implications of climate change for national security in the Indo-Pacific are profound. One strategy for assessing the possible effects is integrated assessment modelling (IAMs), which is designed to study future change, including the effect of policies on climate pathways. The authors assess the potential application of IAMs to the practice of strategic foresight in long-term national security strategy.

Finally, Devereaux tackles the ongoing and much discussed area of nurturing strategic thinking in Australia. He argues that unless leaders act now and encourage a *culture* of valuing thinkers, strategic thinking will fail to be recognised and its value lost; talented individuals will depart for cultures that better embrace innovation and creativity, needlessly increasing risks in our national security community.

For our readers needing a quick refresher, our commentaries offer a range of areas to whet the appetite. Chris Field's commentary builds on his integrated campaigning expertise proposing insights into fighting power. He argues three components of fighting power – intellectual, moral and physical – should be considered as a system, where each component is dependent on the others. Peter Layton utilises a grand strategic framework to better understand the rationale behind China's grey-zone actions to determine how they may evolve and uncover some possible weaknesses in China's strategy. Scott Richardson follows with an examination of the implications of the growing preponderance of precision munitions and argues that this will affect the strategic, operational and tactical levels of war in ways that are yet to be fully realised. Finally, Christopher Johnson posits Australia is walking along a strategic tightrope in Antarctica, balancing science on one hand, and diplomacy on the other. He argues Australia is taking a simple but disconcerting approach, akin to 'don't look down'. Central to Johnson's argument is that Australia cannot ignore the nexus between science and diplomacy is becoming unbalanced, as states prioritise their own strategic interests over the common good.

This issue closes with a selection of excellent book reviews to add to the Christmas list of the discerning reader, but not before another thoughtful and indeed crucial review essay by Professor Michael Evans, the General Sir Francis

Hassett Chair of Military Studies, titled ‘Defence by denial: American military strategy in the twenty-first century and its implications for Asia’.

This year has borne witness to significant shifts in global, regional and domestic politics and security; some devastating and some uplifting, but all educational. On a personal note, the editorial team here have also moved through trials and tribulations of our own changes and have sadly lost members of the board, mentors and leaders in the ADF. In this issue we acknowledge the loss in March 2023 of Rear Admiral James Goldrick, AO, CSC, RAN (Rtd) with a moving tribute by David Stevens.

So as the weather warms up in the southern hemisphere and our readers up north settle into the cooler months, we look forward to seeing you again in 2024 and from the team here we wish you all a safe and happy holidays to read, relax and enjoy!

Dr Cathy Moloney

Editor

Conventional war is dead! Long live conventional war?

Ahmed S Hashim

Introduction[1]

Over the past half century, academics of various persuasions have subjected the professional strategic studies and war studies communities to two strident claims.[2] The first is that war is costly, normatively and socially repugnant to civilised societies, and of little benefit, having outstripped its usefulness in the globalised world of the late twentieth and early twenty-first centuries. The second claim is that traditional conventional war between states (inter-state war) is now 'dead' because the character of war has changed so much since the mid-twentieth century; rather, they say, wars within societies – intra-state wars – constitute the new reality and the future.

The focus of this piece is on addressing this latter claim concerning the decline of conventional war and the debate it has engendered over the years. Specifically, this paper counters the argument that conventional war has been superseded by other kinds of war (wars which have been given all kinds of esoteric names) and that the role of conventional war in the future is uncertain. While acknowledging that the future is uncertain, I nonetheless find this argument on conventional war's relevance unconvincing for many reasons, especially as proponents of the demise of conventional war conceptualise war as either conventional or unconventional.

1 The author would like to thank several colleagues in the field for their incisive comments on various drafts and two anonymous reviewers.

2 Most of those who argue the changed character of war has killed off conventional war come from the security studies subfields of peace studies or terrorism and insurgency studies. Martin Van Creveld, 'Modern conventional war: an overview', paper prepared for the US National Intelligence Council 2020 Project 'Mapping the global future', 2004; available via https://indianstrategicknowledgeonline.com

The death of conventional war was disconcerting purely from a personal academic career point of view. In the 1990s, the indomitable Professor William Kaufman, one of my advisers at MIT told me: don't focus on nuclear strategy and nuclear war – students and analysts in this field are a dime a dozen – rather focus on conventional war *and* irregular war. Or, words to that effect. By *conventional* wars, my academic adviser meant, *inter-state* wars that were occurring at that time in what was referred to as the 'Third World', most of which had escaped in-depth analysis.[3] By *unconventional* wars, Kaufman meant wars that pit a regular military against an 'irregular' force, which was occurring in various regions around the world.

The goals of the paper are as follows. First, this paper addresses definitions and characteristics of conventional war and those factors that distinguish it from unconventional war. Second, it addresses the debate concerning conventional war's decline. Reports of conventional war's demise are greatly exaggerated and stem from a profound misunderstanding of the dialectical dynamic and interaction between conventionality and unconventionality in war. Finally, it *speculates* on the appearance of conventional war in future war. Will it be a cameo appearance, or will it return as a fully-fledged participant in future war? What might future armies look like? Although, as I will point out below, while the study of past wars in military history is instructive and can provide lessons, it is not necessarily a reliable guide to the future.

What is conventional war?

Definitions of war invariably begin with Carl von Clausewitz, the soldier and philosopher of war all of us know about but few have read. However, in this instance I will put the famous Australian strategic thinker and international relations theorist, Hedley Bull, centrestage because his definition better suits the purpose of this paper. Bull stated that war is '*organized violence* carried on by *political units* against each other'.[4] Organised collective violence is entrusted by a political entity to a subordinate organisation known as the military.[5] That is the purpose of raising, equipping and training an army, as Clausewitz emphasised. Dealing 'death and destruction' is the essence of the profession of arms, and for most armies this has been best done within an activity called **conventional war**.

3 Eliot Cohen, 'Distant battles: modern war in the Third World', *International Security*, 1986, 10(4): 143–171. https://doi.org/10.2307/2538952

4 Hedley Bull, *The Anarchical Society: A Study of World Order in World Politics*, Columbia University Press, New York, 1977, p 184. Authors' italics.

5 I have also relied extensively here on a manuscript of Michael Martin, *How to Fight a War*, Hurst and Company, London, 2023.

Conventional war pits two or more *symmetrically* organised regular militaries of organised political entities – such as empires, city-states and nation-states – in violent interaction with one another: this is, war. While two or more protagonists may be at war in the legal sense, any prolonged violent interaction between them – warfare – is best exemplified in what we call battle. Battle is when armies oppose each other directly and symmetrically, inflicting death and destruction until one side is defeated. This is different from short violent encounters known as skirmishes, ambushes, hit-and-run attacks and raids. These inflict damage, confusion and psychological dislocation, but they rarely, if ever, achieve outright defeat. Historically, the 'allure' of battle and the concept of decisive battles – in which one side convincingly defeats the other –has mesmerised both practitioners and theorists.[6] However, from the nineteenth century onwards, conventional war became more 'total' – requiring greater resources, manpower and finance – wars became attrition slugfests between opposing sides.[7]

What do we mean by symmetric? Symmetry refers to things that are matching or similar to one another in one or a number of ways. There are a number of important points – both conceptual and historical – that follow on from imputing the concept of symmetry to conventional war.

Structurally symmetrical

Almost all regular militaries look the same in that they are structured as distinct traditional services – operating in the domains of land, sea and air. Any society that does not have a specific functional differentiation between the military and civilian domain, cannot have an organised military – usually societies that are nomadic, tribal or 'primitive'. Its males are both warriors and civilians, in a sense, and switch roles easily from one to the other depending on whether their society is in a state of belligerence or is at peace. More complex societies develop conventional military organisations, although until the twentieth century they were restricted to two domains of warfare: land and sea. However, in the past, it was not easy for a power, even a great one, to be equally proficient in both domains, as France found out to its cost in its longstanding duel with rival, Britain in the eighteenth and nineteenth centuries. In modern and contemporary times, other domains – air, space and cyber – entered the scene, and beginning with air in the early twentieth century, these have further complicated the character and trajectory of conventional war. It is an open question as to which power in future

6 Cathal Nolan, *The Allure of Battle: How Wars Are Won and Lost*, Oxford University Press, New York, 2017; Yuval N Harari, 'The concept of "decisive battles" in world history', *Journal of World History*, 2007, 18(3): 251–266. https://www.jstor.org/stable/20079432

7 Hew Strachan, 'Essay and reflection: on total war and modern war', *The International History Review*, June 2000, 22(2): 341–370. https://www.jstor.org/stable/20079432

conventional war would be able to achieve proficiency in all of these domains simultaneously.[8]

Regular forces

Conventional war presupposes the existence of a 'regular' force, that is, existing on a permanent basis, not 'regular' in the temporal sense of an occurrence of an event. In this latter context, 'irregular' wars (unconventional wars) have occurred more regularly than 'regular' wars (conventional wars) in recent decades.[9] A regular standing army does not disband after campaigns; it is in a state of permanent existence even in peacetime. This is the very essence of the regularity that Carl Schmitt wrote of in *The Theory of the Partisan*.[10] 'Regularity' stands first in juxtaposition to the 'non-regularity' of fighters in 'non-complex' societies – where 'warring parties' disband after hostilities and the warriors go back to doing whatever subsistence economic activities they engage in normally – and second to the 'irregularity' of the armed forces of a non-state actor.

A regular conventional force can consist of professionals, that is long-term service soldiers who make soldiering their lifelong career. Although, as the British military historian, Sir Michael Howard, once pointed out, it is the only profession which one may never get to practice over the course of one's career. A regular conventional force can also be a mass army of conscripts, as in the French Revolution and Napoleonic Wars,[11] the American Civil War and in the First and Second World Wars. Or, a conventional army can also consist of a mixture of professional and conscript forces, as we find in armies such as the Israeli Defense Force and the Singapore Armed Forces, where conscription or national service is part of the national mythos and cannot be done away with easily.

Mature forces with functional specialisation

Mature conventional forces are characterised by functional specialisation.[12] Mature does not mean old, but rather fully formed and evolved conventional forces. In modern and contemporary times, militaries have become more

8 J R Lindsay and E Gartzke, 'Politics by many other means: the comparative strategic advantages of operational domains', *Journal of Strategic Studies*, 2022, 45(5): 743–776.

9 Robert Scaife, 'The regularity of irregular war', *Small Wars Journal* website, 16 October 2012 4:29 pm. https://smallwarsjournal.com/jrnl/art/the-regularity-of-irregular-warfare

10 Carl Schmitt, *The Theory of the Partisan: Intermediate Commentary on the Concept of the Political*, Telos Publishing Press, New York, 2007.

11 Although professional long-term service officers from the former royal army served in the French Revolutionary and Napoleonic armies.

12 Much of the discussion here builds on Adam Smith, *On the Wealth of Nations*, Book V, Chapter I, Part I: 'On the expense of defence', extract available via: marxists.org/reference/archive/smith-adam/works/wealth-of-nations/book/05/ch01.htm.

functionally specialised, as new branches within each service – army, navy, air force – have developed. Each service has further organised into distinct branches. For example, ground forces have armour, mechanised infantry, 'leg' infantry, engineers, artillery, combat support and combat service support units. Similarly, air forces are composed of air defence fighters, fighter-bombers, heavy bombers, air defence artillery and may even control the ballistic missiles capabilities of a state. And, naval forces have specialised surface combatants, marines, air components and submarines. A mature conventional force structure is very expensive to raise, train, equip and maintain. Furthermore, such a force should not be sidelined by activities incidental to its profession or by unstable civil–military relations within the body politic. A mature force needs to be regularly exercised in realistic simulated battlespace conditions to maintain its effectiveness.

Inherent asymmetries in conventional warfare

While militaries are symmetrical in the sense that they are organised along the same lines – more or less – and are also symmetrical in that they have the same weapons systems – again more or less – conventional war has its own inherent asymmetries that arise because of the nature of the interactive relationship that exists between the belligerents. Asymmetry denotes a lack of equivalence, balance, dissimilarity or inequality within something or between things.[13] This asymmetry warrants three points.

One, both of the warring sides want to win, but both cannot win. Each side has a set of goals; the achievement of its goals by one side means that the other has failed to achieve its own goals and will have lost. Thus, there is an **asymmetry of goals in a conventional war by dint of sheer logic**. Each side is trying to 'overthrow' or disarm the other side in order for its goals to prevail in this contest of arms, resources and will.[14]

Two, despite being organised in the same symmetric fashion, combatants will not be fighting in the same manner. There is **asymmetry in national styles or ways of war between regular combatants**. The idea of national styles in

13 Christian Buhlmann, 'Asymmetric strategies: a concept to better understand modern conflict?', *Military Power Revue der Schweizer Armee*, 2009, Nummer 2, pp 8–21; Ivan Arreguin-Toft, *How the Weak Win Wars: A Theory of Asymmetric Conflict*, Cambridge University Press, Cambridge, 2005; Barton Kunstler, 'Extreme asymmetric warfare of the future: insidious, inevitable, iconoclastic', *World Future Review*, Fall 2011, pp 5–16, https://doi.org/10.1177/19467567110030030 3; Christofer Berglund and Emil A Souleimanov, 'What is (not) asymmetric conflict? From conceptual stretching to conceptual structuring', *Dynamics of Asymmetric Conflict*, 2020, 13(1): 87–98. https://doi.org/10.1080/17467586.2019.1680855.

14 Better described by Carl von Clausewitz, *On War*, (Michael Howard and Peter Paret eds trans), Princeton University Press, Princeton, 1976, ch 1.

war or ways of war is a vast and contested subject within strategic studies and military history. This asymmetry in national styles or ways of war is inherent in warfare because every political entity's way of war is a function of political, socioeconomic, financial, cultural, psychological, historical, geographical and technological factors.[15]

Three, there can be asymmetry between professional standing armies in their approaches to combined arms and joint warfare. Conventional forces can fight either organically as separate and unintegrated forces or they can (and should for the sake of military effectiveness) fight as combined-arms entities. Combined arms refer to the ability to use all the combat arms of the ground or land forces – infantry, armour, artillery, engineers, combat support and combat service support – in an integrated manner on the battlefield to achieve effects that are greater than the sum of their parts. Joint warfare refers to the ability of the different services – army, navy and air force – to operate together effectively where the services 'train as a team, fight as a team and win as a team'. Jointness is the opposite of the *organic* approach where each service prepares, trains, educates and fights wars independently of its sister services. The effectiveness of contemporary military forces is predicated on the condition of jointness, which requires the different services to overcome structural impediments and their respective organisational and experiential prejudices to operate together. Jointness is largely a contemporary phenomenon; in the past armies and navies developed, trained and fought separately.[16]

Political entities

The rise of conventional militaries is intricately associated with the rise of organised sedentary (settled) political entities. While we cannot be too sure where and when this exactly happened, most historians assume regular militaries arose in the Middle East, specifically in the territory formerly known as Mesopotamia, now modern Iraq. It is only an organised and established political entity that has the financial, coercive, and material wherewithal to raise, train, equip and pay a standing army. It gets these resources through taxation, plunder of enemies and extraction of natural resources.[17]

15 There is a considerable and contentious literature on 'ways of war' or national styles in war within military history and strategic studies. I surveyed the literature in my forthcoming, *Iranian Ways of War: From Cyrus the Great to Qassem Soleimani*, Hurst and Company, Oxford University Press, New York, 2024.

16 Martin van Creveld, *The Changing Face of War: Lessons of Combat from the Marne to Iraq*, Ballantine Books, New York, 2006, p 6.

17 Charles Tilly, *Coercion, Capital and European States AD990–1990*, Basil Blackwell, Cambridge MA and Oxford UK, 1990.

There is an intrinsic relationship between conventional war and an organised political entity, be it an empire, a city-state or a nation-state. The most efficient and effective practitioner of conventional warfare has proven to be the modern nation-state, at least as evidenced from the Western experience since the seventeenth century, because its bureaucratic and administrative capabilities were better developed than those of previous political entities, especially those of the medieval era.[18] Hence, conventional war is often incorrectly associated with the emergence of the modern nation-state in the West. However, conventional war emerged in ancient times with the rise of empires or states with extractive capabilities. What is correct, however, is that the modern nation-state which emerged in the west proved to be the entity that was most efficient and effective at waging conventional warfare because of its development of 'infrastructural power'.

The ability to extract resources from society depends on infrastructural power. Infrastructural power is defined by historical sociologist and political scientist Michael Mann, as the 'capacity of the state to penetrate civil society, and to implement logistically political decisions throughout the real'.[19] Framed alternatively, infrastructural power is the capacity of the political entity to reach deep into society to extract resources effectively and efficiently and to be able to surmount most obstacles: physical or man-made. In the past, as in the present, infrastructural power varies across political entities, but it is crucial to the construction of conventional military power and to the waging of war.

The role of the people in conventional war

The emergence of modern warfare in Europe from the seventeenth century onwards coincided with the consolidation of powerful monarchical states over peripheral areas. These monarchies created powerful professional armies but the people as such were not involved politically or militarily in seventeenth- and eighteenth-century warfare. Conventional warfare advanced in practice immensely in Europe during the eighteenth and early nineteenth centuries under the impetus of some technological but largely sociopolitical and cultural changes in state structures and societies, as Prussian officer General Gerhard Johann D von Scharnhorst brilliantly highlighted in his piece '*Entwicklung der allgemeinen Ursachen des Glucks der Franzosen in dem Revolutionskriege, und insbesondere*

18 Michael Howard, 'War and the nation-state', *Daedalus*, Fall 1979, 108(4): 101–110.

19 Michael Mann, 'The autonomous power of the state: its origins, mechanisms and results', *European Journal of Sociology*, 1984, 25(2): 185–213, p 189. https://doi.org/10.1017/S0003975600004239

in den Feldzugen von 1794'.[20] Scharnhorst pointed out that the reasons for the success of the French revolutionary armies stemmed from profound political and social changes in French society. Previously, in the so-called 'cabinet wars' of pre-French Revolution Europe, 'the people' did not participate as involved and concerned citizens. However, with the French Revolution, 'war became the business of the (French) people', most of whom were motivated and ideologically committed citizens.

This 'blurring' between the military and civilian domains brought about by the French Revolution has never since been reversed. One could convincingly argue that the separation of these two domains, as occurred in the eighteenth century and then again, to some extent, in the limited wars of the nineteenth century, constitutes an aberration rather than a norm of conventional war. If this is the case, then the theoretical dichotomisation between conventional war and other categories below it becomes futile when war takes place in the real world. The only 'firebreak' that has not occurred is between conventional and nuclear wars. The intricate and disturbing relationship between conventional and nuclear war has come to the fore with the ongoing Russo-Ukraine war.

The participation of the people in conventional war actually erases the boundaries between the categories of conventional war and those below it. While we might readily consider the eighteenth and nineteenth centuries the heyday of the development of conventional war in the West, it is important to recognise that conventional wars then were also accompanied by extensive unconventional or irregular wars by a wide variety of non-state actors, state-sponsored proxy partisan forces and by what we can best describe as early special operations forces – light troops and skirmishers – of the combatant states.

From petite guerre *to nineteenth century colonial warfare*

There is a critical divide between partisan war or small war, (*petite guerre* or *kleinkrieg* in French and German) in the eighteenth century from what became *guerrilla warfare* or colonial *small wars* from the nineteenth century onward.[21] In the eighteenth century, the 'war of parties', or partisans, involved small groups of soldiers detached from the main army who functioned independently of the main force or as autonomous forces under local commanders and who were not

20 'Development of the general foundations of the French success/good fortune in the Revolutionary Wars, in particular during the operations of 1794', in Ursula von Gersdorff (ed), *Gerhard von Scharnhorst: Ausgewahlte Schriften*, Biblio Verlag, Osnabruck, 1983, pp 47–110.

21 Andre Corvisier and Herve Coutau-Begarie, *La Guerre: Essais historiques*, Perrin, Paris, 1995, p 121, pp 385–389.

always under the control of the state.[22] These eighteenth-century partisan forces were not necessarily animated by ideological or nationalist aspirations; they acted as proxies of their state or even independently under regional commanders to protect their own turf from invading forces. What American strategist, Frank Hoffman, famously referred to as hybrid warfare in contemporary warfare – the use of a range of forces and methods below the threshold of conventional war or even alongside it – was also practised in the *petites guerres* of the eighteenth century.[23]

Matters were different in the non-Western world where Europeans were projecting their power. In their rush to create colonies, European powers turned their sense of racial superiority and military power onto the hapless non-white populations of the non-European world. Most non-Westerners opposed the efforts of the West to invade, occupy and colonise them; often unsuccessfully. Australian strategic scholar, Andrew Mack, once wrote that 'the history of imperialist expansion in the late nineteenth and early twentieth century reveals one thing very clearly: Third World resistance, where it existed, was crushed with speedy efficiency'.[24] This is a powerful statement but not quite accurate.

Creating effective conventional military power in the non-Western world in the nineteenth century was a monumental task in which all but one – Japan – ultimately failed due to a wide range of political, social, economic, cultural, bureaucratic and technological obstacles.[25] The non-Western world in the nineteenth century was not a mass of undifferentiated entities. Some were relatively powerful empires with huge ramshackle militaries that fell behind those of the West. Others were small states with relatively efficient military forces who proved themselves in conventional wars against Western opponents. But they ultimately succumbed because they did not create effective state infrastructural power and thus did not have the resources to continue battling Western armies, whose superiority was defined by formal and defined organisational structure,

22 George Satterfield, 'The fate of *petite guerre* in early modern Europe', *Revue Historique des Armees*, 2017, no 286, p 49; Betrand Fonck, 'De la guerre de partis a la petite guerre: Les campagnes des armees Francaises Aux Pays-Bas, 1672–1697', *Revue Historique des Armees*, 2017, no 286, pp 29–47; Sandrine Picaud-Monnerat, 'La reflexion sur la petite guerre a l'oree du XIX siècle: L'exemple de Clausewitz (1810–1812)', *Strategique*, 2009, nos 97–98, pp 123–147; Beatrice Heuser, 'Les Lecons de la pratique de la petite guerre dans les conflits de 1775 a 1815 dans la literature theorique', *Revue Historique des Armees*, 2017, no 286, pp 101–116.

23 Frank Hoffman, *Conflict in the 21st Century: The Rise of Hybrid Wars*, Potomac Institute for Policy Studies, Arlington VA, 2007. https://potomacinstitute.org/reports/19-reports/1163-conflict-in-the-21st-century-the-rise-of-hybrid-wars

24 Andrew Mack, 'Why big nations lose small wars: the politics of asymmetric conflict', *World Politics*, January 1975, 27(2): 175–200, p 175. https://doi.org/10.2307/2009880

25 David Ralston, *Importing the European Army: The Introduction of European Military Technology and Institutions in the Extra-European World*, Chicago University Press, Chicago, 1990.

instilling of discipline, regularised training and ability to bring forces effectively and efficiently to battle. Technological superiority was more decisive for the Europeans in the latter part of the nineteenth century following vast improvements in gun and artillery technology, which gave the Europeans an advantage.[26]

Where the 'natives' resisted effectively was through hit-and-run attacks, ambushes, raids and insurgent warfare. In most cases, this protracted but often poorly organised resistance – generally lacking ideological cohesion and effective mass mobilisation and participation – merely delayed the inevitability of succumbing to the colonial power, who would win possibly after years of combating insurgents, harsh elements, forbidding geography of poorly mapped regions and various diseases.[27]

Europeans viewed non-white irregular/nonconventional resistance in the nineteenth century as *hors la loi*, or illegal, because the 'natives' were not fighting according to the emerging laws of war that saw 'legal' combatants as those who were part of a functioning regular army. It did not matter that many of the 'natives' were not familiar with international laws of war and often did not have conventional forces. If the 'natives' had conventional armies that were ultimately defeated in an unequal contest and they reverted to unconventional war, they were often accused of being uncivilised and were threatened with dire consequences, for example, as US generals threatened the nationalist Filippino government when US armies invaded and occupied the archipelago and trounced the regular Filippino army (1899–1902). The legality that was imputed to Spanish, Russian and Calabrian insurgents during the European resistance to attempted French hegemony was declared illegal in the non-Western world during the era of imperial conquests.

Distinguishing conventional and unconventional war

Conventional war stands in juxtaposition to unconventional war, just as symmetry does in relation to asymmetry, or regularity to irregularity. In conventional war, regular armies of opposing *states* face each other. By way of contrast, unconventional or 'irregular' war is a violent interaction between a regular force

26 Daniel R Headrick, 'The tools of imperialism and the expansion of European colonial empires in the nineteenth century', *The Journal of Modern History*, June 1979, 51(2): 231–263, p 248, p 253. https://www.jstor.org/stable/1879216

27 C E Callwell, *Small Wars: Their Principles and Practice*, Nebraska University Press, Lincoln Nebraska, 1996; Albert Ditte, *Observations sur la guerre coloniale: Observations, Execution*, Henri Charles-Lavauzelle, Paris, 1905. These two officers, the former British and the latter French recount the difficulties faced in waging war in regions that were alien to the Europeans. Conventional war, *a l' Europeanne* was simply out of the question. On colonial warfare, see Olivier Le Cour Grandmaison, *Coloniser Exterminer: Sur la guerre et l'Etat colonial*, Fayard, Paris, 2005, especially chapters 2 and 3, pp 95–200; Dierk Walter, *Colonial Violence: European Armies and the Use of Force*, Hurst and Company, London, 2017.

of the state and the 'irregular' forces of a non-state actor. Unconventional wars occur *within* the territory of a political entity, be it an empire, a city-state or a nation-state.[28] Throughout history, these unconventional forces have been usually classified via a multitude of confusing terms: insurgent, guerrilla, partisan, revolutionary war or even non-state actor. Sometimes, however, 'irregular' war witnesses combat between two or more competing irregular forces. The violent struggles in Iraq following the American occupation often occurred between competing irregular forces. While with the outbreak of the bloody Syrian civil war in 2011, there were myriad irregular forces at loggerheads with one another and with the Syrian army of the incumbent regime, which reconfigured to fight conventional war and counterinsurgency *simultaneously*. These 'irregular' forces were often supported or opposed by outside states – depending on ideological propinquity between the non-state actor and external actor – with competing interests in Syria. Syria's war is evidence of the difficulties inherent in making any meaningful distinction between conventional and unconventional war in contemporary times.

Just as asymmetry abounds in conventional war between two symmetric sides, so it does in unconventional war between a state and non-state actor. But the dynamic of asymmetry in unconventional war is different in several subtle and nuanced ways. There is the asymmetry in organisation and force structure between a regular and an irregular force, as pointed out by the French counterinsurgency officer David Galula (1919–1967), whose theories were resurrected by the Americans during the counterinsurgency wars in Afghanistan and Iraq between 2001 and 2019. These opposing forces stand in stark contrast to one another, but this is not a static asymmetry.

As the trajectory of an unconventional war between a regular and an irregular force unfolds, a certain peculiar dynamic develops. The 'irregular' side begins to incorporate many of the appurtenances of regularity as it moves from primitive irregular warfare to more sophisticated mobile and ultimately quasi-conventional warfare. In recent wars, this process has been facilitated by what has been referred to as the 'democratisation of technologies', which gives non-state actors the ability to get 'near conventional capabilities', such as drones or even missiles. This is generally a long and involved process, since building forces that come to approximate those of conventional militaries in many ways takes

28 Klaus Knorr, 'Unconventional warfare: strategy and tactics in internal political strife', *Annals of the American Academy of Political and Social Sciences*, May 1962, vol. 341, 53–64, https://www.jstor.org/stable/1034143; Otto Heilbrunn, 'Guerrillas in the 19th century', *Royal United Services Institution Journal*, 1963, 108(630): 145–148; Herve Coutau-Begarie, 'Guerres irregulieres: de quoi parle-t-on?' *Strategique*, 2009, nos.93–96, pp 13–30; Beatrice Heuser, 'Small wars in the age of Clausewitz: the watershed between partisan war and people's war', *Journal of Strategic Studies*, 2010, 33(1): 139–162.

time, financial and material resources, training and more often than not support from a foreign state benefactor. But building a 'near conventional' capability; by non-state actors can fail disastrously, and such a force can also eventually be defeated even if the progression towards a regular force is completed. Such a regularisation of irregular forces contributes to the blurring of the dichotomy between conventional and unconventional force categories in the battlespace. This regularisation of irregularity can be seen in the development of formidable non-state actors, such as Hezbollah, the Liberation Tigers of Tamil Eelam, the Houthis in Yemen, Islamic State and the Taliban. To be sure, the 'regularisation' of the 'armed forces' of these non-state actors cannot be a mirror image of those of states.[29]

At the same time, however, the regular side also witnessed a kind of reverse dynamic as some of its forces become 'de-regularised', as it were, to fight like their 'irregular' opponents. This takes less time for them, as states already have the forces in being for the most part or they raise new semi-irregular or paramilitary forces rather more quickly than their poorer foe.

The decline of conventional warfare: the argument

Now that we have defined and conceptualised conventional war, where does it stand in relationship to other types of war in the present before considering what role might it play in the future?

During the Cold War era and after its end in the early 1990s, a number of academics and military officers argued that conventional wars (here defined as armed conflicts openly waged by one state against another by means of their regular armies) have become the exception rather than rule.[30] There are different theories about why conventional war has declined in frequency in contemporary times. The historical decline of great power war and the supposed irrelevance or absence of 'true' conventional war in the Global South – the post-colonial states – that emerged after the Second World War are the most common explanations.

Decline of great power wars

The dominant theoretical approach in international relations, namely realism, which puts a stress on the role of military power in relations between states, has tended to associate the possession of military power with very powerful states,

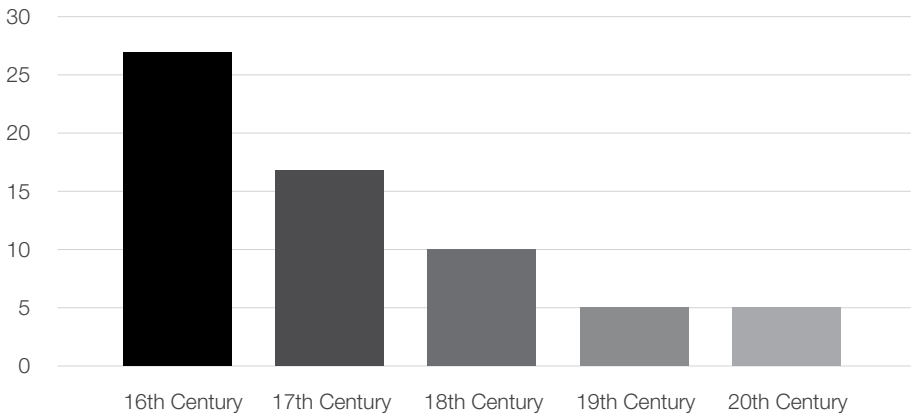
29 Nicholas Blanford, 'Israel: Hezbollah is now stronger than any Arab army', *Christian Science Monitor*, 9 June 2014; Alex Worsnop, 'From guerrilla to maneuver warfare: a look at the Taliban's growing combat capability', *Modern War Institute – West Point*, 6 June 2018. https://mwi.usma.edu/guerrilla-maneuver-warfare-look-talibans-growing-combat-capability/

30 R Jordan Prescott, 'Goodbye conventional war. It's been fun', *Modern War Institute – West Point*, 21 March 2019. https://mwi.usma.edu/goodbye-conventional-war-fun/

such as great powers. It is great power wars that matter in the international system; they are seismic events waged by those with substantial resources and endowed with the ability to project power far and wide.

The occurrence of great power wars has significantly declined over the course of the past 100 years. Why has this been so? To begin with, it is simply a matter of numbers. As the number of great powers has declined over the course of the centuries, there have been fewer great powers to fight great power wars (as indicated in Figure 1).[31]

Figure 1: Occurrence of great power war



The large number of great power wars in the sixteenth century is attributable to the number of 'wannabe' great powers in European affairs fighting to establish themselves within the continent. By the late seventeenth century, many of them had lost the struggle to climb the ladder of great power status and had slipped into the ranks of secondary powers (Dutch Republic, Sweden, the Ottoman Empire and Spain etc.). This was because their resources, size and demography could not match their ambitions, they made too many enemies, or stinging defeats put paid to their aspirations once and for all.

In the eighteenth century, the 'traditional' great powers emerged: France, Britain, Prussia, Russia and Austro-Hungary (Habsburg Empire). The hierarchy of the great powers and the relative balance between them seemed to be finely tuned and known, notwithstanding a number of so-called limited wars on the continent. By the end of the nineteenth century, there were three newcomers: the United

31 From Charles-Philippe David and Olivier Schmitt, *La guerre et la paix: Approches et enjeux de la securite et de la strategie*, Presses de Sciences Po, Paris, 2020, p 191.

States, Japan and Italy. The capabilities of all these great powers varied wildly but it also became clear that the size of a military was not an accurate indicator of military power; industrial, economic and financial power also constituted the sinews of great power capacity to wage conventional war.[32]

By the nineteenth century, great power conventional war had become industrialised, total, very destructive and prohibitively expensive.[33] The costs of great power war were highlighted during First World War, which destroyed four empires and weakened two of the three victors.[34] After the Second World War no great powers remained, only two superpowers, who were deterred from war by the threat of Armageddon posed by their mutual possession of nuclear weapons. Although, some academics have argued it was not merely or even primarily nuclear weapons that stayed great power conventional war but rather a growing normative revulsion against war.[35]

During the Cold War, the Western world and the Soviet bloc fought no conventional war directly against one another. The common belief at the time was that conventional war between the rival alliances would rapidly escalate to a nuclear conflagration. Furthermore, by the late 1980s, Soviet defence thinkers and planners began to formulate the idea of the military-technical revolution, which posited that the development of hi-end technologies – not necessarily all military in origin – in the West would thwart a conventional Warsaw Pact thrust into western Europe.

The period between the onset of the Cold War in 1945 and its end, with the demise of the Soviet Union in 1989, has been referred to as the 'long peace' by renowned international relations scholars. When the Cold War ended, eminent scholars and policymakers waxed lyrical about 'zones' of peace in Europe and North America.

As the euphoria of the 'peace dividend' has worn off a number of academics and policy analysts have begun to advance the thesis that great power wars might make a comeback, not surprisingly, given the rise in tensions between the

32 Paul Kennedy, *The Rise and Fall of Great Powers: Economic Change and Military Conflict from 1500 to 2000*, Random House, New York, 1987; John Mearsheimer, *The Tragedy of Great Power Politics*, W W Norton and Company, New York, 2001.

33 Robert Epstein, 'Patterns of change and continuity in nineteenth-century warfare', *The Journal of Military History*, July 1992, 56(3): 375–388; Barton Hacker, 'The machines of war: Western military technology 1850–2000', *History and Technology*, September 2005, 21(3): 255–300. https://doi.org/10.1080/07341510500198669

34 Lawrence Freedman, 'The rise and fall of great power wars', *International Affairs*, 2019, 95(1): 101–117. https://doi.org/10.1093/ia/iiy239

35 John Mueller, 'The essential irrelevance of nuclear weapons: stability in the postwar world', *International Security*, Fall 1988, 13(2): 55–79. https://doi.org/10.2307/2538971

United States and its major competitors, Russia and China. However, Russia's pretensions as a great power have been brutally exposed during the second Russo-Ukraine War (2022–present), as its vaunted conventional military has been shown to be a hollow force in the face of determined Ukrainian forces. Should great power war break out in the near future for whatever reasons, it is likely to be a titanic military contest between the United States and the People's Republic of China. While each side has its strengths and weaknesses, as Hal Brands and Michael Beckley exhaustively point out in *Danger Zone*, it will be a cataclysmic war.[36]

Complex war in the Global South

One needs to question this great-power centred, reductionist, realist approach, which diminishes the centrality of wars in the Global South, whether conventional or unconventional. The long peace during the Cold War requires a more critical look – just as with the nineteenth century's 100-years peace – as this 'peace' was a bit of a fiction. Massive wars raged in the so-called 'Third World',' where conventional and unconventional warfare were intricately linked.

For many decades, the view within Western strategic and war studies concerning conventional war in the Global South (formerly 'Third World' during the Cold War) suffered from certain biases and flawed structural assumptions. Firstly, there was a distinct and marked lack of interest in analysing them – minds were focused on the Cold War confrontation and how to prevent it disintegrating into a shooting war.

Secondly, many of the conventional wars in the Global South were viewed with derision because they were regarded as poor cousins compared to the 'real' conventional wars which would be waged by developed countries if the Cold War were to become a 'hot' one. Conventional wars in the Global South had nothing useful to impart, it was argued. The bloody Iran–Iraq War (1980–1988) was universally perceived as the war of the 'inept versus the incompetent'. Little effort was made to understand why this might be so. The one notable exception was the Arab–Israeli War of 1973, which elicited substantial commentary as an example of what high-intensity war in Europe might look like were it to break out.

Thirdly, observers were mesmerised by a particular type of warfare that was occurring in the 'Third World', namely unconventional war. Many factors account for this fascination. Colonial societies defeated formidable Western powers by unconventional war. Post-colonial unconventional warfare was the dominant

36 Hal Brands and Michael Beckley, *Danger Zone: The Coming Conflict with China*, W W Norton, New York, 2022.

kind of war in the 'Third World' during the Cold War. There was an intertwined policy and academic focus on understanding and defeating (counterinsurgency in Vietnam and other regions) this kind of war in the 'Third World'.

Finally, as American academic, Eliot Cohen, wrote in the mid-1980s, it seemed that an understanding of war – particularly conventional war – in the 'Third World', was complicated by the fact that 'records were few, inaccurate and often unavailable'.[37] In this context, only a few academics such as Stephanie Neuman and Robert Harkavy studied conventional war in the 'Third World', while those in comparative politics, peace studies and the emerging security studies field made much of so-called 'new wars' that occurred within unstable Global South states. This focus on unconventional war ensured that the academic community paid little attention to conventional wars in the Third World or Global South.

Moreover, this focus on unconventional war misunderstands the character of warfare in the Global South. It would be a major mistake to characterise war in the Global South simply as either conventional or unconventional. The issue is not black or white, but grey. Often wars in the Global South are 'blurred' in that they consistently contain elements of both. Indeed, whether in the Western world or the Global South, there have historically been few 'pristine' conventional wars, in which skill and technology inflict a 'clean' defeat on a foe's army with little or no civilian participation or civilian collateral damage.

The end of the Second World War witnessed wars of decolonisation, during which colonial powers were ejected from their former colonies. Some withdrew from colonies without violence; but others were extremely reluctant to do so. These wars of decolonisation were neither purely conventional nor unconventional; they contained elements of both types of warfare.

None of the famous theorists and practitioners of people's revolutionary warfare – Mao Zedong, Vo Nguyen Giap or Abdul Haris Nasution thought that 'pinprick' guerrilla warfare of ambushes, hit-and-run attacks and raids would drive out the enemy. While the colonial power would use conventional forces, militias and special forces to wage counterinsurgency, the anti-colonial forces sought to progress from classic guerrilla or insurgent low-level attacks to create larger and larger forces that could take on the enemy. People's revolutionary warfare required the total mobilisation of the population and its resources against the occupier and the creation of a conventional force structure. This was a monumental task, in which Maoist China and North Vietnam remain the exemplars in the Global

37 Eliot Cohen, 'Distant battles: modern war in the Third World', *International Security*, 1986, 10(4): 143.

South.[38] Ultimately, the colonial side would throw in the towel because of loss of will or recognition that hanging onto the colony in the face of organised mass resistance was no longer feasible or beneficial.

With the end of the wars of decolonisation, the newly emergent states were enmeshed in internal violence, ranging from terrorism against civilians to massive insurgencies. This violence required extensive counterterrorism and counterinsurgency resources, which many in the non-Western world were initially incapable of generating without extensive help from outside. Many unconventional wars broke out in these newly independent states, as ethno-sectarian groups as well as class-based disgruntled minorities fought their governments.

Israeli military historian, Martin van Creveld, was among those who argued that as wars in the Global South had demonstrated the character of warfare had changed, with conventional war declining as intrastate or internal wars became the predominant form of war. Indeed, the proliferation of wars that were not conventional in character or were below the threshold of conventionality also led to a proliferation in terms and concepts to describe these wars, ranging from 'low-intensity conflict' and' fourth generation war' to 'new wars'.[39]

Paradoxically, even as 'Third World' states faced internal strife most sought to build up their conventional forces, either at the expense of forces for counterinsurgency or alternatively building two types of forces simultaneously with the help of external patrons. Conventional forces were associated with the trappings of state power and reflected the corporate self-interest of the officer corps. Once again, as in the nineteenth century, states in the Global South faced formidable obstacles in building effective military power and equally as formidable ones in waging conventional wars. In his book, *Blood and Debt: War and the Nation-State in Latin America,* Miguel Centeno points out that while revolutions, civil wars, and insurgencies were rampant on that continent, *inter-state war was relatively rare.* Latin American states were infrastructurally weak, and the state simply could not marshal the resources needed to build effective conventional military power and to wage conventional war for sustained periods. Unclear boundary issues were seemingly resolved in three great inter-state wars between various Latin American states. There were, however, deep-seated internal divisions within each society. The militaries focused on the myriad internal enemies – left-wing social enemies and peasants (of indigenous races

38 On Vietnam's mobilisation for total war, see Christopher Goscha, *The Road to Dien Bien Phu: A History of the First War for Vietnam*, Princeton University Press, Princeton, 2022; especially ch 2 and ch 3; pp 57–120. https://doi.org/10.2307/j.ctv1t8q8v6

39 Mary Kaldor, 'In defence of new wars', *Stability Journal*, 2013, 2(1): 1–16, https://doi.org/10.5334/sta.at; General Sir Rupert Smith, *The Utility of Force: The Art of War in the Modern World*, Knopf, New York, 2005.

different from the white or mixed-race ruling elites) – whom they dispatched with considerable relish.[40]

Centeno's argument is even more applicable to other states in the Global South that were weaker infrastructurally than many Latin American countries. Yet conventional wars did occur in other parts of the Global South. Most of the conventional wars of the Third World were ignored and viewed as amateurish efforts of the real thing. But a number of wars in the Global South, most notably the Arab–Israeli Wars, were heavily integrated into the Cold War rivalry between the US and the Soviet Union. Both sides provided advanced weaponry to the belligerents and were very keen to draw lessons from the performance of their respective weapons systems. In the final analysis, just as in the nineteenth century when many political entities in the non-Western world found it difficult to build conventional military power, postcolonial emerging states found it even more difficult to do so during the Cold War era.

With the end of the Cold War and the collapse of the Soviet Union, we witnessed few conventional wars, the most notable being Desert Storm in 1991 in which an outclassed Iraqi army was virtually eliminated by a coalition led by the United States.

This lopsided victory, however, had a bracing effect on the rest of the world's conventional military establishments. It was an inflection point in warfare as conventional militaries around the world paused and considered their relative respective capabilities to field militarily effective conventional forces and pondered how they would face off or compete against US conventional superiority. Most countries concluded that emulation – copying the US – was simply out of the question. Facing the US on its own terms – high-intensity conventional war – was a sure invitation to defeat.

The term 'asymmetric warfare' entered the strategic lexicon, although it merely complicated rather than simplified matters. American strategists and policymakers argued that potential foes of the US would strive to find ways to 'offset' US advantages by building asymmetric capabilities, such as weapons of mass destruction, ballistic missiles and nuclear weapons. This view failed to appreciate the fact that asymmetry, if it is useful as a concept, exists in all categories of war and within each category as was mentioned above. Moreover, if anything, it was the US military that was *asymmetric* in relation to the Iraqi army in Desert Storm. So technically, the solution other countries required was

40 Miguel Centeno, *Blood and Debt: War and the Nation-State in Latin America*, University of Pennsylvania Press, Philadelphia, 2002.

potentially an asymmetry or offset to the initial asymmetry the US had constructed when rebuilding its post-Vietnam War army.

Recent conventional wars and the future of conventional war

The first two decades of the twenty-first century have witnessed the outbreak of several wars that defy categorisation into either conventional or unconventional war because they contained elements of both.[41] How do we characterise the Russo-Georgian War (2008), the Syrian civil war (2011–present), the second Iraq War against Islamic State (2011–present), the first Russo-Ukraine War (2014–2016), the second Nagorno-Karabakh War between Armenia and Azerbaijan (2020), and the most monumental of them all, the second Russo-Ukraine War (2022–present)? These ongoing wars provide lessons and observations that can give us a glimpse of how future war might unfold, but the key is to separate the profound from the ephemeral and this, historically, has not been easy.

Some of the wars mentioned above were more conventional in character, while others were more unconventional but again contained conventional elements. The Russo-Ukraine war of 2014–2016 was largely below the threshold of full-scale conventional war despite some intensive force-on-force battles.[42] Even the limited conventional war between two small states in 2020, namely between Armenia and Azerbaijan over the contested Nagorno-Karabakh region, has been worthy of considerable attention for the past two years. Several countries, including technologically advanced ones have sought to mine the lessons of the war. The war itself, in particular, highlighted the ability of one side – Azerbaijan – to make effective use of unmanned aerial vehicles (UAVs) to inflict greater damage on Armenian ground forces than possibly the Azeri Air Force would have been able to inflict in the difficult role of close air support to Azeri ground forces.[43] UAVs are simpler and less expensive than a manned air force; their use by small states and non-state actors has led to the idea that there has been a 'democratisation of technology', wherein small entities can leverage certain less

41 Heiko Borchert, Torben Schütz and Joseph Verbovszky, *Beware the hype: what military conflicts in Ukraine, Syria, Libya and Nagorno-Karabakh (don't) tell us about the future of war*, Défense AI Observatory, Helmut Schmidt University, 2021. https://doi.org/10.13140/RG.2.2.10456.62723

42 Amos Fox, 'The Donbas in flames: an operational level analysis of Russia's 2014–2015 Donbas Campaign', *Small Wars and Insurgencies*, 18 August 2022. https://doi.org/10.1080/09592318.2022.2111496

43 Construction of manned air power in many countries, particularly in the Global South, has not been easy. See Sanu Kainikara, *Seven perennial challenges to air forces*, Australian Air Power Development Centre, 2009. https://airpower.airforce.gov.au/publications/seven-perennial-challenges-air-forces

expensive and sophisticated but still very deadly technologies to increase their military power.[44]

The outbreak of the Russo-Ukraine War of 2022 has reinforced the position of those who argue conventional war is back. When it invaded Ukraine in February 2022, Russia dramatically broke with the mixed proxy and conventional approaches used during its 2014–2015 Crimean and Donbas campaigns. Instead, in February 2022, it sent in a conventional force that failed on a monumental scale for a wide variety of politico-strategic, operational and tactical reasons. Again, in this second war we have witnessed extensive Ukrainian 'partisan' or resistance activities by militias, civilians and armed groups that are separate from but often work with the Ukrainian military, especially with its special forces. While we should be mindful of urban legends about their activities, they have clearly made things difficult for the Russian occupation.

What does all this tell us about the place of conventional war in future war? Will conventional war make a cameo appearance in a world in which intra-state wars predominate? Or will conventional war be centre stage again as in the past, with unconventional war playing a supporting role? Or will war be a mixture of both conventional and unconventional war?

A caveat: the future is uncertain, but the nature of war is not

Let me address the twin issues of *history* and the *future*. The history of past wars and campaigns is worth studying, but history is not necessarily a useful guide to the future, as American historian Williamson Murray and others have intimated.[45] We do need to know where we have come from in order to comprehend our present and speculate about the future in a meaningful manner, but human beings tend to pick and choose from history what confirms their biases and reinforces their preferred futures. The head of the Prussian General Staff, Helmut von Moltke the Elder knew that his brilliant campaign to defeat France in the Franco-Prussian War of 1870–1871 was not a reliable indicator of future French performance. The dismal Arab performance in the Six Day War of June 1967 was not a reliable indicator of Arab performance in the October War of 1973. Similarly, solid Arab performance in 1973 was not repeated thereafter except by a non-state actor, Hezbollah. After 9/11, unconventional war and terrorism were all the rage. Most major armies, including Australia's saw the future of war as

44 Jack Watling and Siddarth Kaushal, 'Nagorno-Karabakh: the democratization of precision strike and the viability of military power', *RUSI*, 22 October 2020. https://rusi.org/explore-our-research/publications/commentary/democratisation-precision-strike-nagorno-karabakh-conflict

45 Williamson Murray, 'History, war, and the future', *Orbis*, Fall 2008, 52(4): 544–563. https://doi.org/10.1016/j.orbis.2008.07.012

dedicated to fighting nonconventional foes. This was true for two decades; the 'complications' of Iraq and particularly of Afghanistan coupled with changes in the geopolitical environment left a bitter taste in the mouth concerning this type of warfare.

Moreover, as a number of analysts have pointed out in recent studies of contemporary wars, we must be careful of seeing ongoing conventional wars as something totally revolutionary in contrast with those of the past, even the recent past. And we must be wary of any 'hype' that would have us believe these wars are necessarily harbingers of the future or that emerging disruptive technologies will bring about major revolutions in the character of war.[46] The study of past wars, ongoing wars and the 'wars of others' at length and in-depth – to paraphrase the late Sir Michael Howard – enhances our critical faculties and allows us to use them to think more effectively about future war.

Concerning the future, I cannot predict any more than anybody else in this field has been able to. With respect to the near future, which is invariably defined as anywhere between three to five years hence, it is likely that most militaries would go to war with the 'army they have' – to paraphrase former Secretary of Defense Donald Rumsfeld's notorious statement at the height of US difficulties in Iraq in the early 2000s. Addressing geopolitical trends and the environment, domestic politics and technology with certainty beyond that time frame – say anywhere between 10 and 20 years – is fraught with difficulties. In mid-March 2005, the eminent strategic studies scholar, Colin Gray, gave a talk in Arlington, Virginia, titled 'What do we know about future war?', as part of the Johns Hopkins University's Applied Physics Laboratory Colloquium. He said there was no such thing as the foreseeable future and that we have to rely either on guesswork or crystal balls to 'discover' the future. Sir Lawrence Freedman has also pointed out the many failures of 'predicting' the future in his book, *The Future of War*.

So, what does this mean? I will make some points here that may reinforce the position that conventional warfare will continue to be of importance in future war.

The nature and character of war

Let us begin with war itself. Once again, let me reiterate I am not addressing the debate concerning its supposed obsolescence. I am addressing the character of future war and the place of conventional war within that future. In this context, I will refer to the theme of the *nature* and *character* of war; there is an extensive analysis in the literature on war on the notions of the nature and character of war

46 Borchert et al., *Beware the hype: what military conflicts in Ukraine, Syria, Libya and Nagorno-Karabakh (don't) tell us about the future of war*.

and much of it is related to Clausewitz's well-known articulation of these notions in *On War.*

Unfortunately, too often scholars, military officers and journalists conflate the *nature* and *character* of war and have done so with irksome frequency since the outbreak of the 'big' Russo-Ukraine war in 2022. The nature of war pertains to those things that are intrinsic to war. War involves violence, death and destruction. It is about politics. It is suffused with fear, courage, uncertainty, and what Clausewitz called 'friction', wherein what can go wrong will go wrong. These things define war, and they have never changed and never will.

More recently though, a number of thinkers, ranging from such 'cerebral' military celebrities as General James Mattis, former head of the United States Marine Corps and a former Secretary of Defense, Robert Work, a former Deputy Secretary of Defense of the United States, and academic writers have pondered whether emerging and disruptive technologies such as artificial intelligence and robotics might actually change the *nature* of war as human beings are further and further removed directly from the battlespace.[47] While these views should be treated with the respect they deserve, war, as Thucydides famously pointed out is the 'human thing'. We go to war for reasons that are human, to wit, 'greed, fear, and honour' (or prestige in modern terms). Machines will remain the instruments of our supposedly rational pursuit of political goals by violence. Now whether machines will reduce or increase violence in future war and also deleteriously impact the laws of war are open questions being addressed at length.

But war does change *character*, whether it is conventional or unconventional. Some of the changes are promoted by the introduction of new technologies into a conventional force structure. However, it would be erroneous to succumb to 'technological determinism' and believe that all changes are determined by technology. Political, cultural, geography (or environment) and socioeconomic factors determine the frequency and intensity of conventional war, as does thinking about new or innovative ideas on doctrine, tactics, techniques, procedures and new organisational structures of military forces. While it is correct that each age or epoch has its type of war with its specific character, it is unfortunately not the complete analysis. Within each age conventionality and unconventionality have existed side by side, or witnessed a situation where one is the dominant type and the other is in a supporting role, or vice versa.

47 Frank Hoffman, 'Will war's nature change in the Seventh Military Revolution?', *Parameters*, Winter 2017, 47(4): 19–31. DOI: 10.55540/0031-1723.3101

We need to take a measured position between the tendency towards technological determinism – which posits operational methods and tactics are determined by technology – and the tendency to undervalue the impact of technology on war.[48] While there is simply no way to ignore or wish away the impact of the emerging and disruptive technologies on future war (and future make-up of societies), it is important to recognise that the existence of technologies in of themselves will not create military power or an advantage over an adversary. There is a complex and dynamic process between the political entity that produces such technology, its armed forces, and the skill and expertise with which its military personnel use these technologies. As in the past and present, there will be a hierarchy in the international system when it comes to the emerging and disruptive technologies that are beginning to play a role in militaries and societies and will do so in greater quantities in the future. Those who are rich and have their own science and technology and research and development infrastructures will be able to leverage these more effectively than those who are neither rich nor endowed with these infrastructures. To be sure, we have already mentioned the matter of the 'democratisation' of technology, as was witnessed in the second Nagorno-Karabakh War of 2020, but this phenomenon goes only so far for those at the lower end of the military–technology hierarchy.

Full circle: the relationship between military power and the nature of political entities

First, the geopolitical environment and the trajectory of international relations cannot be discounted in speculating about future war and the role of conventional war within that future. From whence the threat and how to deal with it has, of course, been a perennial issue in defence planning. If military power will continue to be an important currency of international relations, as I believe it will, what will be the character of that military power in the future? This takes us back full circle to the relationship between military power and the nature of political communities in the international system. In the future, the world will be composed of few great powers with the full panoply of military power, including the ability to produce and use the wide range of emerging and disruptive technologies. These great powers, in contrast with the past, will be few in number: namely the United States, China and Russia. Although, the status of the last has been in jeopardy because of its performance in Ukraine and the potential impact on its economy among other things in the coming years. In the past, great powers fielded

48 On technological determinism, see Fernando E Rey, 'Technological determinism and ancient warfare', in Garret Fagan and Matthew Trundle (eds), *New Perspectives on Ancient Warfare*, Brill, Leiden, 2010, pp 21–22; Barry Buzan, *An Introduction to Strategic Studies: Military Technology and International Relations*, Macmillan, Basingstoke, 1991, pp 17–35.

conventional capabilities that could be projected over considerable distances. In the future, we will see the same as well as equally robust anti-access and area denial capabilities. Great power war in the past has uniformly been protracted, nasty and brutish, to paraphrase the English philosopher, Thomas Hobbes. Most of those who have speculated about a potential Sino-American war in the future have concluded that it will also likely be so. This, of course, has led to debates concerning the offence-defence balance in future war – wherein military technology is seen as the main variable shaping the ease of offence versus that of defence or vice versa – as well as of the political and military utility of nuclear weapons. While the former issue pertains to the unfolding of conventional war, the latter takes us beyond conventional war into a realm of war that has never taken place before.

Second, robust middle powers with impressive conventional warfighting capabilities have emerged in recent years. A few of them will be able to make use of emerging and disruptive technologies to enhance their military power. Ironically, some middle powers may continue to struggle with military threats below the threshold of conventional violence or with nuclear-armed adversaries. These may be a limited subset of countries, but as we have seen, the Republic of Korea (South Korea) has decided, in the *interim*, to respond to the Democratic Republic of Korea's (North Korea) increasingly robust nuclear arsenal with a high-tech counterforce conventional capability to deter its northern foe.[49]

Third, what of smaller *states*? It is instructive that they are not called small powers, as this points to the traditional realist view that they cannot generate military power in of themselves. This has to be adjusted somewhat. True, small states cannot project power far beyond their borders, if at all, although there are exceptions in contemporary times. However, would it not be accurate to argue that the ability of small states to hinder access and deny areas has increased – and may likely increase in the coming decades – against those who might consider invading and occupying them? This increased capability would be a function of the democratisation of certain technologies that promote robustness in defence but would also need to be a function of significant changes in military doctrine, military organisational structure and enhancement of societal resilience. In such cases, a purely conventional approach to defence might be a sure way to defeat; the military structure would be a blended one incorporating the concept of national resistance and total defence in which small mobile conventional forces still play a crucial role.

49 Ian Bowers and Henrik Hiim, 'Conventional counterforce dilemmas: South Korea's deterrence strategy and stability on the Korean Peninsula', *International Security*, Winter 2021, 45(3): 7–39. https://doi.org/10.1162/isec_a_00399

Finally, a few thoughts about non-state actors in future war. Most non-state actors will continue to function within the realm of unconventional war; it is not clear that we will witness too many undertaking the difficult trajectory of Hezbollah, the Liberation Tigers of Tamil Eelam, and Islamic State from unconventionality towards conventionality. It has worked to some extent for Hezbollah, largely due to extensive state support from Iran, internal cohesion, discipline and extensive training and deep community support, but it did not work for the latter two, whose adoption of conventionality ultimately made it easier to defeat them.

Conclusions

The conventional wars of the past 30 years support a number of conclusions about conventional war's continued vitality as well as significant changes in its character.

First, we need to engage in the academic and seemingly pedantic job of categorising wars in order to understand the specific characteristics, idiosyncrasies and peculiarities of each category. This helps us comprehend that the constructed theoretical assumptions concerning symmetric conventional war will be dashed against the brutal reality of war in the real world. Warfare witnesses a 'pendulum shift' every so often. Sometimes war is largely conventional with unconventional war playing an important but subsidiary role; a subsidiary role can be crucial in defeating a particular side in a largely conventional war. When a country is invaded, occupied and its conventional army is defeated or melts away, its rulers and people may choose not to resist or may do so by unconventional means. If they choose to resist unconventionally, they may also begin rebuilding their conventional forces because they know it will be the kind of force structure that could give them eventual victory. At other times, unconventional war takes centrestage because the war is waged within a particular political entity that is suffering from a crisis of legitimacy brought on by various political and socioeconomic factors. In the final analysis, to quote the Dutch strategic thinker, Martijn Kitzen, 'conventional and unconventional war are not opposites'.[50]

Second, the obituaries about conventional war have been premature. It has never died and will not die. A conventional military establishment is a signal achievement of any political entity. Given the rate at which many states in the world are arming, conventional military establishments are here to stay. To be sure, having a conventional military does not mean that a political entity will

50 Martijn Kitzen, 'Conventional and unconventional war are not opposites', *War Room – United States Army War College*, 28 March 2019. https://warroom.armywarcollege.edu/articles/conventional-and-unconventional-war-are-not-opposites/

inevitably use it in a war. Much of the utility of conventional militaries for many countries lies primarily in symbolism: the aura of power engendered by having a conventional military establishment. Conventional war is both costly and complex, as highlighted by contemporary conventional wars such as the Russo-Ukraine war of 2022 to the present, in which the Russian military's performance has been underwhelming to the utter surprise of almost every observer.[51]

51 Robert Dalsjo, Michael Jonsson and Johan Norberg, 'A brutal examination: Russia's military capability in light of the Ukraine War', *Survival*, 2022,64(3): 7–28. https://doi.org/10.1080/00396338.2022.2078044

AUKUS-plus? Indonesia's strategic options in response to conflict in the Indo-Pacific

Daniel Peterson, Greg Barton, Shahram Akbarzadeh, Josh Roose and Simon Hewes

Introduction

Indonesia's longstanding policy of non-alignment or *bebas dan aktif* (literally 'free and active'), coupled with its modest military resources, leave it ill-prepared to defend its vast territory or play a pivotal role in a hypothetical regional conflict. To better understand the implications of *bebas dan aktif* in the contemporary world, this article explores two potential (and arguably looming) scenarios: how might Indonesia respond if China launched a military 'reunification' campaign against Taiwan and how might Indonesia respond if China sought to unlawfully capture territory in the South China Sea? In this article, we delineate several strategic options available to Indonesia and speculate how its foreign and defence policy might inform its response to either scenario. We argue that Indonesia would, in either scenario, benefit from – and most likely pursue – deeper engagement with the United States and Australia, among other Western countries, thereby ensuring greater collective balance against China.

Like many countries, Indonesia has become increasingly receptive to the opportunities and incentives China has made available through its various modes of economic engagement and statecraft. In 2021, for example, two-way trade between Indonesia and China reached an unprecedented US$124.34 billion,[1] while between 2000 and 2017, Indonesia received more Chinese development finance, both in terms of foreign aid and other official flows (loans and export credits priced at or near market rates), than any other country in South-East

1 Documentation of KBRI Beijing 2022, *Indonesia's trade performance with China in 2021 is encouraging*, Embassy of the Republic of Indonesia Beijing, People's Republic of China website, 13 April 2022, accessed 12 May 2022. https://kemlu.go.id/beijing/en/news/18380/indonesias-trade-performance-with-china-in-2021-is-encouraging

Asia.[2] Understandably, the economic dimension of Indonesia's relationship with China is typically cited as evidence of the unprecedented strength of the bilateral relationship more broadly.[3] China's expansionist aspirations and conduct in the South China Sea, however, remain a thorn in the side of many South-East Asian countries, including Indonesia. Indeed, sporadic yet repeated Chinese intrusions into Indonesia's exclusive economic zone (EEZ), that is, the 200 nautical mile zone off Indonesia's coast, have seen the two countries, on occasion, walk a diplomatic tightrope. Indonesia's EEZ intersects with China's controversial nine-dash line, which captures approximately 90 per cent of the South China Sea, a littoral region to which China lays claim as its traditional fishing waters.[4] Notwithstanding a 2016 Permanent Court of Arbitration ruling that declared the nine-dash line to have no basis in international law,[5] China has continued to both escalate its claims to Taiwan, while constructing naval bases in the South China Sea.[6] Indonesia has therefore found itself to be at the centre of a region in which longstanding US primacy is being openly challenged for the first time since the Second World War. And amidst a heightened US–China rivalry, Indonesia will likely find it increasingly difficult to maintain a neutral (or *bebas dan aktif*) position.

In the following section, before addressing our research question, we explain our methodology and theoretical framework. We then provide a brief historical context – specifically, regarding Indonesian foreign policy – before arguing that Indonesia, despite its rhetorical commitment to non-alignment, is likely tacitly supportive of the AUKUS (Australia, United Kingdom, United States) security pact; moreover, that it might also, in the long-term, align itself with the AUKUS

2 Ammar A Malik, Bradley Parks, Brooke Russell, Joyce Jiahui Lin, Katherine Walsh, Kyra Solomon, Sheng Zhang, Thai-Binh Elson, and Seth Goodman, *Banking on the belt and road: insights from a new global dataset of 13,427 Chinese development projects*, AidData at William & Mary, Williamsburg VA, 2021, https://docs.aiddata.org/ad4/pdfs/Banking_on_the_Belt_and_Road__Insights_from_a_new_global_dataset_of_13427_Chinese_develop-ment_projects.pdf Between 2000 and 2017, Indonesia received US$4.42 billion in official development assistance from China, behind Iraq (US$8.15 billion), North Korea (US$7.17 billion), and Ethiopia (US$6.57 billion). Indonesia also received US$29.96 billion in other official flows from China, behind Russia (US$125.38 billion), Venezuela (US$85.54 billion), Angola ($US40.65 billion), Brazil (US$39.08 billion), and Kazhakstan (US$39.01 billion).

3 Josh M Roose, Shahram Akbarzadeh, Greg Barton and Daniel Peterson, *The evolution of the Indonesia–China relationship post-Covid-19*, Deakin University, 2022, accessed 2 November 2022. https://adi.deakin.edu.au/research/projects/tracking-the-evolution-of-the-indonesia-china-relationship-in-a-post-covid-19-context

4 Ristian Atriandi Supriyanto, 'Why Southeast Asia should welcome AUKUS: Australia models independence in standing up to China', *Foreign Policy*, 28 September 2021, accessed 11 May 2022. https://foreignpolicy.com/2021/09/28/southeast-asia-asean-australia-aukus-china-united-states/

5 Ismira Lutfia Tisnadibrata, 'Indonesia gives new name to sea region north of Natuna Islands', *Benar News*, 14 July 2017, accessed 12 May 2022. https://www.benarnews.org/english/news/indonesian/North-Natuna-Sea-07142017160831.html

6 Lokman Karadag, 'The PRC's military strategies on the security architecture of East and South China Sea under President Xi Jinping', *Intellectual Discourse*, 2022, 30(2): 343–370.

member states. As we discuss toward the end of the article, this alignment will most likely be informal in nature.

Methodology

We draw upon recent academic analysis and related soft literature, together with responses from 30 semi-structured interviews with leading practitioners of the Indonesia-China relationship conducted by the first-named author. The questions posed to the interview respondents revolved around the nature of Indonesia's relationship with China and how Indonesia might navigate that relationship over the next 10 to 20 years. Respondents included current and former bureaucrats and policymakers from Indonesia, Australia and Europe; academics and think-tank analysts from Indonesia, Europe and Australia; and Indonesia-based journalists with defence and foreign policy knowledge and expertise, both Indonesian and foreign. The diversity of the respondents' professions allowed for a broad range of responses and perspectives. Admittedly, anonymising the respondents' identities (as we have done) detracts from the authority of their observations, statements and broader insight, but the sensitivity of many of the respondents' roles and expertise made anonymisation necessary in order to secure their participation. Respondents are therefore referred to throughout with reference to their occupation and nationality so as to maintain non-attribution but some level of authority.

This research was conducted as part of an Australian Defence–funded project, under the Strategic Policy Grants Program, which also resulted in the production of a multifaceted report entitled 'The evolution of the Indonesia–China relationship post-Covid 19'.[7] The interviews also informed the development of the *Indonesia–China geopolitical and military posture index 2016–2020*, which serves as a quantitative analysis tool of the relationship.[8]

Theoretical perspective

Our analysis throughout draws on defensive realism. Structural realism, of which defensive realism is a sub-theory, posits that 'power is a means to an end and the ultimate end is [state] survival'.[9] To ensure this survival, defensive realism posits

7 Roose et al*., The evolution of the Indonesia–China relationship post-Covid-19*.

8 Josh M Roose, Shahram Akbarzadeh, Greg Barton and Daniel Peterson, *Indonesia-China geopolitical and military posture index 2016-2020*, STGP 2021: Tracking the Evolution of the Indonesia-China Relationship in a Post-Covid-19 website, Alfred Deakin Institute for Citizenship and Globalisation: Deakin University, 2022, accessed 16 August 2023. https://adi.deakin.edu.au/research/projects/tracking-the-evolution-of-the-indonesia-china-relationship-in-a-post-covid-19-context

9 John Mearsheimer, 'Structural realism', in Tim Dunne, Milja Kurke and Steve Smith (eds), *International Relations Theories: Discipline and Diversity*, Oxford University Press, Oxford, 2016, p 52.

that states may seek to develop a balancing coalition to counter the aspirations, and discourage the assertive behaviour, of a rising and increasingly assertive power, such as China.[10] Waltz, the progenitor of defensive realism, explains that, in the context of a rising power challenging the status quo, balancing is the most common approach for a status quo power, such as Indonesia,[11] given its desire to maintain the current international order.[12] We use defensive realism in this article to help interpret some responses from interview respondents, to frame our policy suggestions, and to further elucidate the positions and phenomena described that are not otherwise adequately explained by other theoretical perspectives.

Our adoption of defensive realism is also a reaction to recent efforts to explain Indonesia's foreign policy through the lens of neoclassical realism.[13] These efforts have sought to analyse how domestic conditions, concepts, interests, and decision-makers' perceptions have shaped Indonesia's responses to international threats and opportunities.[14] The neoclassical realist interpretation offers sound insights into Indonesia's behaviour, including how its *bebas dan aktif* foreign policy can inform how it conducts and frames its foreign relations. We argue, however, that these positions typically underestimate the extent to which structural factors inform a state's decision-making processes. While bottom-up analyses of Indonesia's foreign policy, which include neoclassical realist approaches, appear *en vogue*, we emphasise the utility of a top-down approach such as defensive realism,[15] to the extent that it can provide different but complementary insights into Indonesia's behaviour and decision-making. In the context of increased great power competition between China and the United States (and their partners), Indonesia's foreign policy calculus arguably needs to adapt to this current bipolarity. Indeed, as Tang has argued, 'we are living

10 Mearsheimer, 'Structural realism'; Stephen Walt, 'Realism and security', *International Studies,* 2017. https://doi.org/10.1093/acrefore/9780190846626.013.286

11 Kennith Waltz, *Theory of International Politics*, McGraw-Hill Inc., New York, 1979.

12 Tanguy Struye de Swielande, 'Middle powers in the Indo-Pacific: potential pacifiers guaranteeing stability in the Indo-Pacific?', *Asian Politics and Polity,* 2019, 11(2): 190–207.

13 Edna Caroline, 'Indonesia's global maritime fulcrum: from hedging to underbalancing', *Journal of Asian Security and International Affairs*, 2021, 8(3): 413–432; Muhamad Arif, 'Balancing with Jokowi's characteristics: a neoclassical realism approach to Indonesia's foreign and security policies in the South China Sea', *Journal of Asian Security and International Affairs,* 2021, 8(3): 370–390; Muhamad Iksan and Jenn-Jaw Soong, 'The political economy of Indonesia's development strategy under China–USA power rivalry and hegemonic competition: a middle power with its hedging strategy', *The Chinese Economy*, 2021, 56(4): 14–320. https://doi.org/10.1080/10971475.2022.2136696

14 Jeffery W Taliaferro, Steven E Lobell and Norrin M Ripsman, 'Introduction: neoclassical realism, the state, and foreign policy', in Steven E Lobell, Norrin M Ripsman, and Jeffery W Taliaferro (eds), *Neoclassical Realism, the State, and Foreign Policy,* Cambridge University Press, New York, 2009.

15 See Martin Hollis and Steve Smith, *Explaining and Understanding International Relations,* Oxford University Press, London, 1991.

in a defensive realism world'.[16] Approaches that therefore underemphasise the structural factors that defensive realism can illuminate, namely the challenges arising from the US–China rivalry, are potentially inadequate for analysing Indonesia's behaviour and decision-making as it faces new foreign policy challenges in the twenty-first century.

Indonesia's current foreign policy position

Non-alignment or *bebas dan aktif* (free and active)

The origins of Indonesia's foundational foreign policy doctrine of *bebas dan aktif* can be traced back to the middle of the twentieth century and the first years of Indonesian independence, when nationalist leaders sought to distance themselves from the post-War US–Soviet rivalry.[17] In Indonesia, the country's first vice president, Mohammad Hatta, argued that non-alignment would benefit Indonesia, insofar as it would enable the fledgling nation to deal with states on a case-by-case basis, irrespective of their ideology or alignment status.

As Arif notes, *bebas dan aktif* remains 'the conceptual framework [to] which Indonesian foreign policy is anchored' today.[18] Previous Indonesian governments, however, adhered to *bebas dan aktif* to varying degrees, a path Indonesia may choose to emulate in response to a more assertive or belligerent China. During the Cold War, under President Sukarno (1945–1967), Indonesia, Yugoslavia, Egypt and India formed the core of the Non-Aligned Movement. This was solidified at the 1955 Bandung Conference (Africa–Asia Conference), before it was formalised at the Conference of Heads of State or Government of Non-Aligned Countries in Belgrade on 1 September 1961. Despite the initial commitment to non-alignment, by early 1965, Sukarno's government had developed a growing affinity with China, with *bebas dan aktif* being temporarily 'discarded' for the establishment of the ephemeral Jakarta–Beijing Axis.[19] Sukarno's successor was General Suharto (1968–1998), who came to power after leading a military orchestrated anti-communist campaign, following an attempted coup by factions within *Partai Komunis Indonesia* (the Indonesian Communist Party). That coup aimed to 'remove senior anti-communist generals

16 Shiping Tang, *A theory of security strategy for our time: defensive realism*, Palgrave Macmillan, New York, 2010, p 2.

17 Rajen Harshe, 'India's non-alignment: an attempt at conceptual reconstruction', *Economic and Political Weekly*, 1990, 25(7/8):399-405. https://www.jstor.org/stable/4395968

18 Arif, 'Balancing with Jokowi's characteristics: a neoclassical realism approach to Indonesia's foreign and security policies in the South China Sea', p 372.

19 Rizal Sukma, *Indonesia and China: The Politics of a Troubled Relationship*, Routledge, London, 1999.

… paving the way for a communist hegemony in Indonesian politics'.[20] After taking power, Suharto made efforts to re-establish *bebas dan aktif* in his approach to foreign relations, rekindling relations with the US-led West, which Sukarno had actively diminished.[21] Despite coming to power at the height of the Cold War, with the support of the US government (including the Central Intelligence Agency),[22] Suharto never formally aligned Indonesia with the United States.[23] Suharto's clearly articulated anti-communist stance was an indication of Indonesia's resistance towards the communist bloc, and included the severing of Sino-Indonesian diplomatic ties between 1967 and 1989.[24] This anti-communist posture was directed toward China more than the Soviet Union,[25] with Indonesia and the Soviets maintaining diplomatic ties, and demonstrating rapprochement in the 1980s.[26] Despite the goodwill between Indonesia and the Soviet Union at this time, Indonesia was, throughout this period, more closely aligned with the United States. Suharto maintained positive relationships with all US presidents during this period,[27] and the United States' South-East Asia policy relied heavily on cooperation with Indonesia, especially after the culmination of the Vietnam War.[28] Despite efforts to remain neutral, Indonesia was ultimately 'dragged in' to the Cold War rivalry.[29]

After Suharto stood down in 1998, foreign policy under his first three successors – Bacharuddin Jusuf Habibie (1998–1999), Abdurrahman Wahid (1999–2001) and Megawati Sukarnoputri (2001–2004) – was neither a focus nor a priority. Rather, it was subsumed by domestic politics and the pressing need for Indonesia to rehabilitate its image globally after the true extent of the humanitarian crises that

20 Taomao Zhou, 'Ambivalent alliance: Chinese policy towards Indonesia, 1960–1965', *The China Quarterly*, March 2015, 221: 208–228, https://doi.org/10.1017/S0305741014001544; Wen-Qing Ngoei, 'The United States and "the Chinese problem" of Southeast Asia', *Diplomatic History,* 2021, 45(2): 240–252.

21 Sukma, *Indonesia and China: The Politics of a Troubled Relationship*.

22 William Blum, *Killing Hope*, Zed Books, London, 2014; Jess Melvin, 'Telegrams confirm scale of US complicity in 1965 genocide', *Indonesia at Melbourne,* The University of Melbourne, 2017, accessed 17 October 2022. https://indonesiaatmelbourne.unimelb.edu.au/telegrams-confirm-scale-of-us-complicity-in-1965-genocide/; Ngoei, 'The United States and the "Chinese problem" of Southeast Asia'.

23 Hugh White, 'The Jakarta switch', *Australian Foreign Affairs*, July 2018, Issue 3: 7–30.

24 Sukma, *Indonesia and China: The Politics of a Troubled Relationship*.

25 Deepak Nair, 'Spooks, goons, 'intellectuals': the military–catholic network in the Cold War diplomacy of Suharto's Indonesia', *History and Anthropology*, 2022, 33(3): 372–390.

26 David Hill, 'Indonesian political exiles in the USSR', *Critical Asian Studies,* 2014, 46(4): 621–648.

27 Frega Wenas Inkiriwang, 'The dynamic of the US–Indonesia defence relations: the 'IMET ban' period' *Australian Journal of International Affairs*, 2020, 74(4): 377–39.

28 Stephen Burgess, 'The US–Indonesian strategic partnership and air force relations', *Journal of Indo-Pacific Affairs*, 2023, 6(3): 54–73.

29 Lucas Myers, 'Indonesia should be at the heart of US Indo-Pacific policy: a free and open Indo-Pacific requires finding the floor and ceiling in the US–Indonesia relationship', *The Wilson Quarterly*, 2023, 47(2).

had transpired under 32 years of New Order rule became public knowledge.[30] It was not until the presidency of Susilo Bambang Yudhoyono (2004–2014) that Indonesia's foreign policymakers more clearly articulated their conception of *bebas dan aktif* as a guiding principle.[31] In 2009, for example, Yudhoyono declared that 'Indonesia can … [have] a million friends and zero enemies.'[32] In 2011, Yudhoyono's foreign minister, Marty Natalegawa, supported this position by seeking to popularise the doctrine of 'dynamic equilibrium', a doctrine that 'seeks to involve all the major relevant powers within a more cooperative framework as a basis for the development of an inclusive regional architecture'.[33] In 2015, the administration of President Joko Widodo (Jokowi) reaffirmed its commitment to a free and active foreign policy in its Defence White Paper.[34]

Certain neoclassical realists have asserted that *bebas dan aktif* has shaped the foreign policy of various Indonesian governments;[35] so too, however, have the external factors emphasised by defensive realism. Indeed, being ostensibly non-aligned does not preclude Indonesia, either in theory or in practice, from allowing structural forces to inform its foreign policy. This, of course, might mean favouring one great power over another, as Indonesia did with the communist bloc under Sukarno and the United States-led West under Suharto. If Indonesia is truly free and active, however, then nothing should preclude it from responding to its changing structural environment by, for example, siding with one power bloc over another. In this instance, that might mean responding to increasing Chinese assertiveness in the Indo-Pacific by developing deeper ties with the AUKUS member states.

30 Abi Mu'ammar Dzikri, '*Perkembangan Politik Luar Negeri Indonesia pada Masa Reformasi'* [The development of Indonesian foreign policy in the Reformasi era], *Tirto*, 26 December 2022, accessed 16 August 2023. https://tirto.id/perkembangan-politik-luar-negeri-indonesia-pada-masa-reformasi-gy35

31 Ganewati Wuryandari, *Politik Luar Negeri Era Reformasi: Kebangkitan Indonesia Sebagai Negara Kekuatan Menengah Dalam Percaturan Regional dan Global* [Reformasi era foreign policy: the rise of Indonesia as a middle power in the regional and global order], Badan Riset dan Inovasi Nasional, Jakarta, 10 March 2022, pp 1–8.

32 Ted Piccone and Bimo Yusman, 'Indonesian foreign policy: 'a million friends and zero enemies', *Brookings*, 14 February 2014, accessed 13 May 2022. https://www.brookings.edu/articles/indonesian-foreign-policy-a-million-friends-and-zero-enemies/

33 Dewi Fortuna Anwar, 'Indonesia's foreign relations: policy shaped by the ideal of "dynamic equilibrium"', *East Asia Forum*, 4 February 2014, accessed 13 May 2022. https://www.eastasiaforum.org/2014/02/04/indonesias-foreign-relations-policy-shaped-by-the-ideal-of-dynamic-equilibrium/

34 Defence Ministry of the Republic of Indonesia, *Defence White Paper*, Defence Ministry of the Republic of Indonesia, 2015, accessed 21 October 2022. https://www.kemhan.go.id/wp-content/uploads/2016/05/2015-INDONESIA-DEFENCE-WHITE-PAPER-ENGLISH-VERSION.pdf

35 See Caroline, 'Indonesia's global maritime fulcrum: from hedging to underbalancing'; Arif, 'Balancing with Jokowi's characteristics: a neoclassical realism approach to Indonesia's foreign and security policies in the South China Sea'.

Barrier to non-alignment – Indonesia's modest military capabilities

Indonesia would, of course, be better positioned to maintain true non-alignment in the long-term if it possessed the defensive military capabilities of a neutral power such as Switzerland; that is, modern high-tech military capabilities and a large, well-trained reserve force.[36] The fact that it does not possess such a defence, however, means that regional conflict involving China would likely affect, at the very least, Indonesia's economic interests and its territorial waters. In response, one option for Indonesia is to develop and acquire more formidable defensive military capabilities. For several reasons, however, Indonesia is unlikely to do this. It will therefore likely need to align itself with a defensive balancing coalition, which, we argue later, might take the form of an unspoken military alliance with the AUKUS powers and their allies.

As the world's largest archipelago, Indonesia comprises approximately 18,000 islands and 5 million square kilometres of water,[37] but its military and defensive capabilities are plainly inadequate to defend such a vast territory. As recently as 2015, 'senior figures [were] talking of Indonesia building a "world class navy"'.[38] As of 2023, however, Indonesia appears unlikely to realise this aspiration. Developing Indonesia into a global maritime fulcrum has been a priority of the Jokowi administration,[39] but budgetary constraints, as well as a persisting insistence that the majority of the military budget be spent on the army, have meant that Indonesia's maritime ambitions have remained purely aspirational.[40] Indonesia's submarine fleet of four obsolete submarines – one remaining Cakra-class vessel and three Nagapasa-class submarines – and a similarly limited fleet of surface vessels, are seen as inadequate to protect Indonesian waters.[41]

Some within the Indonesian government and TNI (*Tentara Nasional Indonesia*, Indonesian National Military) had hoped that the 2021 sinking of the Cakra-class KRI Nanggala-402 submarine might have triggered greater government spending on naval hardware; indeed, three months after the sinking, Jakarta announced it would proceed with the purchase of US$125 billion in new arms over the

36 White, 'The Jakarta switch'.

37 Geoffrey Till, 'Indonesia as a growing maritime power: possible implications for Australia', *Soundings*, May 2015, accessed 12 May 2022. https://navalinstitute.com.au/wp-content/uploads/2015/06/soundings4.pdf

38 Till, 'Indonesia as a growing maritime power: possible implications for Australia', p 2.

39 Rendi A Witular, 'Jokowi launches maritime doctrine to the world', *The Jakarta Post*, 13 November 2014, accessed 15 August 2023. http://www.thejakartapost.com/nws/2014/11/13/jokowi-launches-maritime-doctrine-world.html

40 Till, 'Indonesia as a growing maritime power: possible implications for Australia'.

41 Koya Jibiki, 'Indonesia looks to triple submarine fleet after Chinese incursions', *Nikkei Asia*, 30 May 2021, accessed 11 May 2022. https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/Indonesia-looks-to-triple-submarine-fleet-after-Chinese-incursions

next quarter century.[42] Chang argues that based on the size of its economy, Indonesia should be able to maintain 'a fleet of at least five submarines and 12 large surface combatants'.[43] Instead, Indonesia awaits the construction and delivery of three additional Nagapasa-class submarines, ordered by its Ministry of Defence on 12 March 2019, which are to be built by South Korean shipbuilder Daewoo Shipbuilding and Marine Engineering.[44]

The Ministry's long-term aim is to increase its submarine fleet from four to twelve, as well as its number of surface vessels more broadly.[45] In early 2022, Indonesian defence minister and former special forces commander, General Prabowo Subianto (Rtd) claimed to be working towards making Indonesia 'very strong in the Southeast Asia region' and the navy 'glorious on the oceans', by acquiring up to 50 naval surface vessels by 2024.[46] But as Indonesia's entire government budget for 2021 totalled US$185 billion and military spending is typically just 0.8% of its gross domestic product,[47] there will likely remain a demonstrable gap between Indonesia's stated ambitions and the material resources it ultimately allocates to meeting these ambitions. Indeed, the imbalance between Indonesia's modest navy and its vast territorial waters, we submit, strongly suggests that Indonesia will become reliant on friendly neighbours and military allies to achieve strategic balance in the region.

Before discussing Indonesia's stance vis-a-vis AUKUS, as well as the respective stances of other South-East Asian countries, we first explore the response options available to Indonesia in the event of a regional war precipitated by either Chinese military action intended to achieve the 'reunification' of Taiwan, or further and more serious incursions in the South China Sea.

42 Marchio Irfan Gorbiano and Novan Iman Santosa, 'Government seeks up to $125 billion in loans to modernize military', *The Jakarta Post*, 2 June 2021, accessed 13 May 2022. https://www.thejakartapost.com/news/2021/06/02/government-seeks-up-to-125-billion-in-loans-to-modernize-military.html

43 Felix K Chang, 'At a crossroads: Indonesia's navy modernization', *Foreign Policy Research Institute*, 27 September 2021, accessed 12 May 2022. https://www.fpri.org/article/2021/09/at-a-crossroads-indonesias-navy-modernization/

44 Ridzwan Rahmat, 'Indonesia signs USD1 billion contract for three follow-on SSKs to Nagapasa class', *Jane's 360*, 12 April 2019, accessed 11 May 2022. https://www.janes.com/article/87861/indonesia-signs-usd1-billion-contract-for-three-follow-on-ssks-to-nagapasa-class

45 Jibiki, 'Indonesia looks to triple submarine fleet after Chinese incursions'.

46 Dezy Rosalia Piri, 'Indonesia to get 50 warships by 2024: Defense Minister', *Kompas,* 27 January 2022, accessed 10 November 2022. https://go.kompas.com/read/2022/01/27/170852174/indonesia-to-get-50-warships-by-2024-defense-minister

47 Gorbiano and Santosa, 'Government seeks up to $125 billion in loans to modernize military'.

Indonesia's potential position in regional crises

Indonesia's potential responses to Chinese aggression

In their interviews, the 30 respondents responded to questions on how Indonesia might respond to a crisis in either the Taiwan Strait or the South China Sea. Analysis of the interview data revealed that the respondents overwhelmingly argued that Indonesia would endeavour to maintain a position of non-alignment, and possibly even pursue a mediatory role in both hypothetical scenarios. When pushed about the realities of how this would play out, however, respondents articulated somewhat different, more nuanced responses.

Indonesia and Taiwan

Were China to attempt a 'reunification' with Taiwan by force, several respondents argued that Indonesia would not formally object, at least at the outset of the crisis. One respondent – an American member of a prestigious think tank – referenced a meeting he had attended at which a senior Indonesian politician had argued the case for Indonesia ultimately taking China's side in the event of a successful conquest of Taiwan.[48] On the other hand, two Indonesian academic respondents submitted that Indonesia would remain steadfast in its commitment to the One China Policy, but simultaneously do everything it could to deescalate tensions.[49] One respondent, a senior Jakarta-based Western journalist, believed an invasion of Taiwan would very likely result in US involvement, which would naturally give rise to a broader US–China conflict, either directly or by proxy.[50] This type of conflict would likely precipitate more involvement from regional powers, including Indonesia. Certain other respondents – including a British senior think-tank member, a leading American analyst, an Indonesian former senior diplomat, and an Indonesian Sinologist, himself also a former journalist – suggested that Indonesia would be forced to respond, at least insofar as it would need to protect not just its economic ties to Taiwan, but the tens of thousands of Indonesian foreign workers living in Taiwan. Indeed, one former senior Indonesian diplomat remarked that the innate pragmatism of Indonesian Minister of Foreign Affairs, Retno Marsudi, would mean that Indonesia's Ministry of Foreign Affairs (*Kementerian Luar Negeri* or Kemlu) would likely prioritise the repatriation of those Indonesian workers, meaning Indonesia would become increasingly embroiled, one way or another, in that conflict.

48 Interview with American think tank analyst, 5 January 2022.

49 Interview with Indonesian academic, 5 November 2021; Interview with Indonesian academic 1 December 2021.

50 Interview with senior Jakarta-based Western journalist, 23 December 2021.

While it might be simple for Indonesia to maintain a public position of neutrality with respect to a geographically distant conflict such as Russia's invasion of Ukraine, these practicalities would make it incredibly difficult for Indonesia to maintain a position of neutrality in the event of a Chinese invasion of Taiwan. Therefore, as the structural forces in the region change, Indonesia would likely be compelled to align itself with either a US-led or China-led bloc.

Aggression in the South China Sea

As mentioned, the issue that pervades the Indonesia–China relationship the most is China's conduct in the South China Sea. Indeed, over the years, China has made repeated incursions into Indonesia's EEZ in its North Natuna Sea, a segment of the South China Sea Indonesia renamed in 2017.[51] Indonesia, as well as Vietnam and the Philippines, have responded to China's presence in the South China Sea with increased military spending, as well as the acquisition of naval military hardware.[52] Hendler and Motta, for example, have also predicted that the number of Chinese incursions into Indonesia's North Natuna Sea will only increase in the future, as China responds to Indonesia's commercialisation and militarisation of that maritime territory.[53] In 2021, for example, China demanded that Indonesia cease oil and gas drilling operations in the Tuna Block, an area that falls within Indonesia's EEZ. The dispute revealed just how much of a flashpoint China's claims to the South China Sea could be for Indonesia–China relations, as well as the US–China rivalry more broadly, as Chinese and Indonesian vessels shadowed each other for four months, and the American aircraft carrier USS Ronald Reagan came within seven nautical miles of the Tuna Block drilling rig.[54] China's increased military spending on the People's Liberation Army Navy (PLAN) has been characterised as a potential cause of conflict in the region, as have US efforts to counter this build-up and resulting tensions between China and its neighbours in the South China Sea.[55]

It follows that the increased militarisation of the South China Sea portends some form of military conflict in the longer term. Indonesia's persistent tactic has been to maintain that it is not a claimant to the South China Sea. Although Indonesia

51 Tisnadibrata, 'Indonesia gives new name to sea region north of Natuna Islands'.

52 Bruno Hendler and André Luiz Cançado Motta, 'Military build-up in Southeast Asia and the South China Sea: how relevant are the disputes with China?', *Contexto Internacional*, 2021, 43(3): 565–591.

53 Hendler and Motta, 'Military build-up in Southeast Asia and the South China Sea: how relevant are the disputes with China?'.

54 Tom Allard, Kate Lamb and Agustinus Beo Da Costa, 'EXCLUSIVE: China protested Indonesian drilling, military exercises', *Reuters*, 2 December 2021, accessed 15 August 2023. https://www.reuters.com/world/asia-pacific/exclusive-china-protested-indonesian-drilling-military-exercises-2021-12-01/

55 Aaron Connelly, 'Indonesia must lead for the sake of its interests in the South China Sea', 5 April 2017, *The Jakarta Post,* accessed 23 March 2023.

does not claim territory in the heavily disputed Spratly or Parcel Islands, it seeks to establish control over the Natuna Islands and their natural resources. This has led to Indonesia's EEZ claim not only exceeding China's nine-dash line, but also into territory claimed by both Malaysia and Vietnam.[56] In the past few years, China has renewed its claim to Indonesia's North Natuna Sea, with Shuang Geng, a Chinese Foreign Ministry spokesperson, claiming that the presence of Chinese Coast Guard and fishing vessels in the area is designed to protect China's 'legitimate rights and interests' in the region.[57] Despite this ongoing territorial contestation between a number of states, Indonesia's insistence that it is not a claimant to the South China Sea could be seen as obfuscatory, simply for the fact that part of Indonesia's EEZ falls within China's nine-dash line. Indonesia's position as a non-claimant is also designed not to legitimise China's claims to the South China Sea.[58] The longevity of such an approach, however, appears questionable at best. Notwithstanding that, one Indonesian journalist respondent argued that Indonesia would be able to do just this and, in the process, avoid being subsumed into a regional conflict,[59] three other respondents – an Indonesian academic,[60] an Indonesian journalist, and a senior Australian foreign-policy analyst[61] – argued that Indonesia might use its limited resources to impede all parties' access to Indonesian territory to avoid conflict breaking out in Indonesia. Meanwhile, another Indonesian academic respondent, reflecting a defensive realist position, contended that to think that the conflict would not reach Indonesia, or that Indonesia could somehow manoeuvre its way out of becoming involved, is 'naïve'.[62]

As Supriyanto notes, Indonesia 'is located along the main sea lines of communication (SLOC) between the Indian and Pacific oceans', and South-East Asia is 'the region where Sino-American rivalry exerts the most influence'.[63] It seems unlikely, therefore, that Indonesia could avoid being drawn into a broader conflict, particularly given the significance of its SLOC to the broader

56 Dave McRae, 'Indonesia's South China Sea diplomacy: a foreign policy illiberal turn?', *Journal of Contemporary Asia,* 2019, 49(5): 759–779.

57 Leo Suryadinata, 'Recent Chinese moves in the Natunas riles Indonesia', *ISEAS,* 2020, accessed 7 August 2023. https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2020_10.pdf

58 I Made Andi Arsana and Clive Schofield, 'Indonesia's 'invisible' border with China', in Bruce Elleman, Stephen Kotkin and Clive Schofield (eds), *In Beijing's Power and China's Borders: Twenty Neighbors in Asia*, Routledge, Abingdon, 2012.

59 Interview with Indonesian journalist, 7 November 2021.

60 Interview with Indonesian academic, 17 December 2021.

61 Interview with senior Australian foreign-policy analyst, 20 December 2021.

62 Interview with Indonesian defence-studies academic, 3 December 2021.

63 Supriyanto, 'Why Southeast Asia should welcome AUKUS: Australia models independence in standing up to China'.

region and to any hypothetical conflict. Indeed, the US-led bloc would likely request that Indonesia grant it exclusive access to its SLOC and airspace. If Indonesia were to grant that access, China would most probably interpret such a concession as an act of aggression or outright war, to which China would most likely respond.[64] Naval conflict to ensure China's access to these SLOCs, this respondent contended, would then be highly probable.

Certain respondents, including an American think tank analyst and an Indonesian academic, projected that Indonesia might side with China in the event of a conflict in the South China Sea.[65] An Indonesian academic and defence-studies expert and an Australian academic respondent, argued that Indonesia would hedge for as long as possible before ultimately tilting in the direction of either the US or China, that is, attempting to perpetuate its non-aligned status in the face of increasing pressure before choosing a side.[66] Two Indonesian defence-studies academic respondents argued that Indonesia would be inclined to assist the United States with intelligence sharing and also by possibly tacitly accepting US efforts to blockade Indonesia's SLOCs. They believed this was because of TNI's affinity with the United States, both in terms of the personal affinity many TNI officials have with the United States (having studied there) and their aversion to the threat of communism that China represents.[67] Between 100 and 200 TNI officials are trained in the US annually, with as few as one dozen being trained in China.[68] Between 15 and 25 per cent of US-trained TNI officers are typically promoted to higher positions within the military after their training in the US.[69] Furthermore, US-led training programs operate between the two countries, a recent example being the training of 25 Indonesian naval officers at the International Maritime Intelligence Course in San Diego.[70]

Most respondents argued that Indonesia's contribution to a regional conflict would be minimal. Of the 30 respondents, 27 believed that Indonesia would formally maintain its neutrality for as long as possible and hope that such a conflict would eventually dissipate, while three respondents – an Indonesian

64 Interview with German academic, 18 December 2021.

65 Interview with American think-tank analyst, 5 January 2022; Interview with Indonesian academic, 16 December 2021.

66 Interview with Australian academic, 21 November 2021.

67 Interview with Indonesian academic, 17 December 2021.

68 Interview with Indonesian academic, 17 December 2021.

69 Evan Laksmana and CSIS Indonesia, 'Advancing the US–Indonesia defence relationship', *East Asia Forum*, 19 January 2021, accessed 12 July 2023. https://www.eastasiaforum.org/2021/01/19/advancing-the-us-indonesia-defence-relationship/

70 US Embassy & Consulates Indonesia, *US Navy course trains Indonesian military officers in maritime intelligence* [media release]', US Embassy & Consulates Indonesia, 31 August 2022, accessed 12 July 2023. https://id.usembassy.gov/u-s-navy-course-trains-indonesian-military-officers-in-maritime-intelligence/

human-rights specialist,[71] an Indonesian economist and academic,[72] and a Jakarta-based Western journalist[73] – were unsure how Indonesia would respond. Three respondents – an American Indonesia-analyst and commentator,[74] an Indonesian academic,[75] and a senior Australian foreign-policy analyst[76] – expressed their confidence in Indonesia's ability to maintain a position of armed neutrality. Four academic respondents – one British, one German and two Indonesian – and one Jakarta-based journalist expressed scepticism about Indonesia's ability to play a significant and material role in such a conflict.[77]

One senior Indonesian diplomat explained that Indonesia's approach to conflict in the South China Sea has been to manage it in a tactical, case-by-case basis, in the hope that a high-intensity conflict would never eventuate.[78] As a senior French diplomat respondent explained, however, 'Making sure that you're … prepared for [conflict] is also a way to avoid this situation. It's called deterrence.'[79] It follows that Indonesia would benefit from having a backup plan to which it can revert, should conflict eventuate. We argue below that this could take the form of developing a formal or informal strategic alignment or balancing coalition with the AUKUS member states. Indeed, two respondents – an Indonesian academic and a British think-tank analyst – suggested that Australia and Indonesia are both open to an AUKUS–Indonesia alliance in the long-term.[80]

In the following section, we discuss the establishment of AUKUS, the response to AUKUS from Indonesia and other South-East Asian countries, and what those responses might mean in the long-term. We then contemplate whether such an arrangement might come to fruition in the next 15 to 20 years or longer, that being an AUKUS-plus arrangement involving Indonesia.

71 Interview with Indonesian human-rights specialist, 20 December 2021.

72 Interview with Indonesian economist and academic, 21 December 2021.

73 Interview with senior Jakarta-based Western journalist, 23 December 2021.

74 Interview with senior American Indonesia-analyst and commentator 27 October 2021.

75 Interviews with Indonesian academic, 5 November 2021.

76 Interview with senior Australian foreign-policy analyst, 20 December 2021.

77 Interviews conducted on 25 November 2021, 3 December 2021, 18 December 2021, 21 December 2021, and 27 December 2021.

78 Interview with senior Indonesian diplomat, 1 December 2021.

79 Interview with senior French Diplomat, 10 February 2022.

80 Interview with Indonesian academic, 1 December 2021; Interview with British think-tank analyst, 6 December 2021.

Regional balancing: Indonesia and AUKUS

In 2018, White delineated several pre-AUKUS balancing options available to Indonesia.[81] He argued that Indonesia could align itself with Japan and India, although this was improbable given the fraught nature of the China–Japan and China–India relationships. Alternatively, Indonesia could try to carve out its own sphere of influence or sub-region in South-East Asia, wherein it could attempt to play India and China off one other in order to 'maximise its room to manoeuvre between them'.[82] Finally, Indonesia could adopt a position akin to that of Switzerland, whereby it remains 'armed and neutral', that is, a classic middle-power strategy.[83] All of these options, however, are founded on the assumption that Indonesia develops its own large, modern navy and air force, capable of resisting incursions into its maritime domain. As discussed, looking beyond the political rhetoric of Indonesian elites, and considering the realities of Indonesia's current military capacity, the country is unlikely to be able to establish an 'armed and neutral' position. Additionally, while ASEAN's security architecture has been seen as something for Indonesia to fall back on in the event of a regional crisis, recent events and analyses have shown ASEAN's role in South-East Asia to be diminishing, and a significant lack of consensus amongst ASEAN member states on regional security matters.[84] Several prudent alignment and balancing options remain available to Indonesia, which we discuss next.

AUKUS: aims

The stated aims of AUKUS are to enhance Indo-Pacific security cooperation between Australia, the United States and the United Kingdom, to encourage cooperation on the development of advanced capabilities, and to ultimately equip Australia with nuclear-powered submarines.[85] As announced in early March 2023, Australia will take delivery of between three and five US Virginia class nuclear-powered attack submarines (SSNs) in the early 2030s, and acquire eight new SSN-AUKUS submarines, to be designed in cooperation with the UK, from the early 2040s onwards.[86] Australia's AUKUS-class SSNs are set to be

81 White, 'The Jakarta switch'.

82 White, 'The Jakarta switch', p 25.

83 White, 'The Jakarta switch', p 25.

84 Sana Jaffrey 'Indonesia in 2021: In the eye of the storm', in Daljit Singh and Thi Ha Hoang (eds), *Southeast Asian Affairs 2022*, ISEAS–Yusof Ishak Institute, 2022, pp 141–161; Hoang Thi Ha, 'Understanding the institutional challenge of Indo-Pacific minilaterals to ASEAN', *Contemporary Southeast Asia*, 2022 44(1): 1–30.

85 Defence, *Australian, UK and US partnership* [media release], Defence: Australian Government, 2022, accessed 2 February 2023. https://www.defence.gov.au/about/taskforces/nuclear-powered-submarine-task-force/australian-uk-and-us-partnership

86 Prime Minister of Australia, *Joint Leaders Statement on AUKUS'* [joint statement], Australia Government, 14 March 2023, accessed 17 March 2023. https://www.pm.gov.au/media/joint-leaders-statement-aukus

built in the Osborne shipyards in South Australia, which will receive a $2 billion upgrade over the next four years.[87]

The development of AUKUS has rightly been interpreted as a means to curb China's growing influence in the Indo-Pacific, and to reaffirm long-held defensive coalition bonds between the AUKUS states. Supriyanto notes that Australia's improved submarine capabilities would work 'to extend its maritime striking distance to where China's naval forces would likely be concentrated during hostilities: the South China Sea and Taiwan Strait'. These naval upgrades also equip Australia with submarines that permit 'longer submerged duration for naval intelligence and espionage purposes'.[88] Public commentary has made much of the fact that, despite media attention surrounding the AUKUS announcement, Australia is a decade away from obtaining its own nuclear-powered submarine fleet. This observation, however, obscures the reality that AUKUS provides an alliance framework for medium-term base rotation and operational support of US and UK submarines through Western Australia by 2027, as part of Submarine Rotational Force – West.[89] Furthermore, Australian naval personnel are set to embed themselves within crews aboard US and UK submarines and in shipyards during 2023. According to US Secretary of Defense Lloyd J Austin III, the AUKUS states will also work toward the mutual development of each country's industrial bases, the improvement of information sharing and technological cooperation, and the development of advanced artificial intelligence, hypersonics, and maritime-domain awareness technologies.[90]

Several days after the announcement of AUKUS, ASPI executive director and former Deputy Secretary for Strategy in Australia's Department of Defence, Peter Jennings, offered a defensive realist perspective on AUKUS. Jennings noted that AUKUS served several purposes. First, it provides Australia, the United Kingdom and the United States the much-needed opportunity to recalibrate after recent developments, namely the Biden Administration's withdrawal from Afghanistan; the UK's directionless post-Brexit foreign policy; and Australia's refusal 'to

87 Andrew Greene and Matthew Doran, 'Australian nuclear submarine program to cost up to $368b as AUKUS details unveiled in the US', *ABC News*, 14 March 2023, accessed 14 March 2023. https://www.abc.net.au/news/2023-03-14/aukus-nuclear-submarine-deal-announced/102087614

88 Supriyanto, 'Why Southeast Asia should welcome AUKUS: Australia models independence in standing up to China'.

89 Greene and Doran, 'Australian nuclear submarine program to cost up to $368b as AUKUS details unveiled in the US'.

90 Lloyd J Austin, *Statement by Secretary of Defense Lloyd J Austin III on AUKUS optimal pathway announcement* [media statement], US Department of Defense website, 13 March 2023, accessed 14 March 2023. https://www.defense.gov/News/Releases/Release/Article/3327747/statement-by-secretary-of-defense-lloyd-j-austin-iii-on-aukus-optimal-pathway-a/

subordinate [its] national interests to China'.[91] Secondly, it has not only granted Australia '[America's] closely guarded nuclear propulsion technology for a fleet of new submarines',[92] but it made clear the United States' expectations of Australia, namely that it is to play a stabilising and China-balancing role in the Asia-Pacific, including in South-East Asia.

With this and China's rise in mind, Jennings submitted that 'AUKUS is the best thing to have happened in years to give [Chinese President] Xi pause in his international risk-taking'. Jennings also maintained that 'the stronger AUKUS is, the less likely it is that there will be an attack on Taiwan'.[93] Jennings' overall argument is that AUKUS establishes a strong balancing coalition against China's rise, as China increasingly acts assertively in its foreign relations. It is important to consider, however, how South-East Asian stakeholders view AUKUS and its implications regarding future conflict.

AUKUS: reactions from South-East Asia

The nations of South-East Asia, including Indonesia, increasingly figure in the calculus of the Sino-American rivalry. Given the security implications of the AUKUS announcement for South-East Asia, it might be expected that AUKUS would have been met with suspicion or hostility from South-East Asian states. No ASEAN member state, however, responded to the September 2021 AUKUS announcement in an overtly hostile manner. Indonesia did, of course, 'cautiously note' the establishment of the pact, while Malaysia appeared to conflate the aim of AUKUS – namely the sharing of nuclear propulsion technology between the US and Australia – with nuclear weapons, which, it believed could ignite tensions in the South China Sea.[94] Neither Malaysia nor Indonesia sought to escalate their concerns beyond these observations, other than a fleeting attempt to develop a joint statement with ASEAN on the pact.[95]

91 Peter Jennings, 'AUKUS sets a better direction for Australia's defence', *The Strategist*, Australian Strategic Policy Institute (ASPI), 17 September 2021, accessed 10 May 2022. https://www.aspistrategist.org.au/aukus-sets-a-better-direction-for-australias-defence/

92 Jennings, 'AUKUS sets a better direction for Australia's defence'.

93 Jennings, 'AUKUS sets a better direction for Australia's defence'.

94 Prime Minister's Office of Malaysia, *Kenyataan Media Berkaitan Perdana Menteri Malaysia dan Perdana Menteri Australia Setuju Memperkukuhkan Hubungan Dua Hala* [media statement: Prime Minister of Malaysia and Prime Minister of Australia agree to strengthen bilateral relations], Prime Minister's Office of Malaysia website, 18 September 2021, accessed 10 May 2022. https://www.pmo.gov.my/2021/09/kenyataan-media-berkaitan-perdana-menteri-malaysia-dan-perdana-menteri-australia-setuju-memperkukuhkan-hubungan-dua-hala/

95 Rozanna Latiff, 'Malaysia hopes for ASEAN consensus on Australian nuclear sub pact', *Reuters,* 12 October 2021, accessed 25 November 2022. https://www.reuters.com/world/asia-pacific/malaysia-hopes-asean-consensus-australian-nuclear-sub-pact-2021-10-12/

In response to the 13 March 2023 announcement that formalised AUKUS, Kemlu reacted by tweeting a reiteration of Indonesia's prior stance, namely that 'maintaining peace and stability in the region is the responsibility of all countries' and reinforcing its position that Australia must continue to uphold its non-proliferation treaty commitments.[96] While some have viewed this response as being critical of (or uneasy about) AUKUS,[97] others treated the tenor of Indonesia's official response as a form of acceptance.[98] Indeed, Kemlu's tweet, in contrast to its initial reaction to AUKUS, indicated a softening of Indonesia's response. In its response to the AUKUS announcement, Malaysia reiterated its prior concerns and strengthened its language regarding the refusal of allowing nuclear-powered submarines to operate in Malaysian waters.[99] Anticipating unease regarding the announcement, Australia made diplomatic efforts to assuage the concerns of South-East Asian states. Chief of Navy Vice Admiral Mark Hammond, for example, travelled through South-East Asia the week following the AUKUS announcement, meeting with Indonesia's Navy Chief of Staff, Admiral Muhammad Ali, where the pair discussed a 'number of important points to enhance cooperation, especially between the two countries' navies'.[100]

In terms of other South-East Asian countries, the responses to AUKUS have, as mentioned, generally ranged from benign to positive. While Cambodia and Laos – despite their close ties to China – refrained from commenting, Singapore

96 Ministry of Foreign Affairs of the Republic of Indonesia (@Kemlu_RI), 'Indonesia has been closely following the security partnership of AUKUS', Twitter, 14 March 2022 2:47 pm, accessed 15 March 2023. https://twitter.com/Kemlu_RI/status/1635487830314217473?ref_src=twsrc%5Etfw%7Ctwcamp%5Eembeddedtimeline%7Ctwterm%5Escreen-name%3AKemlu_RI%7Ctwcon%5Es1

97 Chris Barrett and Karuni Rompies, '"AUKUS created for fighting": push for Indonesia to refuse access to subs', 14 March 2023, *The Sydney Morning Herald*, accessed 15 March 2023. https://www.smh.com.au/world/asia/aukus-created-for-fighting-push-for-indonesia-to-refuse-access-to-subs-20230314-p5crzz.html; Ajeyo Basu, 'Indonesia uneasy with US-UK-Australia Aukus nuclear submarine deal, fears getting embroiled in Great Game rivalry', 14 March 2023, *Firstpost,* accessed 15 March 2023. https://www.firstpost.com/world/indonesia-uneasy-with-us-uk-australia-aukus-nuclear-submarine-deal-fears-getting-embroiled-in-great-game-rivalry-12288532.html

98 Barrett and Rompies, '"AUKUS created for fighting": push for Indonesia to refuse access to subs'; Amanda Hodge and Dian Septiari, 'AUKUS alliance: your submarines may be unwelcome in our waters, says Malaysia', 15 March 2023 *The Australian,* accessed 15 March 2023. https://www.theaustralian.com.au/nation/defence/aukus-alliance-diplomacy-pays-dividends-as-jakarta-reins-in-criticism/news-story/2fbb1ad3a393614298880349cd60e722

99 Ministry of Foreign Affairs Malaysia, *Enhanced trilateral security partnership between Australia, the United Kingdom and the United States of America (Aukus)* [media release]*,* 14 March 2023, Ministry of Foreign Affairs Malaysia*,* accessed 15 March 2023. https://www.kln.gov.my/web/guest/-/enhanced-trilateral-security-partnership-between-australia-the-united-kingdom-and-the-united-states-of-america-aukus-

100 Emma Conners, 'Navy chief embarks on SE Asia tour to soothe concerns about subs deal', 14 March 2023, *Australian Financial Review,* accessed 15 March 2023. https://www.afr.com/world/asia/navy-chief-embarks-on-se-asia-tour-to-soothe-concerns-about-subs-deal-20230314-p5cryb; Indonesia Defence Magazine, 'Angkatan Laut Indonesia-Australia Komitmen Tingkatkan Kerja Sama Pertahanan' [Indonesian-Australian navies commit to increasing defense cooperation], 21 March 2023, *Indonesia Defence Magazine,* accessed 27 August 2023. https://indonesiadefense.com/angkatan-laut-indonesia-australia-komitmen-tingkatkan-kerja-sama-pertahanan/.

openly welcomed the AUKUS announcement.[101] Similarly, the Philippines endorsed it, acknowledging that 'ASEAN member states, both individually and collectively, do not possess the military capacity to maintain peace and security in Southeast Asia'.[102] Other South-East Asian states have been relatively silent on the matter, but given the often challenging nature of China–Vietnam relations, for example, some have interpreted Vietnam's silence as 'hidden support' of AUKUS.[103] Unsurprisingly, Japan, a major ally of the US, and sometime rival of China, welcomed AUKUS.[104]

The above responses reveal a wide range of official state-level attitudes towards AUKUS. The results of a 2021 survey conducted by Singapore's ISEAS-Yusof Ishak Institute indicate with whom the broader South-East Asian population would side in the event of a regional crisis. In terms of survey respondents' views of China, a significant majority (76.3%) saw China as 'the undisputed influential economic power in the region', though almost equally, 72.3% expressed concerns about China's growing economic influence.[105] A major concern for survey respondents (62.4%) was China's militarisation of the South China Sea and its increasingly assertive conduct. Respondents were more welcoming of US strategic influence in the region, with 63.1% of respondents supporting US influence in the region.[106] Unsurprisingly, therefore, 61.5% of survey respondents said they would side with the US over China if forced to choose. China as a preferred option dropped from 46.4% in 2020, to 38.5% in 2021, notwithstanding China's investment and vaccine diplomacy efforts throughout the region.[107] Another report suggests that

101 Channel News Asia, 'PM Lee speaks with PM Scott Morrison about Australia's new trilateral partnership with US, UK', 16 September 2021, *Channel News Asia*, accessed 10 May 2022. https://www.channelnewsasia.com/singapore/pm-lee-scott-morrison-australia-us-uk-partnership-aukus-2182196

102 Teodoro L Locsin, *Statement of The Honorable Teodoro L Locsin Jr Secretary of Foreign Affairs on the Australia-United Kingdom-United States (AUKUS) enhanced trilateral security partnership* [media release], 19 September 2021, Department of Foreign Affairs Republic of the Philippines website, accessed 10 May 2022. https://dfa.gov.ph/dfa-news/statements-and-advisoriesupdate/29484-statement-of-foreign-affairs-teodoro-l-locsin-jr-on-the-australia-united-kingdom-united-states-aukus-enhanced-trilateral-security-partnership

103 Hai Hong Nguyen, 'Australia can count on Vietnam to support AUKUS', *The Strategist,* ASPI, 27 October 2021, accessed 16 November 2022. https://www.aspistrategist.org.au/australia-can-count-on-vietnam-to-support-aukus/

104 Ministry of Foreign Affairs Japan, *Japan-Australia Foreign Ministers' telephone talk'* [media release], Ministry of Foreign Affairs Japan website, 17 September 2021, accessed 10 May 2022. https://www.mofa.go.jp/press/release/press3e_000248.html

105 ISEAS – Yusof Ishak Institute, *The state of Southeast Asia: 2021 survey report*, 2021, ISEAS – Yusof Ishak Institute, accessed 17 May 2022. https://www.iseas.edu.sg/wp-content/uploads/2021/01/The-State-of-SEA-2021-v2.pdf

106 ISEAS – Yusof Ishak Institute, *The state of Southeast Asia: 2021 survey report*.

107 ISEAS – Yusof Ishak Institute, *The state of Southeast Asia: 2021 survey report*.

Indonesia is, generally, supportive of US foreign policy, with 69% of Indonesian respondents viewing US foreign policy favourably.[108]

AUKUS plus Indonesia

Considering the evidence presented, we posit that it is in Indonesia's national interest to align itself, whether formally or informally, with the AUKUS states in the long-term. Despite circumstances that might motivate Indonesia to pursue such an alignment, it is difficult to imagine a scenario where Indonesia would enter into a formal AUKUS-plus arrangement, thereby publicly deviating from its *bebas dan aktif* position. While a formal AUKUS-plus alliance remains an option, especially if regional tensions escalate to the point of armed conflict, it is unlikely that policymakers in Jakarta would be willing to formally align with any coalition. Nevertheless, Indonesia could engineer an informal alignment with the AUKUS member states, while maintaining an impression of nominal independence or neutrality. Indonesia could achieve this by continuing to expand its ties with the AUKUS member states, whether by deepening its participation in exercises, such as Garuda Shield or Talisman Sabre; sending more military officials to AUKUS states for education and training; and/or potentially working with the AUKUS states in Indonesia's pursuit of modern military technologies and capabilities. In a potential conflict scenario, Indonesia may be able to maintain a neutral stance, while information sharing with AUKUS, and allowing the AUKUS states to pass through Indonesian territory unrestricted. Given the role a US-led bloc could play in bolstering Indonesia's defensive capabilities, an informal alignment with AUKUS would also be of utility if Indonesia were to become an unlikely target in such a conflict.

In either scenario, the question becomes: How much more assertive can China's behaviour become before Indonesia, and other South-East Asian states, are moved to ultimately align themselves with either a China-led or US-led bloc? Defensive realism offers insights into such situations and posits that states like Indonesia are likely to develop or join balancing coalitions to deter increasingly assertive powers.[109] Given the material capacity of the AUKUS alliance, its commitment to the rules-based international order,[110] and its member states' less-assertive behaviour in South-East Asia, Indonesia may be more inclined to side with the AUKUS member states if pushed. Indonesia's modest military capabilities would also be bolstered by seeking alignment with a pact

108 Matthew Kendrick, 'Biden is much more popular than Trump around the world', *Morning Consultant*, 21 February 2023, accessed 28 February 2023. https://morningconsult.com/2023/02/21/biden-more-popular-than-trump-abroad/

109 Mearsheimer, 'Structural realism'.

110 Defence, *Australian, UK and US partnership*.

as mightiful as AUKUS. Indonesian alignment with AUKUS would also be welcomed by the AUKUS member states, given the 'bulwark [such an arrangement] could present to China's expansionist aspirations in East Asia and the Western Pacific region'.[111]

Reported feelings of 'indifference' between Australia and Indonesia, and their often-strained relationship, might make the likelihood of an AUKUS-plus arrangement with Indonesia seem remote.[112] This is compounded by wider perceptions of Australia being the 'odd man out' in the Indo-Pacific,[113] and its modern foreign relations demonstrating hypocrisy in its posturing in opposition to China and a reverence toward its colonial bonds.[114] Australia and Indonesia, however, have reason to seek a closer relationship. Given their presence in a region facing challenges posed by a rising China, both Indonesia and Australia would benefit from the development of balancing coalitions, acting as a bulwark against an assertive and, at times, belligerent China. Both states' most recent defence white papers, and Australia's 2020 Strategic Update, highlight the ongoing significance of Indonesia–Australia relations to regional peace and security, indicating a willingness to work together on a multilateral level to promote security in the Indo-Pacific.[115] Such commitments were reaffirmed at the 2+2 meeting in February 2023, where the nations' defence and foreign ministers signed a joint statement committing to 'deepening … defence engagement' and affirming their 'shared vision of the Indo-Pacific as a region of dialogue and cooperation, where countries can make their own sovereign choices and where international law is respected'.[116] Within weeks of winning the May 2022 Australian federal election, Prime Minister Anthony Albanese attended a summit with Jokowi and reaffirmed Australia's relationship with Indonesia, releasing a

111 Daniel Peterson, 'China's power play in Indonesia: infrastructure investment and territorial incursions', *Moussons,* 2023, 41: 223–247.

112 See Endy M Bayuni, 'The view from Indonesia: dispatch from an indifferent neighbour', *Australian Foreign Affairs,* July 2018, Issue 3: 49–68.

113 Chengxin Pan, 'The Indo-Pacific and the geopolitical anxieties about China's rise in the Asian regional order', *Australian Journal of International Affairs,* 2014, 68(4): 453–469.

114 See Simon Hewes and David Hundt, 'The battle of the Coral Sea: Australia's response to the belt and road initiative in the Pacific', *Australian Journal of International Affairs,* 2022, 76(2): 178–193.

115 Defence Ministry of the Republic of Indonesia, *Defence White Paper;* Department of Defence, *2016 Defence White Paper*, Australian Government, 2016, accessed 21 October 2022. https://www.defence.gov.au/about/strategic-planning/defence-white-paper Department of Defence, *2020 Defence Strategic Update*, Australian Government, 2020, accessed 21 October 2022. https://www.defence.gov.au/about/strategic-planning/2020-defence-strategic-update .

116 Richard Marles, *Joint statement on the eighth Australia-Indonesia foreign and defence ministers' 2+2 Meeting* [media release], Defence: Australian Government, 10 February 2023, accessed 7 August 2023. https://www.minister.defence.gov.au/statements/2023-02-10/joint-statement-eighth-australia-indonesia-foreign-and-defence-ministers-22-meeting

joint statement which emphasised 'plans to elevate our defence cooperation'.[117] Furthermore, Australia's (and the US's) role in fostering Indonesia's independence from the Dutch in the 1940s is fondly recalled.[118] Finally, both states are seen to have a strong mutual interest in the perpetuation of the current international order and a commitment to constructive middle-power diplomacy.[119] The affinity between both states indicates room for Indonesia and Australia to work together to traverse an increasingly uncertain and competitive Indo-Pacific region.

Recent events have demonstrated that Indonesia's affinity with Australia and the other AUKUS member states translates into strategic cooperation. The affinity between US and Indonesian military elites has also grown in recent years, and defence cooperation between the two states has been further strengthened. In 2021, Foreign Minister Retno Marsudi announced that Indonesia and the US would enter 'a new era of bilateral relations' and, along with Secretary of State Anthony Blinken, reiterated the importance of the US–Indonesia relationship's 'contribution to a secure and prosperous Indo-Pacific'.[120] This built upon the legacy of the Obama Administration's Joint Statement with the Jokowi Administration, which emphasised defence cooperation, through the 'strengthen[ing of] bilateral defense cooperation, and … the growth in bilateral military engagements'.[121] In 2022, this culminated in what has been dubbed 'Super Garuda Shield', the largest joint military exercise involving the US and Indonesia. These exercises included more than 4,000 personnel, including troops from Australia, Japan and Singapore for the first time.[122] The United Kingdom has also demonstrated a desire to strengthen ties with Indonesia, participating in 'Super Garuda Shield', as well as developing the UK–Indonesia Partnership Roadmap 2022 to 2024, which emphasises a joint commitment to 'strengthening cooperation in bilateral

117 Graham Dobell, 'Australia's new government: climate, China and AUKUS', *Comparative Connections*, 2022, 24(2): 171–184; Prime Minister of Australia, *Joint communiqué: Indonesia–Australia annual leaders' meeting [media release]*, Prime Minister of Australia, 6 June 2022, accessed 23 March 2023. https://www.pm.gov.au/media/joint-communique-indonesia-australia-annual-leaders-meeting

118 Allan Gyngell, *Fear of Abandonment: Australia in the World Since 1942,* Latrobe University Press, Carlton, 2021; Defence Ministry of the Republic of Indonesia, *Defence White Paper*.

119 de Swielande, 'Middle powers in the Indo-Pacific: potential pacifiers guaranteeing stability in the Indo-Pacific?'; Greta Nabbs-Kellar, 'Understanding Australia-Indonesia relations in the post-authoritarian era: resilience and respect', *Australian Journal of International Affairs*, 2020, 74(5): 532–556.

120 Ahmad Syamsudin and Shailaja Neelakantan, 'Indonesia starts 'new era' with US as Washington courts Southeast Asia', *Benar News,* 5 August 2021, retrieved 7 August 2023. https://www.benarnews.org/english/news/indonesian/indonesia-us-new-era-ties-08052021160032.html

121 Office of the Press Secretary, *Joint statement by the United States of America and the Republic of Indonesia*, The White House website, 26 October 2015, retrieved 7 August 2023.

122 Combined Joint Information Bureau, *Super Garuda Shield 2022 showcases multinational partnership and joint interoperability* [media release], US Embassy and Consulates in Indonesia, 3 August 2022, retrieved 7 August 2023. https://id.usembassy.gov/super-garuda-shield-2022-showcases-multinational-partnership-and-joint-interoperability/

political, security and defence ties to ensure peace and stability'.[123] Australia's recent hosting of the largest ever Talisman Sabre exercises, which included the participation of the US, the UK and Indonesia, is further evidence of the states' willingness to cooperate on defence issues.[124]

Recent events surrounding the Russia–Ukraine war further highlight that, in a crisis, states such as Indonesia may veer away from states that display aggressive behaviour. This mirrors the defensive realist assumption that a belligerent power will drive sympathetic weak/middle powers away, often pushing them to join a balancing coalition with a rival great power.[125] In response to Russia's aggression in Ukraine, coupled with a perceived weakening of Russia's position due to the invasion, long-time Russian partners, including Kazakhstan, Kyrgyzstan and Tajikistan, have recently expressed discontent towards Moscow, and are said to be looking to further ties with Beijing to ensure their long-term stability and security.[126] If such dynamics are present between Russia and its formal allies and former Soviet satellite states, it is reasonable to predict that Indonesia could pursue similar balancing efforts with the AUKUS states in response to increasing Chinese aggression in East Asia, where no similarly strong historical bonds or alliances exist between Jakarta and Beijing.

Similarly, despite Indonesia's initial attempts to avoid criticising Russia's activities in Ukraine and its insistence that Russia be permitted to attend the 2022 G20 summit in Bali, Jokowi ultimately opened the event with his strongest criticism of Russia to date, claiming that the G20 must be 'responsible' to 'stop the war'.[127] Indonesia assisted in drafting, and ultimately signed, the 2022 G20 Leaders' Declaration, which 'deplores in the strongest terms the aggression by the

123 Foreign, Commonwealth & Development Office, *UK-Indonesia partnership roadmap 2022 to 2024*, Foreign, Commonwealth & Development Office, 19 April 2022, retrieved 8 August 2023. https://www.gov.uk/government/publications/uk-indonesia-partnership-roadmap-2022-to-2024/uk-indonesia-partnership-roadmap-2022-to-2024#defence-security-and-political-cooperation

124 Richard Marles, *Largest ever Exercise Talisman Sabre to be held in Australia* [media release], Minister for Defence: Australian Government, 16 April 2023, retrieved 8 August 2023. https://www.minister.defence.gov.au/media-releases/2023-04-16/largest-ever-exercise-talisman-sabre-be-held-australia

125 Mearsheimer, 'Structural realism'; Waltz, *Theory of International Politics*.

126 Olzhas Auyezov, '"We want respect": Putin's authority tested in Central Asia', *Reuters*, October 2022, accessed 29 October 2022. https://www.reuters.com/world/we-want-respect-putins-authority-tested-central-asia-2022-10-18/; Lucia Stein, 'Vladimir Putin's military draft sent thousands of men fleeing to Kazakhstan, driving up rents in its biggest cities', *ABC News,* 29 October 2022, accessed 29 October 2022. https://www.abc.net.au/news/2022-10-29/vladimir-putin-faces-more-assertive-central-asian-allies/101547014

127 Andrew Beatty and Jack Moore, '"End the war", Jokowi urges at G20 opening', *The Jakarta Post,* 15 November 2022, accessed 16 November 2022. https://www.thejakartapost.com/indonesia/2022/11/15/end-the-war-jokowi-urges-at-g20-opening.html

Russian Federation against Ukraine'.[128] This demonstrates that while Indonesia initially sought a more non-aligned position, it ultimately criticised Russia's invasion of Ukraine as the situation deteriorated. Indonesia could, therefore, be willing to do the same if China acted with aggression in the Taiwan Strait or the South China Sea. Given the more imminent threat that conflict in the Taiwan Strait or the South China Sea poses to Indonesia, proactive formal or informal alignment with a bloc such as AUKUS could be a sound move, particularly given Indonesia's preference to maintain the contemporary global trading system built on US primacy.[129]

Conclusion

In this article, we have sought to explicate the options available to Indonesia were it to become enmeshed in a regional crisis over Taiwan or parts of the South China Sea. While Indonesia's policymakers and members of its various security apparatuses are likely to try to maintain the status quo using the *bebas dan aktif* framework, Indonesia also needs to prepare for the possibility that it could be drawn into a regional conflict between China and a US-led bloc. Indonesia's modest military capabilities preclude it from playing a decisive role in a regional crisis, especially if it had to take up arms to defend its territory. Given these constraints and the changing regional structure, Indonesia would, from a defensive realist view, benefit from joining a balancing coalition in response to China's increasingly assertive behaviour in its region. We have argued that this most likely could take the form of an informal alignment with the AUKUS states. The official responses to AUKUS from several leading South-East Asian countries, including Indonesia, the Philippines, Singapore and Vietnam, reveal a preference for a strong American presence in the region over increased Chinese centrality.

While Indonesia might wish to maintain its current approach to managing China's illegal and expansionist conduct in its EEZ, the structural reality is that, as China's economy and military grow, so too does the threat it presents to the broader South-East Asian region. Indonesia partnering with a balancing coalition, by either formally or informally joining an AUKUS-plus arrangement, would constitute a deviation from *bebas dan aktif*. The exigencies of the current geopolitical climate, however, suggest that such a move might be a necessary and preferable response to China challenging the regional status quo from which currently Indonesia benefits.

128 The White House, *G20 Bali leaders' declaration* [briefing room statement], 16 November 2022, The White House website, accessed 17 November 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/16/g20-bali-leaders-declaration/

129 de Swielande, 'Middle powers in the Indo-Pacific: potential pacifiers guaranteeing stability in the Indo-Pacific?'.

Energy transitions and national security: the potential application of integrated assessment models

Llewelyn Hughes, Thomas Longden and Yeliz Simsek

Introduction

In the 2023 *National Defence: Defence Strategic Review* (DSR), the Australian Government confirmed '[c]limate change is now a national security issue' that 'has the potential to significantly increase risk in our region'. The DSR further states that climate change 'could lead to mass migration, increased demands for peacekeeping and peace enforcement, and intrastate and interstate conflict'.[1]

The implications of climate change for Australian national security were also addressed in the 2018 report from the Foreign Affairs, Defence and Trade References Committee of the Australian Senate.[2] In summarising submissions to the inquiry, the committee noted climate change will directly impact the environment across different timescales. It proposed increasing the capability to respond to climate risks, providing additional funding for international climate adaptation and disaster risk mitigation measures, and building capacity within government by providing ongoing funding for climate science and research organisations, amongst other recommendations.

A key issue for governments planning how to respond to climate change is uncertainty. The most recent summary of the state of the global climate released by the United Nations Intergovernmental Panel on Climate Change (IPCC) confirms it is unequivocal humans have warmed the atmosphere, ocean and land, leading

1 Defence, *National Defence: Defence Strategic Review*, Australian Government, Canberra, 2023, p 41. https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review

2 Foreign Affairs Defence and Trade References Committee 2018, *Implications of climate change for Australia's national security*, Australian Senate, Canberra ACT, 17 May 2018. https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Affairs_Defence_and_Trade/Nationalsecurity/Final_Report

to widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere.[3] Yet it also shows a large range of uncertainty around climate futures depending on the effect of future emissions on additional warming. There is also uncertainty about the potential for low-likelihood, high-impact tipping points in which the climate system or a climate subsystem crosses a critical threshold, leading to potentially abrupt and irreversible changes in natural systems.[4] The resilience of human systems to climate impacts is also uncertain, depending on factors such as state capacity, the structure of political institutions, and the extent and ways in which international assistance is delivered.[5]

A second source of uncertainty lies in the transition pathways countries take when decarbonising. Governments are pursuing different levels of near and long-term climate ambition. In the Indo-Pacific, for example, governments have adopted nationally determined contributions (NDCs) and net-zero targets with different levels of ambition. Japan has committed to reduce greenhouse gas emissions by at least 46 per cent by 2030 relative to 2013 and to reach net zero by 2050. China has committed to peak CO_2 emissions in 2030 and reach net zero in 2060, and India has committed to reduce the intensity of emissions by 33–35 per cent by 2030 and to reach net zero by 2070. In addition, the technologies used to decarbonise differ across countries depending on domestic resources, technology costs and policy choices.

The implications of climate change for national security in the Indo-Pacific are profound. One strategy for assessing the possible effects that decarbonisation trajectories have in the Indo-Pacific, including the effect of different policy settings on future climate changes, is integrated assessment modelling. Integrated assessment models (IAMs) are quantitative models designed to study future change, including the effect of policies on climate pathways. Broadly speaking, IAMs are used to understand the impact of climate change on different factors of interest, the economic impact of climate mitigation policies, or a combination of both.[6]

3 Intergovernmental Panel on Climate Change (IPCC), *AR4 Climate Change 2007: Mitigation of Climate Change*, IPCC, 2007. https://www.ipcc.ch/report/ar4/wg3/

4 IPCC, '2023: summary for policymakers', in Core Writing Team, Hoesung Lee and José Romero (eds), *Climate change 2023: synthesis report* , IPCC, Geneva Switzerland, 2023, pp 1–34, doi: 10.59327/IPCC/AR6-9789291691647.001. PDF access via https://www.ipcc.ch/report/sixth-assessment-report-cycle/

5 Joshua W Busby, *States and Nature: The Effects of Climate Change on Security*, 1st edn, Cambridge University Press, 2022.

6 John Weyant, 'Some contributions of integrated assessment models of global climate change', *Review of Environmental Economics and Policy,* 2017, 11(1): 115–37; Robert S Pindyck, 'The use and misuse of models for climate policy', *Review of Environmental Economics and Policy*, 2017, 11(1): 100–114. There are limitations of IAMs identified that potentially weaken their utility in modelling potential climate futures. For a trenchant critique see Pindyck (2017).

In this paper, we assess the potential application of IAMs to the practice of strategic foresight in long-term national security strategy. We propose that IAMs are a potentially useful additional tool as an input for considering the implications of decarbonisation trajectories in the Indo-Pacific. We pay particular focus to testing the implications of assumptions about the availability and costs of different technologies on the composition of energy supply and demand in the region. IAMs also provide a way of considering the strategic implications of what will be a decades-long transition to net zero nationally, regionally and globally.

In the next section we discuss the low-carbon energy transition as a national security challenge, before outlining the function, characteristics and applications of IAMs in section three. In section four we then introduce possible applications of IAMs in strategic foresight for the purposes of defence planning. We conclude by offering a number of policy recommendations.

Climate change, energy transition and national security

Climate change risks can emerge from direct physical impacts, defined as the 'adverse physical impact of hazards related to climate change'.[7] Physical risks manifest through threats to national integrity caused by phenomena such as sea level rise, loss of life through extreme weather, disruptions to critical infrastructure and mass migration.[8] The most recent assessment of the state of the climate from the IPCC records that as the world continues to warm loss and damage will increase, and some human and natural systems will no longer be able to effectively adapt.[9] Reflecting this, research focuses on the relationship between environmental security, and more narrowly climate change, and human security, defined as the ability for people to 'meet their most essential needs and to earn their own living'.[10] Scholars note that climate change is being increasingly securitised as an issue, including in Australia, with complex implications. For instance, domestic pressure to enhance climate adaptation may have the

7 Priyadarshi R Shukla and Jim Skea (eds), Climate Change 2022: Mitigation of Climate Change – Working Group III contribution to the sixth assessment report of the Intergovernmental Panel on Climate Change, IPCC, Geneva Switzerland, 2023. https://www.ipcc.ch/report/ar6/wg3/

8 Joshua W Busby, 'Who cares about the weather? Climate change and US national security', *Security Studies*, 2008, 17(3): 468–504.

9 IPCC, '2023: summary for policymakers'.

10 Florian Krampe, Anders Jägerskog and Ashok Swain, 'The environment and human security', in *Routledge Handbook of Environmental Security*, Routledge, London, 2021, pp 250–59.

potential to reduce emphasis on the need for continued mitigation or support for improving the adaptive capabilities of other states in the Indo-Pacific region.[11]

A particularly challenging physical risk is sea level rise, which will continue for millennia. Extreme sea level events may become 20 to 30 times more frequent by 2050. One billion people are exposed to this risk.[12] In addition to the implications for human security, sea level rise and extreme weather events also have implications for existing energy-related infrastructure. In an assessment of the implications of sea level rise and extreme events for Europe's coastal energy infrastructure, Brown, Hanson and Nicholls find there are 158 major oil/gas/liquid natural gas tanker terminals in Europe's coastal zones, as well as 71 operating nuclear reactors, concluding that adapting coastal energy infrastructure to rising sea levels will be a crucial issue for governments and industry in the coming decades.[13] Militaries and military operations also generate large greenhouse gas (GHG) emissions, leading to pressure to decarbonise military forces through future force design.[14]

National security implications from climate change also emerge from the interaction of energy-related risks faced by states and decarbonisation policies. A core concern historically for governments has been potential vulnerability to politically induced shocks in fuel supplies.[15] For example, the geopolitical leverage of exporters of energy commodities will change as a result of the energy transition.[16] Under the International Energy Agency's net-zero emissions scenario for the energy sector, fossil fuel use falls as a share of total energy supply from 80 per cent in 2020 to just over 20 per cent in 2050. Oil demand falls from 90 million barrels a day in 2020 to 72 million barrels a day in 2030, and 24 million barrels a day in 2050.[17]

11 Matt McDonald, *Ecological Security: Climate Change and the Construction of Security*, Cambridge University Press, Cambridge, 2008; Matt McDonald, 'After the fires? Climate change and security in Australia', *Australian Journal of Political Science*, 2021, 56(1): 1–18; Maria Julia Trombetta, 'Environmental security and climate change: analysing the discourse', *Cambridge Review of International Affairs,* 2008, 21(4): 585–602.

12 IPCC, '2023: summary for policymakers'.

13 Sally Brown, Susan Hanson and Robert J Nicholls, 'Implications of sea-level rise and extreme events around Europe: a review of coastal energy infrastructure', *Climatic Change*, 2014, 122(1): 81–95.

14 Duncan Depledge, 'Low-carbon warfare: climate change, net zero and military operations', *International Affairs*, 2023, 99(2): 667–85.

15 Llewelyn Hughes and Austin Long, 'Is there an oil weapon?: security implications of changes in the structure of the international oil market', *International Security,* 2015, 39(3): 152–89.

16 Christian Downie, 'Geopolitical leverage in the energy transition: a framework for analysis and the case of Australia', *Energy Research & Social Science*, November 2022, 93, Article 102826, pp 1–6. https://doi.org/10.1016/j.erss.2022.102826

17 International Energy Agency (IEA), *Net zero by 2050 – a roadmap for the global energy sector*, IEA, Paris, May 2021, p 57. https://www.iea.org/reports/net-zero-by-2050

The low-carbon energy transition thus will have a large impact on the role of energy security in the foreign policy behaviour of import-dependent states in the Indo-Pacific, as well as Australia's relationship with the region. Policies such as the electrification of transport and industrial and other processes that currently use liquid and gaseous fuels, for example, coupled with the decarbonisation of electricity systems, will 'make energy supply, energy mix and energy trade less dependent upon assumptions of fossil resource availability'.[18] The potential of hydrogen as an energy carrier also has geopolitical consequences as new patterns of trade and investment emerge.[19] Reflecting this, Bordoff and O'Sullivan argue 'the transition will reconfigure many elements of international politics that have shaped the global system since at least World War II'.[20]

A core challenge in analysing these changes is uncertainty. In addition to uncertainties around the nature and extent of physical climate risk, there are also large uncertainties about the mix of technologies different countries will use to decarbonise their economies. There is also uncertainty about the pace of transition. Although many governments have committed to net-zero targets, for example, policies being used in the near to medium term to support transition continue to be developed. There is also the risk of an implementation gap, in which governments make long-term commitments but do not put in place the policies required to meet those commitments. The longer that governments delay the low-carbon energy transition, the longer risks associated with traditional fossil fuels will continue to be an important part of energy security concerns.

A potential solution to understanding this uncertainty for national security and defence planning is the use of IAMs. IAMs incorporate both economic and natural processes contributing to greenhouse gas emissions and allow for the characterisation and analysis of future uncertainty.[21] In the next section we discussed the function characteristics and applications of IAMs. We then move on to discuss possible applications of IAMs for national security planning.

18 A Cherp, J Jewell, V Vinichenko, N Bauer and E De Cian, 'Global energy security under different climate policies, GDP growth rates and fossil resource availabilities, *Climatic Change*, 2016, 136, pp 83-94. First published 1 November 2013. https://doi.org/10.1007/s10584-013-0950-x

19 International Renewable Energy Agency (IRENA), *Geopolitics of the energy transformation, the hydrogen factor*, IRENA, Abu Dhabi, January 2022. https://www.irena.org/publications/2022/Jan/Geopolitics-of-the-Energy-Transformation-Hydrogen

20 Jason Bordoff and Meghan L O'Sullivan, 'Green upheaval: the new geopolitics of energy', *Foreign Affairs*, January/February 2022, 101: 68, p 69.

21 M Granger Morgan and Hadi Dowlatabadi, 'Learning from integrated assessment of climate change', *Climatic Change*, November 1996, 34(3-4): 337–368.

The function, characteristics and applications of IAMs

There are numerous quantitative models that enable scenario analyses of the links between emissions from a range of economic sectors, GHG concentrations, the impact of GHG emissions on temperature and climate change, as well as the effect of technological changes and public policies on climate outcomes. If a model has most of these elements, it offers an 'integrated assessment of climate change' and is typically referred to as an IAM. There are over 20 global-scale models that can be classified as either benefit–cost or detailed process IAMs.[22]

The Dynamic Integrated Climate and Economy model is an example of an early benefit–cost IAM, which compares the optimal climate mitigation policy trajectory using an assessment of abatement costs and climate change damages.[23] A key question is whether emissions reductions should occur in the near-term, based on an assessment of the present value of future damages from climate change. Other examples of benefit–cost IAMs are the Framework for Uncertainty, Negotiation, and Distribution (FUND) and the Policy Analysis of the Greenhouse Effect (PAGE) models.[24]

Detailed process IAMs disaggregate key factors using detailed regional and sectoral representations, motivated by informing analysis of optimal emissions pathway and associated policies to achieve them. Topics include the assessment of the impacts of delayed policy action and how technological changes impact sectoral emissions.[25] Other detailed process IAMs utilise projections of the physical impacts of climate change, such as changes in crop growth, and temperature-related mortality.[26]

22 John Weyant, 'Some contributions of integrated assessment models of global climate change', *Review of Environmental Economics and Policy*, 2017, 11(1): 115–37.

23 William D Nordhaus, *Managing the Global Commons: The Economics of Climate Change*, MIT Press, Cambridge MA, 1994, p 31.

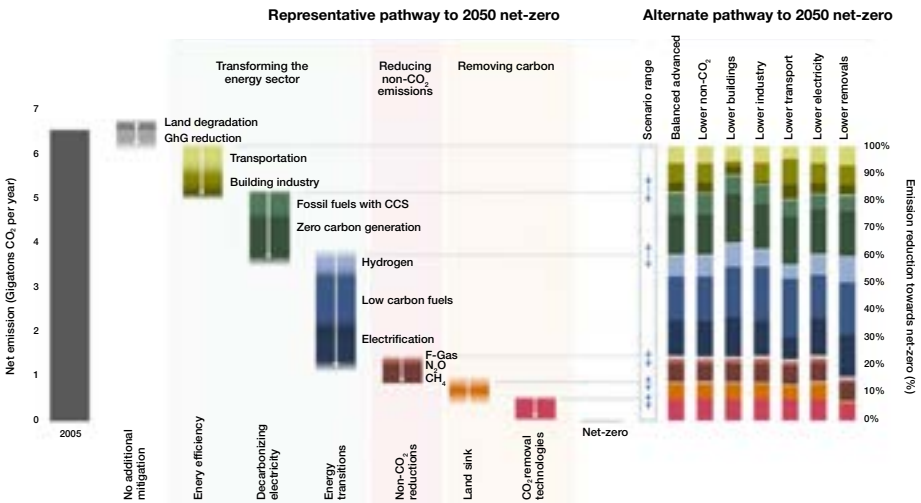
24 Daiju Narita, Richard SJ Tol, and David Anthoff, 'Economic costs of extratropical storms under climate change: an application of FUND', *Journal of Environmental Planning and Management*, 2010, 53(3): 371–84.

25 Keywan Riahi, Elmar Kriegler, Nils Johnson, Christoph Bertram, Michel Den Elzen, Jiyong Eom, Michiel Schaeffer, Jae Edmonds, Morna Isaac, Volker Krey, Thomas Longden, Gunnar Luderer, Aurélie Méjean, David L McCollum, Silvana Mima, Hal Turton, Detlef P van Vuuren, Kenichi Wada, Valentina Bosetti, Pantelis Capros and Ottmar Edenhofer, 'Locked into Copenhagen pledges – implications of short-term emission targets for the cost and feasibility of long-term climate goals', *Technological Forecasting and Social Change*, January 2015, 90(Part A): 8-23, https://doi.org/10.1016/j.techfore.2013.09.016;
Jiyong Eom, Jae Edmonds, Volker Krey, Nils Johnson, Thomas Longden, Gunnar Luderer, Keywan Riahi and Detlef P van Vuuren. 'The impact of near-term climate policy choices on technology and emission transition pathways', *Technological Forecasting and Social Change*, January 2015, 90(Part A): 73–88. https://doi.org/10.1016/j.techfore.2013.09.017

26 John Weyant, 'Some contributions of integrated assessment models of global climate change', *Review of Environmental Economics and Policy*, 2017, 11(1): 115–37.

Detailed process IAMs have been used to set renewable energy and/or emission targets. The European Commission has a suite of models that inform policy development with analysis of environmental, economic and social impacts, including cost-effectiveness analysis. These include the POLES-JRC, PRIMES and PRIMES-TREMOVE models, which are respectively, a global energy model, an EU energy-system model and a transport model.[27] The results from these models have informed the 2020 and 2030 emissions targets. The Global Change Assessment Model (GCAM) and Office of Policy – National Energy Modelling System (OP-NEMS) were used to assess the possible pathways to net-zero emissions in the US by 2050. A key contribution of GCAM was to illustrate how the pathways may differ based on assumptions that include lower industrial emissions, lower CO_2 removal technologies and land use change, and lower non-CO_2 reductions.[28]

Figure 1: Emissions reductions pathways to achieve 2050 net-zero emissions in the United States



Source: United States Department of State and United States Executive Office of the President, *The long-term strategy of the United States: pathways to net-zero greenhouse gas emissions by 2050*, US Department of State and US Executive Office of the President, Washington DC, 2021. https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf

27 European Commission, *Modelling tools for EU analysis,* Directorate-General for Climate Action website, 2023. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/economic-analysis/modelling-tools-eu-analysis_en

28 United States Department of State and United States Executive Office of the President, *The long-term strategy of the United States: pathways to net-zero greenhouse gas emissions by 2050* [pdf], US Department of State and US Executive Office of the President, Washington DC, 2021. https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf

IAMs have had an important role as part of the IPCC reporting process, in which they have been given a chapter in each report.[29] These chapters contain a model comparison where numerous scenarios are compared to summarise the literature on how IAMs have modelled climate policy and technology assumption-sensitivity analyses.[30] A key concern has been the need to better highlight the complexities and uncertainties associated with the underlying model formulations, and the role of key model inputs and parameters, such as the impact of assumptions on economic growth and technological change.[31] This led to a literature that focuses on model diagnostics, which can be based on hindcasting or model comparison exercises.[32]

Often, IAMs are calibrated to aggregated national or regional data, such as the International Energy Agency's World Energy Outlook. Some modelling initiatives have focused on improving the representation of key segments of a sector using facility-level data. Examples include a focus on the number of coal electricity generation facilities that are in planning, permitting or construction and the possible need for early retirement of these facilities to achieve climate policy targets.[33]

A key advantage of IAMs is they can be used to conduct 'what if' assessments of potential future economic and climate outcomes, while taking into account uncertainty. IAMs can also be used to place bounds on the range of estimated costs, even where substantial uncertainties remain.[34] While transitioning away from coal is a common finding of the modelling of emissions reduction

29 Contribution of Working group III to the Fourth Assessment Report of the IPCC, *Climate Change 2007: Mitigation of Climate Change*, IPCC, Geneva, 2007; IPPC, *AR4 Climate Change 2007: Mitigation of Climate Change*, IPCC, Geneva, 2014; IPPC, *AR6 Climate Change 2007: Mitigation of Climate Change,* IPCC, Geneva, 2022.

30 Weyant, 'Some contributions of integrated assessment models of global climate change'.

31 Karen Fisher-Vanden and John Weyant. 'The evolution of integrated assessment: developing the next generation of use-inspired integrated assessment tools', *Annual Review of Resource Economics,* 2020, 12: 471–87.

32 Valeria Jana Schwanitz, 'Evaluating integrated assessment models of global climate change', *Environmental Modelling & Software*, December 2013, 50: 120–31. https://doi.org/10.1016/j.envsoft.2013.09.005

33 RY Cui, N Hultman, MR Edwards, L He, A Sen, K Surana, H McJeon, G Iyer, P Patel, S Yu and T Nace, 'Quantifying operational lifetimes for coal power plants under the Paris goals', *Nature Communications*, 2019, 10(1): 4759; Ryna Yiyun Cui, Nathan Hultman, Diyang Cui, Haewon McJeon, Sha Yu, Morgan R Edwards, Arijit Sen, Kaihui Song, Christina Bowman, and Leon Clarke, 'A plant-by-plant strategy for high-ambition coal power phaseout in China', *Nature Communications*, 2021, 12(1): 1468; Morgan R Edwards, Ryna Y Cui, Matilyn Bindl, Nathan Hultman, Krinjal Mathur, Haewon McJeon, Gokul Iyer, Jiawei Song, and Alicia Zhao. 'Quantifying the regional stranded asset risks from new coal plants under 1.5 C', *Environmental Research Letters*, 2022, 17(2): 024029.

34 Weyant, 'Some contributions of integrated assessment models of global climate change'.

policies,[35] the mix of energy sources that a given country transitions towards is uncertain. Modelling provides a tool to understand the potential shares of gas, biomass, solar, wind and nuclear energy. Future fuel mixes will be determined by technological costs, available resources and trade, hence the ability to model these dynamics is a key strength of IAMs.

The GCAM, which we focus on in this paper, is an IAM developed at the Pacific Northwest National Laboratory in the United States that incorporates the interaction of five systems: the economy, the energy system, the climate system, water and agriculture and land use. As such, it allows for analysis of the interaction of physical and socioeconomic systems in a single computational platform that is not highly demanding of computational power. Key outputs from scenario analyses using GCAM are:

- energy – energy demand and flows, technology deployment, energy prices
- agriculture and land use – prices and supply of all agricultural and forest products, land use and land use change
- water – demand and supply for agricultural, energy and household water use
- GHG emissions – 24 GHG and short-lived species: CO_2, CH_4, N_2O, halocarbons, carbonaceous aerosols, reactive gases and sulphur dioxide.

In climate research, GCAM has been used to address a wide variety of research questions about human-climate interactions from the global to the national in scope, including the future impact of climate on global agricultural yields, water demands associated with long-term electricity plans under different developmental pathways in India, and the implications of uncertainty regarding the renewable-energy resource base for projections of the global role of wind and solar power projections globally.

The key characteristics of GCAM are as follows.

Transparency and open access

GCAM is fully documented and available online, supporting transparency and open access. This is a useful characteristic given a key issue with IAMs as analytic tools lies in the importance of assumptions in determining model outcomes.

35 Cui et al., 'Quantifying operational lifetimes for coal power plants under the Paris goals'; Ryna Yiyun Cui, Nathan Hultman, Di-Yang Cui, Haewon Mcjeon, Leon Clarke, Jia-Hai Yuan and Wen-Jia Cai, 'A US–China coal power transition and the global 1.5°C pathway', *Advances in Climate Change Research*, April 2022, 13(2): 179–186. https://doi.org/10.1016/j.accre.2021.09.005

Wide coverage of fuels and sectors

GCAM models demand and supply of coal, gas, bioenergy, nuclear, solar, wind and hydroelectricity.

Traded fuels

Fossil fuels (i.e. coal, gas, and oil) are traded across regions in the model, allowing modelling of import demands of fuels under different scenarios.

Policy-based scenarios

GCAM allows the modelling of different 'what if' policy scenarios, such as emissions reduction targets, technological subsidies or restrictions.

Uncertainty analysis

The model runs using a dynamic recursive process, which approximates a decision-maker that is unable to foresee future changes. This contrasts with another class of IAMs called intertemporal optimisation models, which assume agents in the model have full information about the future when they make decisions.

GCAM offers a potentially useful tool for long-term scenario analysis, as it enables the flexible assessment of future scenarios concerning key areas of interest to Australia's interests related to energy, land, water, climate and socioeconomic factors in the Indo-Pacific region, including the potential role of feedback loops and compounding effects. The open-source nature of the GCAM IAM also allows for the development of additional modules to increase resolution of assessments in the Indo-Pacific. At present, geographic and sectoral coverage of the model in the Indo-Pacific is as follows: Australia/New Zealand, China, India, Indonesia, Japan, South Korea, Taiwan, and the rest of South-East Asia and the Pacific.

Potential use of IAMs in the interaction of energy transitions and national security

IAMs have already been used to examine the implications of climate change for energy security, although with a particular focus on Europe. Guivarch and Monjon find a nonlinear relationship between energy transition and energy security, and suggest low cost and wide availability of low-carbon power generation technologies will rapidly reduce European reliance on the import of fuels for power generation while increasing the robustness of the energy system.[36] In an

36 Céline Guivarch and Stéphanie Monjon, 'Identifying the main uncertainty drivers of energy security in a low-carbon world: the case of Europe', *Energy Economics*, May 2017, 64: 530–41. https://doi.org/10.1016/j.eneco.2016.04.007

assessment of the energy-security implications of long-term climate scenarios for China, India, the European Union and the United States, Jewell et al. compared results from six different IAMs and found climate policies lower energy trade globally and reduce energy-related imports of major economies,[37] suggesting there are energy security co-benefits from the introduction of more stringent policies. Related, McCollum et al. found across multiple IAMs that energy-system resilience increases along with a reduction in oil imports as climate-change mitigation policies increase in stringency.[38] They also found, however, that energy-efficiency policies are unlikely to improve energy independence, and that there may be an increased concentration in regions exporting oil and gas as countries decarbonise, with negative implications for energy security. Taken together, these studies suggest national security concerns associated with fossil fuel import dependence may fall in the long-run; however, there are potential nonlinearities and complexities emerging from the substitution of coal for gas in the short to medium term, coupled with the potential for increased market concentration in fossil fuel markets. Supply chains in the energy sector will also grow in complexity as the range of technologies used to supply energy services increase.

IAM's have also been used to examine the economic and emissions implications of a European embargo of Russian fossil fuel imports,[39] technology requirements for achieving net-zero carbon dioxide emissions in North America by 2050,[40] and the implications of an increased use of bioenergy for food security globally.[41] Factors relevant to climate risk and a sample of research using IAMs is shown in Table 1.

37 Jessica Jewell, Aleh Cherp, Vadim Vinichenko, Nico Bauer, Tom Kober, David McCollum, Detlef P van Vuuren and Bob van der Zwaan, 'Energy security of China, India, the EU and the US under long-term scenarios: results from six IAMs', *Climate Change Economics*, 2013, 4(4): 134001. https://doi.org/10.1142/S2010007813400113

38 David McCollum, Nico Bauer, Katherine Calvin, Alban Kitous and Keywan Riahi. 'Fossil resource and energy security dynamics in conventional and carbon-constrained worlds', *Climatic Change*, 2014, 123: 413–426. https://doi.org/10.1007/s10584-013-0939-5

39 Li-Jing Liu, Hong-Dian Jiang, Qiao-Mei Liang, Felix Creutzig, Hua Liao, Yun-Fei Yao, Xiang-Yan Qian et al. 'Carbon emissions and economic impacts of an EU embargo on Russian fossil fuels', *Nature Climate Change*, 2023, 13(3): 290–296. https://doi.org/10.1038/s41558-023-01606-7

40 M Browning, J McFarland, J Bistline, G Boyd, M Muratori, M Binsted, C Harris, T Mai, G Blanford, J Edmonds and AA Fawcett, 'Net-zero CO_2 by 2050 scenarios for the United States in the energy modeling forum 37 study', *Energy and Climate Change*, December 2023, 4, p 100104. https://doi.org/10.1016/j.egycc.2023.100104

41 Tomoko Hasegawa, Ronald D Sands, Thierry Brunelle, Yiyun Cui, Stefan Frank, Shinichiro Fujimori and Alexander Popp, 'Food security under high bioenergy demand toward long-term climate goals', *Climatic Change,* 2020,163: 1587–1601.

Table 1: Climate risk and integrated assessment modelling approach

Factor relevant to climate risk	How can this factor be addressed with IAMs?
Natural resources	Natural resources are a core energy security concern of governments. IAMs are widely used models for developing scenarios of the future of resources including the phasing out of fossil fuels,[i] stranded assets,[ii] renewable energy integration and low-carbon transition,[iii] innovative technology substitution, and the effect of shocks (such as the Russo–Ukraine War).[iv]
Energy and infrastructure	Energy is a broad and significant topic for national security as well as IAMs. Most IAMs include energy sectors demand-supply representation including residential, industry, transport and agriculture. The role of specific technologies (such as wind technology),[v] or the impact of climate change and transition-related security risks on particular sectors (such as steel and cement) can be studied.[vi]
Climate transition policies	To address climate change and its risks, several global, regional and sectoral strategies including different policy portfolios are studied since the Paris Agreement. IAMs are useful tools for decision-makers to see the future impacts of policies, including understanding the synergies and trade-offs between different policies in terms of national security.[vii]
Displaced population, migration	IAMs typically use population as a key assumption, and population change due to climate change and transition risks can be reflected in the model. Most IAMs allow users to define new pathways with different population and urbanisation projections.[viii] Most IAMs also have the flexibility to allow creation of a new region by disaggregating a combined area, including detailed subnational representation. For instance, the GCAM-USA model was created to represent US economic, energy, and water systems for 51 state-level regions (50 states plus the District of Columbia) and to explore the climate impacts at a subnational level.[ix]
Water	Water is a significant topic for national security as well as energy and food. Not only including residential and industrial usage in the models, but also modelling water resources in the energy context (hydro energy, hydrogen etc.) gained importance to develop successful strategies and prioritise water use in case of scarcity.[x]
Food, agriculture, land use	Land use is an essential input for IAMs. Depending on the complexity of the model, land use can be modelled to understand future changes in a specific land of a region in terms of agriculture, water and energy use.[xi] Furthermore, changes in agriculture sector and food security could be examined by IAMs to understand the impact of climate change and transition-related security risks.[xii]

i Cui et al., 'A US–China coal power transition and the global 1.5°C pathway', 2022 (fn 35); Cui, et al., 'A plant-by-plant strategy for high-ambition coal power phase-out in China', 2021 (fn 33); Greg Muttitt, James Price, Steve Pye, and Dan Welsby, 'Socio-political feasibility of coal power phase-out and its role in mitigation pathways', *Nature Climate Change*, 2023, 13(2): 140–47.

ii J-F Mercure, Hector Pollitt, Jorge E Viñuales, Neil R Edwards, Philip B Holden, Unnada Chewpreecha, Pablo Salas, Ida Sognnaes, Aileen Lam, and Florian Knobloch, 'Macroeconomic impact of stranded fossil fuel assets', *Nature Climate* Change, 2018, 8(7): 588–593.

iii Panagiotis Fragkos, Heleen Laura van Soest, Roberto Schaeffer, Luke Reedman, Alexandre C Köberle, Nick Macaluso, Stavroula Evangelopoulou et al., 'Energy system transitions and low-carbon pathways in Australia, Brazil, Canada, China, EU-28, India, Indonesia, Japan, Republic of Korea, Russia and the United States', *Energy*, 2021, 216: 119385; Subhash Kumar, 'Assessment of renewables for energy security and carbon mitigation in Southeast Asia: the case of Indonesia and Thailand', *Applied Energy*, 2016,163: 63–70.

iv Li-Jing Liu, Hong-Dian Jiang, Qiao-Mei Liang, Felix Creutzig, Hua Liao, Yun-Fei Yao, Xiang-Yan Qian et al., 'Carbon emissions and economic impacts of an EU embargo on Russian fossil fuels', *Nature Climate Change*, 2023, 13(3): 290–296.

v Kelly Eurek, Patrick Sullivan, Michael Gleason, Dylan Hettinger, Donna Heimiller, and Anthony Lopez, 'An improved global wind resource estimate for integrated assessment models', *Energy Economics,* 2017, 64: 552–567.

vi Bas J van Ruijven, Detlef P van Vuuren, Willem Boskaljon, Maarten L Neelis, Deger Saygin, and Martin K Patel, 'Long-term model-based projections of energy use and CO_2 emissions from the global steel and cement industries', *Resources, Conservation and Recycling*, 2016, 112: 15–36.

vii M Browning, J McFarland, J Bistline, G Boyd, M Muratori, M Binsted, C Harris, T Mai, G Blanford, J Edmonds and AA Fawcett, 'Net-zero CO_2 by 2050 scenarios for the United States in the energy modeling forum 37 study', Energy and Climate Change, December 2023, 4, p 100104. https://doi.org/10.1016/j.egycc.2023.100104; Aileen Lam, and Jean-Francois Mercure, 'Which policy mixes are best for decarbonising passenger cars? Simulating interactions among taxes, subsidies and regulations for the United Kingdom, the United States, Japan, China, and India', *Energy Research & Social Science*, 2021, 75: 101951; Jorge Moreno, Dirk-Jan van de Ven, Jon Sampedro, Ajay Gambhir, Jem Woods and Mikel Gonzalez-Eguino. 'Assessing synergies and trade-offs of diverging Paris-compliant mitigation strategies with long-term SDG objectives', *Global Environmental Change*, 2023, 78: 102624.

viii Leiwen Jiang, and Brian C O'Neill, 'Global urbanization projections for the shared socioeconomic pathways', *Global Environmental Change*, 2017, 42: 193–99; KC Samir, and Wolfgang Lutz, 'The human core of the shared socioeconomic pathways: population scenarios by age, sex and level of education for all countries to 2100', *Global Environmental Change*, January 2017, 42: 181–92. https://doi.org/10.1016/j.gloenvcha.2014.06.004

ix Matthew Binsted, Gokul Iyer, Pralit Patel, Neal T Graham, Yang Ou, Zarrar Khan, Nazar Kholod et al., 'GCAM-USA v5. 3_water_dispatch: integrated modelling of subnational US energy, water and land systems within a global framework', *Geoscientific Model Development*, 2022, 15(6): 2533–2559; Wenjing Shi, Yang Ou, Steven J Smith, Catherine M Ledna, Christopher G Nolte, and Daniel H Loughlin, 'Projecting state-level air pollutant emissions using an integrated assessment model: GCAM-USA', *Applied Energy*, 2017, 208: 511–521.

x RY Cui, K Calvin, L Clarke, M Hejazi, S Kim, P Kyle, P Patel, S Turner, and M Wise, 'Regional responses to future, demand-driven water scarcity', *Environmental Research Letters*, 2018, 13(9), p 094006; Zarrar Khan, Isaac Thompson, Chris R Vernon, Neal T Graham, Thomas B Wild, and Min Chen, 'Global monthly sectoral water use for 2010–2100 at 0.5° resolution across alternative futures', *Scientific Data*, 2023, 10(1): 201.

xi Katherine V Calvin, Abigail Snyder, Xin Zhao, and Marshall Wise, 'Modeling land use and land cover change: using a hindcast to estimate economic parameters in Gcamland v2.0', *Geoscientific Model Development*, 2022, 15(2): 429–47.

xii James A Edmonds, Robert Link, Stephanie T Waldhoff, and Ryna Cui, 'A global food demand model for the assessment of complex human-earth systems,' *Climate Change Economics*, 2017, 08(04): 1750012; Hasegawa, 'Food security under high bioenergy demand toward long-term climate goals', (see fn 41).

IAMs may also provide a useful input into strategic foresight practices. In a report on the design and implementation of scenario analysis in defence planning by the Australian Defence Science and Technology Organisation (DSTO) of the Department of Defence, Nguyen and Dunn describe procedures for identifying a problem and synthesising scenarios for analysis.[42] Leigh notes the use of strategic foresight processes lead to a more 'focused, innovative and creative government' in Australia.[43] Elsewhere, Durst et al. document the foresight processes used by the German Federal Armed Forces,[44] which includes environmental planning, impact uncertainty analysis and explorative scenario construction. Davis recommends strategic planning in the United States should prioritise capabilities attuned to a proper treatment of uncertainty and make recommendations for use in analyses.[45] Dreyer and Stang review practices used by governments in foresight activities, recommending proper identification of target audiences, maintaining close ties with senior decision-makers, establishing programs rather than single projects, and using scenario-based analysis.[46] In a review for the Swiss Federal Commission for Nuclear, Biological and Chemical Protection and the Federal Office for Civil Protection, Kohler summarises different forecasting techniques, and notes that 'foresight can help to prioritize which areas would profit from more data collection and resilience'.[47]

Amongst other potential uses, IAMs could be used to assess how decarbonisation trajectories affect the energy-security risks faced by states in the Indo-Pacific region, including Australia. It is possible, for example, that energy-security risks for governments in the region will increase if thermal coal rapidly exits power-generation systems but is replaced by gas. In addition, coal, gas and oil will continue to play a role as countries in the region chart trajectories towards net-zero emissions, but the range of technologies that are available to support decarbonisation are likely to influence the pace with which these fuels exit

42 Minh-Tuan Nguyen and Madeleine Dunn, *Some methods for scenario analysis in Defence strategic planning*, Defence Science and Technology Organisation, 2009.

43 Andrew Leigh, 'Thinking ahead: strategic foresight and government', *Australian Journal of Public Administration*, June 2003, 62(2): 3–10. https://doi.org/10.1111/1467-8497.00320

44 Carolin Durst, Michael Durst, Thomas Kolonko, Andreas Neef, and Florian Greif. 'A holistic approach to strategic foresight: a foresight support system for the German Federal Armed Forces', *Technological Forecasting and Social* Change, 2015, 97: 91–104.

45 Paul K Davis, *Capabilities for joint analysis in the Department of Defense: rethinking support for strategic analysis*, RAND Corporation, 2016, accessed 22 August 2022. http://www.rand.org/pubs/research_reports/RR1469.html

46 Iana Dreyer and Gerald Stang with Carole Richard, 'Foresight in governments – practices and trends around the world', in Antonio Missiroli (ed), *EUISS Yearbook of European Security*, EU Institute for Security Studies, May 2013, 1368, no 1: 7–32. https://www.iss.europa.eu/content/euiss-yearbook-european-security-2013

47 Kevin Kohler, *Strategic foresight: knowledge, tools, and methods for the future*, Center for Security Studies (CSS)/ETH Zurich, September 2021. https://doi.org/10.3929/ethz-b-000505468

the market. Regional governments will use increasing amounts of low-carbon technologies to support electrification and the decarbonisation of electricity systems, which leads to greater complexity in supply chains supporting the provision of energy services. Analysis of scenarios using IAMs could be used to support assessments of how the strategic behaviour of states in the Indo-Pacific may change in response to shifts in the structure of supply chains supporting energy systems regionally and globally.

A second example is the implications of China's economic and military rise for the future trajectory of climate change regionally and globally. China is the largest global emitter of GHG emissions globally. But it has committed to achieving carbon neutrality by 2060 and to peak CO_2 emissions by 2030. In addition to being a large emitter of GHGs, China also dominates the supply chains for key technologies involved in the low-carbon energy transition. The International Energy Agency records that China held 79 per cent of the world's polysilicon production capacity in 2021, 97 per cent of global production capacity for solar-wafer manufacturing, and 85 per cent of solar-cell production. China also holds an important share of production for raw materials used in solar manufacturing.[48] Strategic competition between China and the United States has potential implications not only for climate policies, but also for the costs of low-carbon technologies relative to more emissions-intensive substitutes. Assessing the implications of a more fragmented world for trade and investment in key low-carbon technologies aligns with the capabilities of IAMs.

Conclusion and discussion

IAMs are an important tool climate scientists use to assess the future impacts of climate change and the impact of public policies. These include – but are not limited to – policies designed to transition to low-carbon economies, on climate futures and other important factors, such as the structure of energy supply and demand within countries, regionally or globally. A benefit of IAMs is their ability to conduct 'if-then' analysis, in which the effect of climate transition policies can be assessed in terms of their future implications for energy supply and demand using a robust quantitative framework. A second benefit of IAMs is the ability to address future uncertainty using scenario-based analyses; although, it is important to note that outputs are affected by key assumptions used as model inputs. State responses to climate risks are also crucial in understanding the national security implications of climate change, and vary across countries. It

48 International Energy Agency (IEA), *Solar PV global supply chains: an IEA special report*, IEA, Paris, July 2022. https://www.iea.org/reports/solar-pv-global-supply-chains

is thus crucial to additionally take into account heterogeneity in individual and collective human behaviour in interpreting and improving climate modelling.[49]

In the European and North American contexts, IAMs have been used to assess issues such as the energy-security implications of low-carbon energy transition. Yet their application to analysing future scenarios in the Indo-Pacific related to national security issues is limited. IAMs thus represent a potentially useful tool for use in strategic foresight exercises, complementing other approaches, such as the use of horizon scanning, trend analysis, the use of the Delphi method or expert surveys in forecasting, and other approaches.[50] Carrying out assessments using IAMs requires an investment in human capital to enable capabilities development, including through working with the research sector. Understanding the future implications of climate change, and the effect of strategic issues such as the economic and military rise of China for the future of climate change mitigation in the Indo-Pacific, warrants consideration of such an approach in order to inform long-term decision-making.

Acknowledgement

The authors acknowledge the support of Strategic Policy Grants Program, Department of Defence, Australian Government (Grant Agreement 202021-0243) in supporting this research.

49 Brian Beckage, Frances C Moore and Katherine Lacasse, 'Incorporating human behaviour into Earth system modelling', *Nature Human Behaviour*, 2022, 6(11): 1493–1502. https://doi.org/10.1038/s41562-022-01478-5

50 Kohler, *Strategic foresight: knowledge, tools, and methods for the future*.

Strategic thinking in hierarchical cultures: using leadership to transform rhetoric into reality

Mark Devereux

Introduction

The call for innovation and creativity in Australia's national strategy development has never been louder. Practitioners and scholars alike contend that strategic thinking can offer a range of promising benefits to drive this creativity for Defence, national security and law enforcement communities.[1] But for every benefit cited, in practice, a greater number of barriers to strategic thinking are observed by practitioners in these communities. This is a genuine concern for institutions that are struggling to improve their strategic thinking capacity. Stating a desire for greater strategic thinking, even from the highest levels of authority, is clearly not enough to influence the workforce or culture of these institutions. However, the consequences of a lack of strategic innovation and creativity within these institutions extends far beyond them; it jeopardises Australia's future security and prosperity.

The Defence, national security, and law enforcement communities recognise the benefits of strategic thinking to navigate complex security challenges in the Australian strategic environment – now and in the future.[2] Strategic thinking offers 'novel, imaginative and innovative strategies which rewrite the rules of the

1 Loizos Heracleous, 'Strategic thinking or strategic planning?', *Long Range Planning*, 1998, 31(3):481–487, https://doi.org/10.1016/S0024-6301(98)00069-7; Jeanne M Liedtka, 'Strategic thinking: can it be taught?', *Long Range Planning*, 1998, 31(1):120–129; Ellen F Goldman and Andrea Casey, 'Building a culture that encourages strategic thinking', *Journal of Leadership & Organizational Studies*, 2010, 17(2):119–128; Mick Ryan, 'Thinking about strategic thinking', *The Vanguard*, 2021, no.1, Department of Defence, Australian Government. https://doi.org/10.51174/VAN.001/ILJO7539.

2 Ryan, 'Thinking about strategic thinking', p 1.

competitive game'.[3] However, the environments necessary to nurture strategic thinking *and* which benefit from strategic thinking require people with divergent experiences and perceptions; groups and functions with different cultures and priorities; psychologically safe work environments; and decision-makers who share power. These strategic thinking skills and behaviours, however, are contrary to those typically developed by hierarchical cultures, making this thinking notoriously challenging to cultivate and harness in these organisations. Although strategic thinking should result in a greater institutional capacity to innovate, adapt and engage with strategic complexity, leadership intervention is necessary to allow this thinking to thrive.[4]

Hierarchical cultures are more likely to evolve 'if they determine for themselves that it is both beneficial and necessary'.[5] Practitioners and scholars find that our hierarchical institutions 'struggle to innovate successfully',[6] develop 'suboptimal strategists',[7] and enable cultural vulnerabilities that 'lead to suboptimal strategic outcomes'.[8] Cultural change in these institutions may take 'decades rather than years'.[9] However, unless leaders act now, this cultural status quo and its associated shortfalls will become further entrenched, leading to a strategic capability decline relative to the increasingly complex environments these institutions seek to effect. Strategic thinking will fail to be recognised and its value lost; talented individuals will depart for cultures that better embrace innovation and creativity; and our Defence, national security, and law enforcement institutions will needlessly increase the risks and associated consequences of strategic failure 'high in human and economic costs'.[10]

Leadership and cultural barriers can nullify even the most capable strategic thinking, reducing institutional ability to advance national interests in complex global environments. Put simply, 'culture eats strategy for breakfast'.[11]

3 Heracleous, 'Strategic thinking or strategic planning?', p 485.

4 Sheila Simsarian-Webber, 'Leadership and trust facilitating cross-functional team success', *Journal of Management Development*, 21(3):201–214, pp 201–202. https://doi.org/10.1108/02621710210420273

5 Tracey Green and Alison Gates, 'Understanding the process of professionalisation in the police organisation', *Police Journal*, 2014, 87(2):75–91, p 81.

6 Steve Darroch and Lorraine Mazerolle, 'Intelligence-led policing: a comparative analysis of organizational factors influencing innovation uptake', *Police Quarterly*, 2013, 16(1): 3–37, p 4. https://doi.org/10.1177/1098611112467411

7 Ryan, 'Thinking about strategic thinking', p 8.

8 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 18.

9 Allan R Millett and Williamson Murray, 'Lessons of War', *The National Interest*, Winter 1988/89, no.14, pp 83–95, p 93. http://www.jstor.org/stable/24027131

10 Andrew Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', *The Vanguard*, 2022, no 2, Department of Defence: Australian Government, p 14. https://doi.org/10.51174/VAN.002/HAWQ9727

11 Goldman and Casey, 'Building a culture that encourages strategic thinking', p 119.

Strategic thinking, indeed, strategy itself, cannot thrive without cultural support – and culture is 'the leader's job'.[12] It may seem logical and appealing for organisations seeking to improve their institutional strategic thinking to focus directly – sometimes exclusively – on improving the strategic thinking of their workforce through talent identification, selection and development for placement into strategic teams or leadership positions. This approach has been suggested by some as a primary method for doing so.[13] However, when organisations fail to consider fundamental cultural requirements, enablers and barriers, it results in a 'cherry-picking' of minor cultural changes and actions that will do little to improve broad strategic thinking uptake or realise its benefits.

This paper, in part, aims to supplement and continue the published senior Defence discussion *Thinking about strategic thinking*, itself a response to the 2020 Chief of Defence Force (CDF) question 'how do we nurture and build better strategic thinkers?'[14] In that paper, Ryan analyses relevant academic insights and highlights many valuable views from the military and Defence senior leadership community. Ryan asserts 'improvement is inherent in the question posed by the CDF', and most senior military and Australian Public Service (APS) leaders agree they 'can and must do better'.[15] However, the conclusions arrived at in the paper are representative of typical leadership misconceptions in hierarchical institutions. The discussion conflates strategic thinking with strategic leadership and fails to identify root causes for strategic thinking barriers, resulting in proposed solutions that are narrow, inefficient and almost certain to be ineffective.

To better inform those seeking to improve the situation, this paper highlights relevant overlaps in contemporary leadership research by broadening the leadership literature review. First, it offers greater insight into the impacts of leadership that either cultivate or prevent institutional strategic thinking. Second, it focuses directly on concepts typically – but mistakenly – considered at odds with hierarchical institutions such as military, national security and law enforcement agencies. Discussions about the lack of strategic thinking within these organisations – despite the desire to encourage it – emphasise improving *individual* strategic thinking without acknowledging the unnecessarily self-imposed cultural limitations. Too often, discussions underestimate cultural barriers and are reluctant to engage with contemporary leadership research. Requisite leadership concepts remain unacknowledged (or worse, dismissed)

12 Edgar H Schein, cited by Goldman and Casey, 'Building a culture that encourages strategic thinking', p 121.

13 Ryan, 'Thinking about strategic thinking', p 8.

14 Ryan, 'Thinking about strategic thinking', p 3.

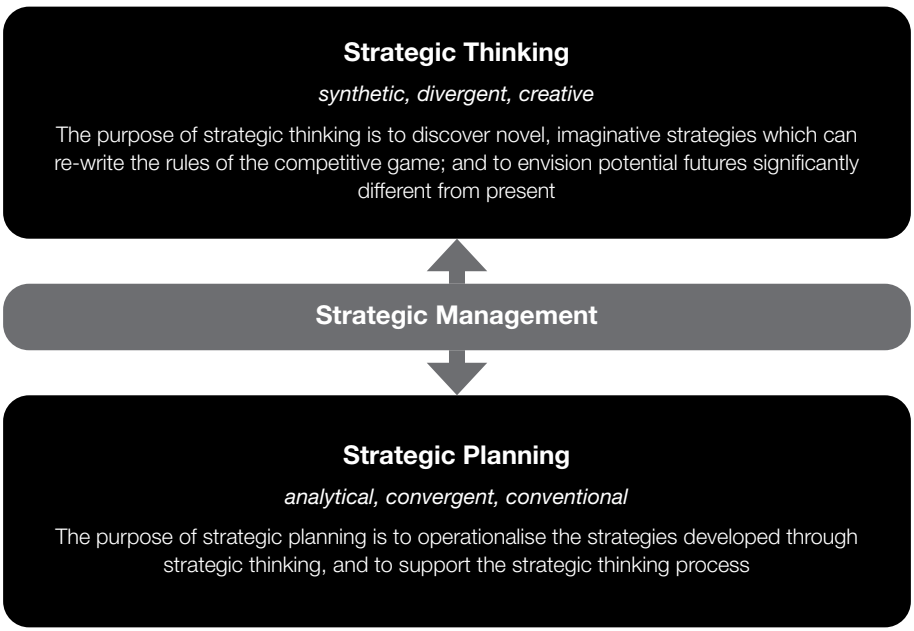
15 Ryan, 'Thinking about strategic thinking', p 3.

by these communities and are missing from their organisational cultures. This reluctance, perhaps, is due to an unfounded fear that deeply examining or questioning their extant leadership cultures may 'undermine [their] capability or weaken esprit de corps'.[16]

Rethinking strategic thinking

Strategic thinking is described as a creative and imaginative cognitive process that offers a greater array of concepts, considerations and options to be incorporate into strategic planning and decision-making processes. By contrast, strategic planning is an analytical process that's goal is to 'program the identified strategies'.[17.]

Figure 1: Strategic thinking and planning distinction[18]



Source: Heracleous, 'Strategic thinking or strategic planning?', p 485.

16 Andrew Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 40.

17 Henry Mintzberg, cited by Liedtka, 'Strategic thinking: can it be taught?', p 121.

18 Reused with permission from Heracleous, 'Strategic thinking or strategic planning?', p 485.

While there is no single definition for either and tension between the two concepts, there is general agreement that 'strategic thinking and strategic planning are both necessary and none is adequate without the other'.[19] Heracleous' diagram at Figure 1 compares the two processes. Scholars offer descriptions of the skills, cognitive abilities and behaviours that typify strategic thinkers – *regardless of rank or role* (see Table 1).

Table 1: Strategic thinker characteristics[20]

Strategic thinking skills, cognitive abilities and behaviours
Creative, imaginative, critical, divergent and futures thinking
Synthesises concepts and ideas into a 'coherent whole'
Considers, integrates, analyses and explores other(s') perspectives and ideas
Recognises gaps, flaws, discontinuity and opportunity
Develops novel and innovative ideas
Uses tools and techniques to apply higher levels of thinking (seeks to reduce negative impacts of bias)
Intent (future goal) and discovery focused
Generates and examines hypotheses

Source: Adapted from Heracleous, 'Strategic thinking or strategic planning?', pp 481–485; Liedtka, 'Strategic thinking: can it be taught?', pp 120–123.

Strategic thinking is not an either-or ability. It should be thought of as a scale: specific actions and behaviours can improve it in one's self and influence it in others. In their discussions about improving institutional strategic thinking, senior leaders assert that organisations must 'carefully select those with strategic potential … and accept that not all those selected will be successful'.[21] There is merit in identifying talented individuals for strategic development opportunities and carefully considering placements into senior strategic roles. However, conflating the concepts of strategic thinking and strategic leadership implies organisations only benefit from the strategic thinking of those in senior

19 Loizos Heracleous, cited by Ryan, 'Thinking about strategic thinking', p 5.

20 Heracleous, 'Strategic thinking or strategic planning?'; Liedtka, 'Strategic thinking: can it be taught?'.

21 Ryan, 'Thinking about strategic thinking', p 9.

decision-making positions. This view, however, is at odds with their call for 'a community of thinkers' and perpetuates the 'great man theory' of leadership they are simultaneously seeking to dispel.[22] Leaders who are lower on the strategic thinking 'scale' are not precluded from actively supporting and utilising the benefits of the strategic thinking of others – doing so also improves their own. However, this requires leaders demonstrate specific leadership actions and behaviours that are generally not developed, promoted or encouraged in hierarchical cultures – behaviours discussed in this paper.

Strategic thinking includes cognitive skills and behaviours that are beneficial for various teams and functions other than the purely strategic realm, such as operational planning, intelligence production and use, complex problem-solving, innovation and change management, project management and more. Research suggests the need for strategic thinking skills 'once the purview of top leaders [are] moving deeper into organisations'.[23] Williams highlights the dangers of bias and heuristics for military professionals at tactical and operational levels, suggesting that 'applying critical and creative thinking to understand, visualise and describe complex, ill-structured problems' and 'valuing the processes that challenge assimilative knowledge … may help us to avoid some of the intrinsic human mental frailties that inhibit good decision-making'.[24] Acknowledging this overlap and the utility of strategic thinking skills – or aspects thereof – for various pursuits and decisions at tactical, operational and strategic levels increases the impetus for leaders *at every level* to act and behave in ways that maximise their own and others' strategic thinking capability and development.

What is the problem?

Typical hierarchical cultures are divergent from environments that nurture and encourage strategic thinking. The culture of a hierarchical organisational emphasises stability, structure and a shared set of values[25] – the need for this in our Defence and law enforcement communities is clear. Doctrine, formal planning and decision-making processes, and clear command structures are crucial for military, national security and law enforcement functions. Clear chains of command and the associated doctrine for units and teams to function and cooperate during tactical and operational tasks allows commanders at various

22 Ryan, 'Thinking about strategic thinking', p 11, p 2.

23 Margaret J Wheatley, cited by Goldman and Casey, 'Building a culture that encourages strategic thinking', p 120.

24 Blair S Williams, 'Heuristics and biases in military decision-making', *Military Review*, 2010, 90(5): 58–70, pp 59–68.

25 MasterClass Business 'Hierarchy culture explained: what is hierarchy culture?', *MasterClass Business*, 16 March 2022, accessed 6 June 2022. https://www.masterclass.com/articles/hierarchy-culture

levels to unilaterally make decisions in dynamic environments. Training, induction programs and typical early-career roles for officers in these environments emphasise unit and functional cohesion,[26] decisiveness, command authority and deference to rank. This emphasis, however, inhibits behaviours and concepts that support strategic thinking development, such as collaboration across command and functional barriers, power-sharing, power-lowering, psychologically safe work environments and risk tolerance – concepts discussed in this paper.

Currently, to nurture and benefit from strategic thinking, leaders must act and behave in ways *despite* their organisational culture and, potentially, contrary to their career interests. Two essential factors in promoting creativity and innovation are support for risk-taking and tolerance of mistakes. Leaders must do more than advocate for these. To influence behaviour in others and create a culture that supports innovation, leaders must role-model intelligent risk-taking, create a safe environment for others to also do so and reward smart failure.[27] Drake elaborates on this concept and offers insight into the dichotomy between strategic thinking and hierarchical cultures by arguing that Defence and national security organisational cultures are inherently risk-averse – 'a product of an intensely compliance-based culture'.[28] Drake also observes that:

> the extremely competitive promotion system and relatively narrow career paths to senior commands contribute to organisational cultures that may profess to encourage innovation and prudent risks, but drive leaders to lack faith that reasonable risks will be supported by superiors when their bets don't pay off.[29]

Leaders in these environments who cultivate and nurture strategic thinking – in themselves and others – are exceptional. Further, even when they do emerge, the benefits of their strategic thinking are constrained by institutional risk aversion and leadership resistance towards collaboration, novel ideas and innovative practices.

26 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 42.

27 Ella Baker, 'Failure-tolerance: encouraging your employees to become risk takers', *Sheakley*, June 2012, accessed 20 June 2022. https://www.sheakley.com/blog/sheakley-updates/failure-tolerance-encouraging-your-employees-to-become-risk-takers/; Gordon Tredgold, '5 ways to encourage smart risk taking', *Inc.*, 17 May 2016, accessed 20 June 2022. https://www.inc.com/gordon-tredgold/how-to-promote-a-culture-of-smart-risk-taking.html

28 Nicholas Drake, 'Aligning risk tolerance to meet the demands of complex strategic problems', *The Strategy Bridge*, 7 October 2017, accessed 6 June 2022. https://thestrategybridge.org/the-bridge/2017/10/7/aligning-risk-tolerance-to-meet-the-demands-of-complex-strategic-problems

29 Drake, 'Aligning risk tolerance to meet the demands of complex strategic problems'.

An over-emphasis on image management – common in hierarchical cultures [30] – reduces the authenticity, growth and curiosity required to develop strategic thinking. Image or impression management includes using behaviours and techniques that bolster one's image or defend an undesired tarnish to it.[31] Charismatic leaders use image management to influence followers' compliance and faith in them and inspire others to pursue a vision.[32] Charisma is a desired trait for some leaders, and there are many known benefits to its *appropriate* use and development. Impression management is not inherently good or bad. However, if its use is misguided, unrealistic or precedes *actual* competence, those leaders and their followers will be led astray. Many leaders in hierarchical organisations role-model and perpetuate a poor use of impression management. This creates 'cultural vulnerabilities' that result in fear and hostility towards being curious, asking others questions (admitting a lack of knowledge), experimenting or offering half-formed thoughts.[33] Without intervention or acknowledgement, leaders carry these inauthentic behaviours through their careers – inhibiting the curiosity that precedes strategic thinking development.

Hierarchical cultures demonstrate a poor understanding of the power dynamics that drive or inhibit intra-organisational and cross-agency collaboration. Yet, this cross-functional collaboration is a critical enabler for strategic thinking, decisions and actions. Collaboration across functional boundaries presents many challenges for organisations due to diverse perspectives, priorities, goals and cultures – these challenges are compounded in hierarchical organisations. Research into the innovative practices of law enforcement agencies has highlighted the collaborative issues impacting strategic thinking and direction in these cultures. For example, intelligence functions train analysts in strategic thinking skills such as hypothesis generation, a futures focus, critical thinking, structured analytical techniques and 'red-hat' analysis. Despite this, studies within Australian and allied law enforcement agencies consistently find resistance to collaboration, conflict, low levels of trust between intelligence teams and decision-makers and leadership cultures resistant to intelligence-led innovation practices.[34]

The above problems indicate a stagnating cultural environment drifting from the leadership and societal realities in which they operate. These problems,

30 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 42.

31 William L Gardner and Bruce J Avolio, 'The charismatic relationship: a dramaturgical perspective', *The Academy of Management Review*, 1998, 23(1):32–58, p 47.

32 Gardner and Avolio, 'The charismatic relationship: a dramaturgical perspective', p 32.

33 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 40.

34 Ratcliffe, 'The effectiveness of police intelligence management: a New Zealand case study', p 447; Darroch and Mazerolle, 'Intelligence-led policing: a comparative analysis of organizational factors influencing innovation uptake', p 24.

combined with the increasing demands of the complex national security challenges facing Australia, degrade the capacity of these organisations to think strategically. The band-aid solutions they propose for themselves uphold and perpetuate deeper leadership and cultural deficiencies. Unless these underlying issues are acknowledged and addressed, an individual's creative, novel and imaginative strategic thinking offers little value to these institutions.

Where can we find answers?

The research exploring concepts relevant to strategic thinking (benefits, enablers and barriers) is extensive, overlapping with organisational culture, leadership, innovation and project management and cross-functional, cross-sector and inter-agency collaboration. Various themes in the existing literature highlight an interconnected relevance and offer analysis of the prevailing leadership impacts on these pursuits. This section focuses on these leadership concepts, their role in strategic thinking uptake and the cultural barriers inhibiting this uptake.

Collaboration

Effective collaboration – within and across boundaries – is a significant enabler of strategic thinking practice and culture. Individuals think strategically, not organisations; however, this thinking is influenced by the 'strategic conversations' that occur within.[35] Senior Defence leaders call for 'a community of thinkers whose expertise and experience can be connected and meshed to ensure a more fulsome strategic discussion' and seek 'evolved ways of building strategic leadership teams that have the appropriate … diversity to appreciate the scope of the changing environment and develop an appropriate variety of potential responses'.[36] Work group diversity is consistent with culture-embedding mechanisms encouraging strategic thinking,[37] Kabacoff asserts that a key method for developing strategic thinking across organisations is to use cross-functional teams to address strategic issues across team boundaries.[38] However, for many, *collaboration* is mistaken as a synonym for *teamwork*. It is often misunderstood as 'better coordination, conflict resolution, more communication, and appropriate individual contributions to achieve a shared goal'.[39] By contrast,

35 Liedtka, 'Strategic thinking: can it be taught?', p 120.

36 Ryan, 'Thinking about strategic thinking', p 11.

37 Goldman and Casey, 'Building a culture that encourages strategic thinking', pp 122–123.

38 Robert Kabacoff, 'Develop strategic thinkers throughout your organization', *Harvard Business Review*, 7 February 2014, accessed 6 June 2022. https://hbr.org/2014/02/develop-strategic-thinkers-throughout-your-organization

39 Michael Schrage, cited by Diane Rawlings, 'Collaborative leadership teams: Oxymoron or new paradigm?', *Consulting Psychology Journal: Practice and Research*, 2000, 52(1):36–48, p 40.

effective collaboration has been the focus of substantial research – notably, as a driver of creativity and innovation. As defined by Schrage:

> Collaboration is the process of shared creation: two or more individuals with complementary skills interacting to create a shared understanding that none had previously possessed or could have come to on their own. Collaboration creates a shared meaning about a process, a product, or an event. Something is there that wasn't there before. The true medium of collaboration is other people. Real innovation comes from the social matrix. Collaboration is a relationship with a dynamic fundamentally different from ordinary communication.[40]

A simplified yet practical definition that applies within or across command or functional boundaries is 'two or more individuals establishing common goals and objectives and working together to achieve them'.[41] Research consistently finds that organisations and leaders are as challenged by driving effective collaboration as they are by attempting to cultivate strategic thinking. A slight relief, perhaps, is that there is a significant overlap between the benefits and enablers of strategic thinking and collaboration. This overlap offers some efficiency in the methods and further strengthens the incentive to aspire towards their improvement.

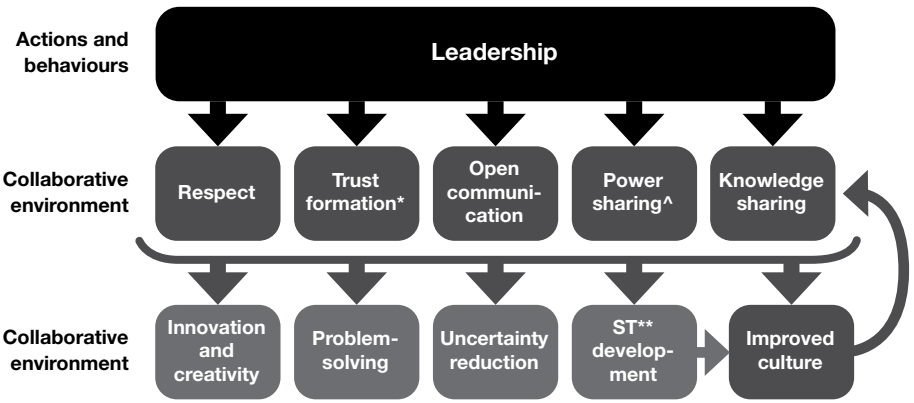
Leadership actions and behaviours are essential for collaboration and strategic thinking effectiveness. Figure 2 (opposite) merges collaboration and strategic-thinking research findings, highlighting the relationship between leadership, the dimensions of an effective collaborative environment, and the associated strategic-thinking outcomes. Transformational, ethical and authentic leadership styles are particularly beneficial for cultivating the collaboration necessary to embed strategic thinking.[42] These styles contain unique behaviours that can enhance strategic thinking uptake along several lines of effort (see Table 2, pp 298-99).

40 Schrage, cited by Rawlings, 'Collaborative leadership teams: oxymoron or new paradigm?', p 40.

41 Adapted from: Daniel A Pellathy, Diane A Mollenkopf, Theodore P Stank and Chad W Autry, 'Cross-functional integration: concept clarification and scale development', *Journal of Business Logistics*, 2019, 40(2):81, pp 84–86.

42 Rebecca J Mitchell and Brendan Boyle, 'A theoretical model of transformational leadership's role in diverse teams', *Leadership and Organization Development Journal*, 2009, 30(5): 455–474, p 466; Tu et.al., 'Differentiating two facets of trust in colleagues: how ethical leadership influences cross-team knowledge sharing', pp 94–97; Bhatti et al., 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing', p 982.

Figure 2: Leadership impact on the collaborative environment and strategic thinking outcomes [43]



ST = Strategic thinking
*Leading to psychological safety
^Joint decision-making, mutual goal creation and resource sharing
**ST and several other development processes for employess and managers

Source: Adapted from Liedtka, 'Strategic thinking: can it be taught?'; Simsarian-Webber, 'Leadership and trust facilitating cross-functional team success'; Tosti, 'Partnering: a powerful performance intervention'; Darroch and Mazerolle, 'Intelligence-led policing: a comparative analysis of organizational factors influencing innovation uptake'; Marasquini Stipp, Pimenta and Jugend, 'Innovation and cross-functional teams: analysis of innovative initiatives in a Brazilian public organization'; Tu et al., 'Differentiating two facets of trust in colleagues: how ethical leadership influences cross-team knowledge sharing'; Bhatti et al. 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing'; Fanousse, Nakandala and Lan, 'Reducing uncertainties in innovation projects through intra-organisational collaboration: a systematic literature review'.

43 Adapted from: Liedtka, 'Strategic thinking: can it be taught?', Simsarian-Webber, 'Leadership and trust facilitating cross-functional team success', pp 201–202; Donald T Tosti, 'Partnering: a powerful performance intervention', *Performance Improvement*, 4 April 2007, 46(4): 25–29, https://doi.org/10.1002/pfi.121; Darroch and Mazerolle, 'Intelligence-led policing: a comparative analysis of organizational factors influencing innovation uptake'; Daniel Marasquini Stipp, Márcio Lopes Pimenta and Daniel Jugend, 'Innovation and cross-functional teams: analysis of innovative initiatives in a Brazilian public organization', *Team Performance Management: An International Journal*, 12 March 2018, 24(1/2): 84–105, https://doi.org/10.1108/TPM-12-2016-0056; Yidong Tu, Yangmei Zhang, Xinxin Lu and Shuoli Wang, 'Differentiating two facets of trust in colleagues: how ethical leadership influences cross-team knowledge sharing', *Leadership & Organization Development Journal*, 2020, 41(1): 88–100, pp 94–97, https://doi.org/10.1108/LODJ-06-2019-0260; Sabeen H Bhatti, Saifullah K Kiyani, Scott B Dust and Ramsha Zakariya, 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing', *International Journal of Managing Projects in Business*, 2021, 14(4): 982–998, https://doi.org/10.1108/IJMPB-05-2020-0159; Rola I Fanousse, Dilupa Nakandala and Yi-Chen Lan, 'Reducing uncertainties in innovation projects through intra-organisational collaboration: a systematic literature review', *International Journal of Managing Projects in Business*, 2021, 14(6): 1335–1358. https://doi.org/10.1108/IJMPB-11-2020-0347

Table 2: Strategic thinking culture-embedding leadership behaviours and benefits [44]

Leadership style and benefits	Leadership behaviours
Transformational leadership Provides a work environment in which innovative thinking is welcomed.	• encourage followers to challenge the status quo, to offer suggestions and to be innovative in their work • role-model and increase followers' ability to use new methods and creative approaches to problem solving • encourage followers to re-examine traditional ways of doing things • evaluate and prioritise (offer personal time and attention to) followers' individual differences and developmental needs • encourage two-way, transparent communication about organisational strengths and weaknesses • encourage followers to model positive change behaviours • empower followers to analyse and initiate solutions to problems

44 Adapted from: Fred O Walumbwa, Bruce J Avolio, William L Gardner, Tara S Wernsing and Suzanne J Peterson, 'Authentic leadership: development and validation of a theory-based measure', *Journal of Management*, 2008, 34(1): 89–126, https://doi.org/10.1177/0149206307308913; Dan F Stanescu, Alexandra Zbuchea and Florina Pinzaru, 'Transformational leadership and innovative work behaviour: the mediating role of psychological empowerment', *Kybernetes*, 2020, 50(5): 1041–1057, https://doi.org/10.1108/K-07-2019-0491; Bhatti et al., 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing'; Napathon Sivarat, Pitak Thamma and Sanya Kenaphoom, 'Full range leadership concepts', *Ilkogretim Online*, 2021, 20(3): 131–1319. https://doi.org/10.17051/ilkonline.2021.03.147

Leadership style and benefits	Leadership behaviours
Ethical leadership Creates environments that value the process taken to arrive at decisions. This promotes creativity and ensures explicit and valid logic is applied to multi-priority, multi-goal challenges and decisions.	• prioritise ethical and balanced decision-making • define success not just by results but also the process through which they are obtained • explicitly discuss the importance of ethics and hold self and others accountable for ethical actions • consider the best interests of followers • role model transparent, two-way communication and decision-making
Authentic leadership Develops insight into own strengths and weaknesses through authentic exposure to others. Shows to others a genuine desire to understand their own leadership to serve others more effectively. Creates an environment that encourages the genuine sharing of opinions and ideas.	• solicit diverse views and opinions that challenge their own deeply held positions – initiate and encourage these discussions • listen carefully to different points of view before coming to conclusions • genuinely consider own and others' views in the decision-making process • consider issues from multiple perspectives and analyse information critically • objectively analyse all relevant data before coming to a decision • promote trust through disclosures that involve openly sharing information and express true thoughts and feelings (though not inappropriate emotions)

Source: Adapted from Walumbwa et al., 'Authentic leadership: development and validation of a theory-based measure', pp 95–96; Stanescu, Zbuchea and Pinzaru, 'Transformational leadership and innovative work behaviour: the mediating role of psychological empowerment', p 1045; Bhatti et al., 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing', p 983; Sivarat, Thamma and Kenaphoom, 'Full range leadership concepts', p 1316.

These leadership styles are relationship orientated; demonstrate individual consideration (of followers), transparent communication and decision-making; and emphasise collective goals and ethical and moral behaviour.[45] These behaviours align with studies into leadership in public, multi-organisational and cross-sector environments – typical of Defence, law enforcement and national security environments – that highlight the importance of 'initiating and sustaining high-quality inter-personal relationships between a diverse set of stakeholders, fostering trust, and managing power relationships'.[46] An ethical approach to leadership can balance the requirements of a hierarchical structure while countering the limitations of their traditional approaches to leadership.

Ethical leadership behaviours reduce collaborative challenges between diverse groups. For example, several studies have found that ethical leadership is well-suited to cross-functional environments as it cultivates trust and knowledge sharing across teams and can be 'expected to extend leaders' influence beyond formal team boundaries'.[47] Bhatti et al. assert that a 'focus on process over results' is ethical and more likely to result in the cross-functional collaboration necessary to achieve innovation.[48] This focus on the process is crucial: decision-makers must *make room* for others to balance and influence their thinking and decisions. No one can reasonably be familiar enough with the vast interconnected and complex range of subject matter necessary to conceptualise the strategic challenges facing these institutions – much less make coherent strategic decisions – 'without reliance on other inputs'.[49] However, the misguided practice of some leaders overly managing their image in hierarchical cultures leads to a dangerous desire to protect how others perceive their strategic or subject-matter knowledge – an obstruction to curiosity. An ethical approach to leadership and decision-making may help leaders overcome this toxic habit and realise the benefits of the strategic thinking they are seeking.

45 Linda K Treviño, Michael Brown and Laura P Hartman, 'A qualitative investigation of perceived executive ethical leadership: perceptions from inside and outside the executive suite', *Human Relations*, 2003, 56(1):5–37, p 7. https://doi.org/10.1177/0018726703056001448; Sharon B Jambawo, 'Transformational leadership and ethical leadership: their significance in the mental healthcare system', *British Journal of Nursing*, 2018, 27(17):998–1001, p 998. https://doi.org/10.12968/bjon.2018.27.17.998

46 Paul Williams and Helen Sullivan, 'Lessons in leadership for learning and knowledge management in multi-organisational settings', *International Journal of Leadership in Public Services*, 2011, 7(1):6–20, p 13.

47 Bhatt et al., 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing', pp 990–991; Tu et al., 'Differentiating two facets of trust in colleagues: how ethical leadership influences cross-team knowledge sharing', pp 94–97.

48 Bhatti et al., 'The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing', p 983.

49 Ryan, 'Thinking about strategic thinking', p 2.

Power-sharing

Power-sharing both cultivates and derives benefits from strategic thinking in several interconnected ways. Power-sharing behaviours include joint decision-making, mutual goal creation and sharing resources. Within boundaries, these behaviours require leaders reduce the 'power distance' between themselves and lower ranks, which is essential for encouraging the hearing of all voices and optimising decision-making.[50] Across boundaries, the same applies, but also includes reducing resource or staff 'ownership' attitudes and encouraging listening to diverse voices – those of other groups, functions and agencies. Crucially, it includes leaders explicitly and deliberately allowing others – who otherwise would have no authority – to influence their decision-making. Finally, strategic-thinking and innovation research has found that groups 'benefit from diversity only if power is shared'.[51] It also highlights power-sharing as one of the primary methods for embedding an organisational culture of strategic thinking; suggesting, leaders must critically self-reflect and ask themselves 'how does one, as an individual, value diversity and power-sharing, and encourage others to do so?'[52.]

Power-sharing is deficient and misunderstood in hierarchical leadership cultures. Though senior Defence leaders agree 'it has never been possible for one person to know everything or to make good decisions without reliance on other inputs',[53] they have suggested their institutions 'need foxes who know how to wrangle hedgehogs'.[54] This is a concerning and dangerous metaphor if the meaning ascribed – intentionally or not – is that *foxes* are senior decision-makers who are encouraged to *wrangle* subject-matter experts or specialist groups. Without open communication, respect and mutually agreed goals, groups fall into 'an us-against-them attitude in which teams resist demands from others and even compete with each other for resources or credit'.[55] *Hedgehogs* are people and leaders with voices in various functions, industries and organisations who possess valuable subject-matter expertise; yet, they are often marginalised or dismissed by self-proclaimed *foxes* when 'challenging deeply held positions',[56] highlighting flaws, or offering novel and innovative perspectives. It is precisely

50 Xiaoshuang Lin, Zhen X Chen, Herman H M Tse, Wu Wei and Chao Ma, 'Why and when employees like to speak up more under humble leaders? The roles of personal sense of power and power distance', *Journal of Business Ethics*, 2019, 158(4):937–950, p 937. https://doi.org/10.1007/s10551-017-3704-2

51 Edgar H Schein, cited by Goldman and Casey, 'Building a culture that encourages strategic thinking', p 123.

52 Goldman and Casey, 'Building a culture that encourages strategic thinking', p 124.

53 Ryan, 'Thinking about strategic thinking', p 2.

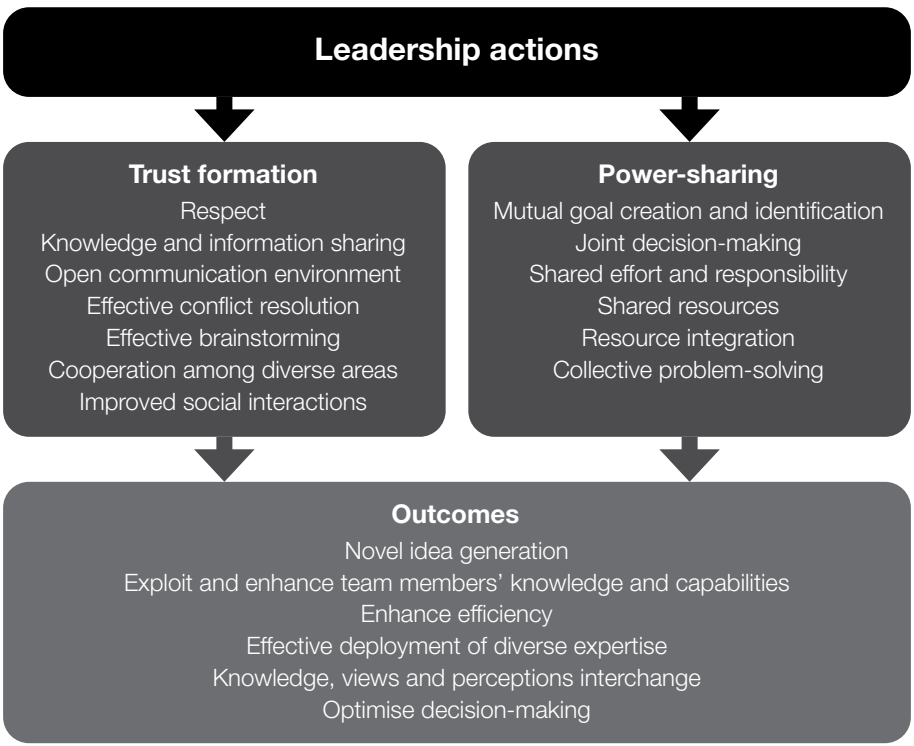
54 Ryan, 'Thinking about strategic thinking', p 11.

55 Tosti, 'Partnering: a powerful performance intervention', p 25.

56 Walumbwa et al., 'Authentic leadership: development and validation of a theory-based measure', p 121.

during these conversations that leaders and decision-makers can and must demonstrate authentic curiosity and reward and encourage these voices – particularly in situations where intelligent voices with little authority over decisions are analysing complex problems. Foxes should instead *partner* with hedgehogs and deliberately make room for their input. This approach allows groups to genuinely share knowledge, and as a result, all invested groups become slightly *foxier*. Power-sharing is also intrinsically linked to trust formation across boundaries – the importance of this link is illustrated in Figure 3.

Figure 3: Leadership impact on cross-functional trust and power-sharing outcomes [57]



Source: Adapted from Tosti, 'Partnering: a powerful performance intervention', p 27; Fanousse, Nakandala and Lan, 'Reducing uncertainties in innovation projects through intra-organisational collaboration: a systematic literature review', p 1344.

57 Tosti, 'Partnering: a powerful performance intervention', p 27; Fanousse, Nakandala and Lan, 'Reducing uncertainties in innovation projects through intra-organisational collaboration: a systematic literature review', p 1344.

Respect and trust

Respect is a confused concept in hierarchical cultures. The ingrained deference to rank and image management behaviours in these cultures clouds the fundamental leadership responsibilities of those with authority and power. 'Respect is earned, not given' is a common adage in assertive cultures, implying you must prove yourself to earn respect, (for example, through value or worth). Rather than debate the validity of this adage, noting many also believe respect is something that should be given and received by all, instead briefly consider the power dynamic in hierarchical cultures and the value of trust formation. Australian Defence Force (ADF) Leadership Doctrine asserts:

> If you want mutual trust, you need to start by giving some. It is the leader's job to go first. Extending trust, though never blindly, is a skill that is a critical part of leading. The need to set the conditions to form mutually trusting relationships with others is one of the most important responsibilities [leaders] have. Create transparency [and] confront reality. Leaders do not ask people to do what they themselves are not willing to do.[58]

Only those *with* power ought to be held responsible for earning respect. When there is a power imbalance, whether through rank, function or decision-making authority, it behoves those with greater power to demonstrate this fundamental 'leadership responsibility' and extend trust and respect. This is an essential building block for the strategic thinking outcomes desired in figures 2 and 3 and for establishing psychological safety.

Psychological safety

Explicit hierarchy is *not* incompatible with psychological safety.[59] Despite this, Defence, law enforcement, and national security organisations misunderstand and undervalue the concept, contributing to their acknowledged gaps in strategic thinking. Psychological safety is 'the extent to which employees in a work setting believe that they would be free to speak up, voice ideas, share opinions and take risks without fear of punishment or being rejected',[60] also described as a shared belief that the team is safe for interpersonal risk-taking. The concept is not

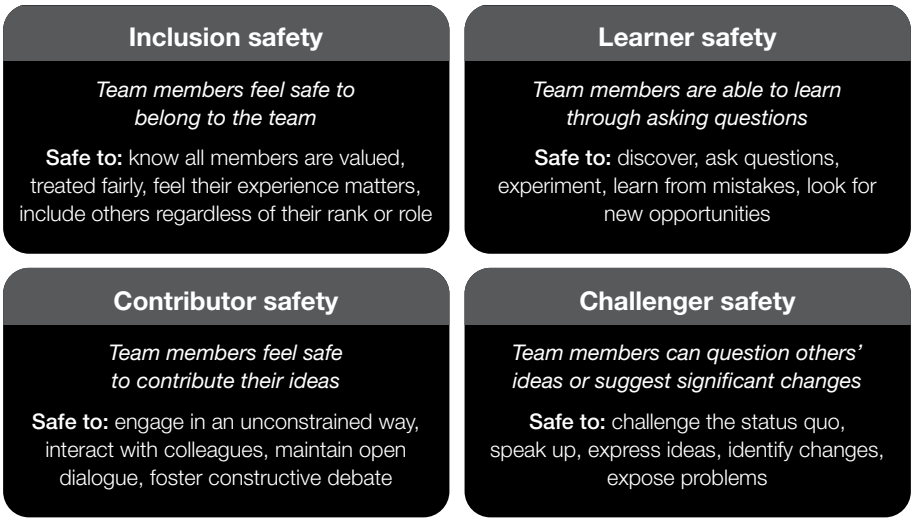
58 Excerpts from Australian Defence Force (ADF), 'ADF Leadership', *ADF Philosophical Doctrine*, 3rd edn, ADF-P-0 ADF Leadership, Australian Defence Force, 2021, p 19, p 36, accessed 6 June 2022. https://theforge.defence.gov.au/adf-philosophical-doctrine-adf-leadership

59 Amy C Edmondson, *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*, John Wiley & Sons Inc., Hoboken NJ, 2019, p 112.

60 Amy C Edmondson and Zhike Lei, cited by Amjad Iqbal, Khawaja F Latif and Muhammad S Ahmad, 'Servant leadership and employee innovative behaviour: exploring psychological pathways', *Leadership & Organization Development Journal*, 2020, 41(6):813–827, p 816.

'always agreeing with one another' or 'lowering performance standards'[61] – it is quite the opposite, requiring candour and mutual respect. Research consistently links psychological safety to greater creativity and innovation, increased ability to adapt to change, and improved cross-functional collaboration – all drivers for pursuing strategic thinking.[62] Figure 4 offers examples of psychological safety within the work environment.

Figure 4: Four stages of psychological safety[63]



Source: Edmondson, *The Fearless Organization*, pp 213–215; Clark, *The 4 Stages of Psychological Safety* p 103; Jackson, *The four stages of psychological safety*.

61 Edmondson, *The Fearless Organization*, pp 15–17.

62 Iqbal, Latif and Ahmad, 'Servant leadership and employee innovative behaviour: exploring psychological pathways'; Aaron D Smet, Kim Rubenstein, Gunnar Schrah, Mike Vierow and Amy C Edmondson, *Psychological safety and the critical role of leadership development*, McKinsey & Company, 11 February 2021, accessed 6 June 2022. https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/psychological-safety-and-the-critical-role-of-leadership-development; Henrik Bresman and Amy C Edmondson, 'Research: to excel, diverse teams need psychological safety', *Harvard Business Review*, 17 March 2022, pp 1–8. https://hbr.org/2022/03/research-to-excel-diverse-teams-need-psychological-safety

63 Edmondson, *The Fearless Organization*, pp 213–215; Timothy R Clark, *The 4 Stages of Psychological Safety: Defining the Path to Inclusion and Innovation*, Berrett-Koehler Publishers Inc., Oakland CA, 2020, p 103; Image reproduced with permission from Stacy B Jackson, 11 February 2022, *The four stages of psychological safety*, SBJ Consulting Inc., accessed 6 August 2022. https://www.sbjconsultinginc.com/2022/02/11/the-four-stages-of-psychological-safety/

Leaders across Defence, law enforcement, and national security institutions, at all levels, do not sufficiently train, role-model, encourage or reward the leadership behaviours necessary to establish psychological safety. The formative years of training and experience for most leaders in the above organisations are in tactical and operational roles and environments. Scholars and practitioners warn against 'arrogance in a culture that likely preselects for opinionated, self-assured personalities'.[64] Senior leaders demonstrate a systemic presumption that because their extant institutional culture is fundamentally sufficient for tactical and operational requirements, it needs only 'bolt-on' improvements to increase strategic thinking uptake. The reality is that their culture *unnecessarily* forms habits and biases that are difficult to overcome and inhibit the leadership behaviours in Table 2 that promote psychological safety. ADF Leadership Doctrine and the APS Integrated Leadership System (ILS) both allude to the need for psychological safety. Doctrine suggests 'an emotional dimension' to feeling safe by 'creating conditions that allow the most junior to speak up',[65] and the APS ILS suggests leaders 'encourage the exploration of diverse views' and 'try to see things from different perspectives'.[66] This guidance aligns with the UK Ministry of Defence's direction following the Chilcot Report highlighting the importance of building 'a culture of reasonable challenge'.[67] However, these guiding directions do not elaborate on *how* or *what* leadership actions and behaviours create these environments and are inadequate for developing leaders; developing in the sense of both the verb and the adjective.

Burgelman notes:

> An atmosphere in which strategic ideas can be freely championed and fully contested by anyone with relevant information or insight may be a key factor in developing internal selection processes that maximise the probability of generating viable organisational strategies.[68]

64 Ray Dalio, cited by Amy C Edmondson, *The Fearless Organization,* p 112; Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', pp 41–42.

65 ADF, 'ADF Leadership', p 19.

66 Australian Public Service Commission (APSC), 'ILS resources: profiles, comparatives and self-assessment', ILS Profiles APS6-EL2, Australian Government, 2021, accessed 6 June 2022. https://www.apsc.gov.au/working-aps/aps-employees-and-managers/classifications/integrated-leadership-system-ils/ils-resources-profiles-comparatives-and-self-assessment

67 Royal College of Defence Studies (RCDS), *Getting strategy right (enough)*, Ministry of Defence, UK Government, 2017, accessed 6 June 2022, p 19. https://nebula.wsimg.com/68287520fb0f33e0aad004ced7281f33?AccessKeyId=5F5B89AA45A3D66BEBBD&disposition=0&alloworigin=1

68 Robert Burgelman, cited by Liedtka, 'Strategic thinking: can it be taught?', p 125.

Practitioners and scholars emphasise the need for open 'strategic conversations' between diverse teams, strategists and decision-makers for strategic thinking to be effectively considered and incorporated into the process.[69] These open conversations are where strategic options are 'made, tested, and the rationales behind them developed'.[70] This aids and aligns with the call by many to make the logic behind strategic theories of success explicit. Hoffman observes:

> Too often policymakers and military leaders make implicit and untested assumptions about causality. But causality and its underlying hypothesis should be explicit so that it can be rigorously explored for historical and logical validity.[71]

Strengthening this sentiment, Senge notes, 'by this, we mean that everyone makes his or her thinking explicit and subject to public examination'.[72] The often-missed aspect of this advice is the requirement for these open discussions to occur between *anyone with relevant information or insight* and the decision-maker(s). This should prompt leaders to consider the high degree of psychological safety required for free and open conversations to take place where individuals both inside and out of their immediate team – of all ranks and vocations – allow their creative, unusual and imaginative thoughts, novel and perhaps controversial ideas to be *subject to public examination*.

Practical leadership implications

The discussion above highlights leadership concepts that are often missing from the cultures within our Defence, national security and law enforcement institutions. These missing elements contribute towards acknowledged strategic-thinking cultural gaps. An ill-defined problem statement is a noticeable barrier for those seeking to improve the situation. Ryan queries:

> Do the ADF and the wider Department of Defence have a problem with forming and embedding the type of strategic learning culture necessary to incentivise strategic thinking that affects decision-making, and for people to invest time in developing these skills over the course of their careers? My view is that this is a macroproblem, of which lack of time, curiosity and advanced cognitive skills are subsets.[73]

69 Liedtka, 'Strategic thinking: can it be taught?', p 125.

70 Liedtka, 'Strategic thinking: can it be taught?', p 124.

71 Frank G Hoffman, 'The missing element in crafting national strategy: a theory of success', *Joint Force Quarterly*, 2020, JFQ 97: 55–64, p 59.

72 Peter Senge, cited by Liedtka, 'Strategic thinking: can it be taught?', p 125.

73 Ryan, 'Thinking about strategic thinking', p 7.

The issues and concepts highlighted in this paper suggest a more appropriate question is: do these institutions have a problem embedding the type of *leadership and decision-making culture* necessary to incentivise curiosity and constructive debate – from early in people's careers – resulting in their investment of time to develop strategic learning and thinking skills?

The leadership concepts discussed here have implications for recruitment, institutional training at early, mid and senior career levels, career and talent management, doctrine and leadership practice. Though senior leaders acknowledge a narrow investment in a select few is a 'very high-risk strategy [of] betting on individual brilliance',[74] some still suggest this as their primary course of action. Instead, institutions require an explicit and deliberate focus on gradual and consistent improvements in foundational leadership actions and behaviours – using contemporary leadership research to do so. Aligning with this view, Hocking recommends evolving and explicitly articulating 'the balance of collaborative, enquiring and respectful challenge cultures aspired to under One Defence'.[75] However, once articulated, behaviours representative of the desired cultures must be evaluated and leaders held accountable. A strategic thinking culture cannot be separated from the organisational culture. By growing organisation-wide practices using – in part – the leadership concepts discussed here, the thinking necessary to develop robust 'theories of success' can organically and exponentially grow commensurate with each individual's creative and strategic thinking capacity.[76] Senior Defence leaders suggest establishing an 'explicit talent management process for identifying strategic thinkers'.[77] But, these thinkers can only be identified within a sufficiently supportive leadership culture that empowers individuals to utilise and develop their strategic thinking skills. As Drake aptly describes, there are no silver bullet solutions for shifting the deeply ingrained and change-resistant cultures of Defence and national security establishments – only lots and lots of 'lead bullets'.[78]

At least two interconnected lines of effort are required to improve strategic thinking uptake: leaders must make room in the environment and in their decision-making. Edmondson characterises an 'anxiety zone' environment as one with 'high standards in a context where there is uncertainty or interdependence (or both) combined with a lack of psychological safety'.[79] Further, she cautions that

74 Ryan, 'Thinking about strategic thinking', p 11.

75 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 42.

76 Hoffman, 'The missing element in crafting national strategy: a theory of success', p 58.

77 Hocking, 'Preparing for the future: key organisational lessons from the Afghanistan campaign', p 15.

78 Drake, 'Aligning risk tolerance to meet the demands of complex strategic problems'.

79 Edmondson, *The Fearless Organization*, p 19.

these characteristics are a 'serious risk factor in environments facing volatility, uncertainty, complexity, and ambiguity' – conditions routinely faced by Defence, national security and law enforcement organisations. Greater psychological safety in these high-standards institutions can take groups from an 'anxiety zone' to one of 'learning and high performance'.[80]

Ethical leadership and its impacts on decision-making offer practical and theoretical implications for an institutional approach to training, developing and role-modelling appropriate leadership behaviours during decision-making processes. Ethical leadership can create environments that value the process taken to arrive at decisions – promoting creativity and ensuring explicit and valid logic is applied to multi-priority, multi-goal challenges and strategic decisions. The more that leaders *at every level* understand these concepts, the harder it ought to be – morally – for them to 'look away' from their ethical role in incorporating strategic thinking practices into strategic planning and decision-making. Only the passing of time can truly test a strategy's effectiveness. Therefore, decision-makers must focus more on the process and critically ask themselves: 'As an individual, have I done everything possible to elicit, consider and analyse others' perspectives and ideas? Have I used techniques to apply higher levels of thinking and sought to reduce the negative impacts of my bias? Have I encouraged others to do the same?' Being curious, authentic and reducing the negative impacts of power dynamics in hierarchical cultures does not just improve the strategic thinking of self and others – it is a leader's fundamental ethical responsibility.

There may be further benefits to understanding and developing relationship-orientated leadership concepts – benefits unexamined in this paper. Leadership research explores social and behavioural phenomena, which influence the behaviour and impact the feelings of others. Freedman argues that:

> strategy … works through affecting the behaviour of others. Thus it is always about persuasion, whether convincing others to work with you or explaining to adversaries the consequences if they do not.[81]

Leadership concepts have implications for how strategic decision-makers may better consider complex problems from multiple perspectives and will likely improve their ability to develop strategic empathy and influential strategic narratives. This warrants further examination.

80 Edmondson, *The Fearless Organization*, p 18.

81 Lawrence Freedman, *Strategy: A History*, Oxford University Press, Oxford, 2013, p 614.

Conclusion

In Defence, national security and law enforcement environments where strategic challenges are wicked and uncertainty is constant, leadership development offers a viable option for improving and driving strategic and operational effectiveness. With the growing complexities of globalisation, effective collaboration between diverse groups should be a leadership priority to facilitate the strategic innovation necessary to meet these challenges. Perhaps even greater than the need for strategic thinking in these institutions is the need for an improved understanding of leadership theory and practice. These organisations must recognise that they are not exempt from social and behavioural phenomena – a strategic thinking culture cannot be directed or established through siloed efforts. Instead, it will take understanding the cultural requirements that motivate and drive strategic thinking and innovation uptake; a realistic assessment of undesired cultural aspects within their organisations that are inhibiting this uptake; and persistent efforts to develop the leadership culture that can improve the situation. Australia's future depends on their actions – one way or the other.

Commentary

The unaccountable contradiction: military theory and the profession of arms in the twenty-first century

Chris Field

Six ideas on *fighting power* interdependence – building the fighting power system

The Australian Defence Force (ADF) capstone concept, *Integrated Campaigning*, released 1 March 2022, states that 'Australia never works alone'.[1] This means the ADF 'works with others to achieve more', connecting reciprocal dependences with shared and mutually beneficial outcomes. Success in working with others mandates interdependent ADF actions nurturing constructive relationships, partnerships and alliances that generate a unified, and greater, whole.

Supporting interdependent ADF actions, doctrine describes *fighting power* as 'the result of the integration of three interdependent components': intellectual, moral and physical.[2] Building the interdependence of the fighting power components, as a *fighting power system*, is a crucial contributor to ADF creativity, capacity and capability. Deliberately unifying interdependent components of fighting power enables the ADF to work with others through cooperation, competition and, if necessary, conflict.

1 Nick Bosio, 'Integrated campaigning (part 1): what it looks like tactically, operationally, and strategically', *The Cove* website, Australian Army, 21 March 2022, accessed 18 January 2023. https://cove.army.gov.au/article/integrated-campaigning-part-1-what-it-looks-tactically-operationally-and-strategically

2 Australian Defence Force, fighting power (Authorised Term), Australian Defence Force Joint Publication-C-0, *Australian Military Power*, Department of Defence: Australian Government, Canberra, 2021, pp 20–21, p 81.

A *fighting power system* demonstrates three behaviours of a complex adaptive system.

First, the 'system consists of a number of heterogeneous agents, and each of those agents makes decisions about how to behave…and evolve over time'.[3] These agents include the intellectual, moral and physical components of fighting power employed by, and through, the five ADF domains – maritime, land, air, cyber and space. Complementary, and at times competing, heterogeneous agents include wider Defence, whole-of-Australian-government, interagency, multinational, multi-sector, multi-fora, coalition partners and allies.

Second, as the ADF trains, prepares, deploys, fights, innovates and learns, the 'agents interact with one another'.[4]

Third, emergence transpires where the 'whole becomes greater than the sum of the parts'.[5] Behaviours of a complex adaptive system mean that the ADF cannot fully understand the fighting power system by simply looking at its three component parts.

The purpose of this article is to stimulate thinking on how the ADF purposefully builds the interdependence of its joint fighting power components into a cohesive fighting power system. Supporting the ADF's ability to 'work with others to achieve more', this article first defines interdependence and fighting power. It then examines six ideas for building the interdependence of fighting power's intellectual, moral and physical components.

These six ideas – strategy interacting with tactics; planning; articulating design principles; control; building the theatre framework; and compounding escalation – are not the complete answer to enabling ADF fighting power interdependence or a fighting power system. Instead, the six ideas are one contribution to how the ADF realises its joint fighting power potential. The ideas are examples of how the ADF can practically bias fighting power component interdependence in our daily values, curiosity, learning, behaviours, training, education, exercises and experience. This bias can germinate additional fighting power ideas to realise the importance and urgency of a system of ADF interdependence.

3 Tim Sullivan, 'Embracing complexity', *Harvard Business Review*, Harvard Business Publishing, Boston, Massachusetts, September 2011, accessed 24 January 2023. https://hbr.org/2011/09/embracing-complexity

4 Sullivan, 'Embracing complexity'.

5 Sullivan, 'Embracing complexity'.

The article concludes that intellectual, moral, and, physical interdependencies – including through partnerships with wider Defence, whole-of-Australian-government, interagency, multinational, multi-sector, multi-fora, coalition partners and allies (or the broader defence organisational system) – iteratively and progressively, build ADF *fighting power* into an effective system.

Interdependence and *fighting power*

The Macquarie Dictionary defines 'interdependent' (*adjective*) and 'interdependence' (*noun*) as 'mutually dependent; dependent on each other'.[6] This definition supports the key argument of this article that for optimal effect the three components of fighting power – intellectual, moral and physical – should, be considered as a system, where each component is dependent on the others.

6 Macquarie Dictionary, Macmillan Publishers, Sydney, Australia, 2022, accessed 18 January 2023, https://www.macquariedictionary.com.au/features/word/search/?search_word_type=Dictionary&word=interdependent ; Peter Cheyne, 'Coleridge the philosopher', *Aeon*, Aeon Media, 19 April 2021, accessed 18 January 2023, https://aeon.co/essays/the-spectacular-originality-of-coleridges-theory-of-ideas. In 1817, Samuel Taylor Coleridge, one of the most prolific inventors of new words in the nineteenth century, created the word 'interdependent', followed, in 1821, by 'interdependence'. Peter Cheyne argues that Coleridge created words, such as 'interdependent', to support his 'inclusive attitude' and 'celebrated powers of synthesis'. Cheyne explains that 'polarised debates' were seen by Coleridge as 'revealing an interdependent whole'. In turn, Coleridge 'tried to embrace the views of his philosophical opponents, rather than simply dismiss them'. Coleridge assessed 'dichotomous or binary thinking (B versus C)', as arguing. He preferred 'trichotomous thinking (B versus C within a broader unity of A…or thesis, antithesis and synthesis)', to achieve, through reasoning, 'a unified [or interdependent] whole'. Building the interdependence of fighting power through integrating intellectual, moral, and physical components, progresses Coleridge's synthesis through the ADF 'working with others to achieve more'. Fighting power interdependence also avoids 'polarised debates', reveals an 'interdependent whole', and continuously seeks to embrace the ideas, capabilities and effects of diverse stakeholders and partners. Finally, effective interdependence for the ADF, through the trichotomy of cooperation, competition and, if necessary, conflict, benefit from Coleridge's 'inclusive attitude' that embraces the views of others to achieve more.
James C McKusick, *Living Words: Samuel Taylor Coleridge and the Genesis of the Oxford English Dictionary*, English Faculty Publications, University of Montana, Missoula, 1992, p 20, p 33, accessed 18 January 2023, https://scholarworks.umt.edu/eng_pubs/6/. In addition, Coleridge contributed a variety of ideas and concepts to our language including: adaptive, appraisal, artefact, bipolar, cyclical, egoistic, factual, fatalistic, greenery, heuristic, housemate, negativity, phenomenal, productivity, realism, resurgence, romanticise, sectarianism, soulmate, subjectivity, technique, and uniqueness. Textual references for these words are found in the James C McKusick, *Living Words: Samuel Taylor Coleridge and the Genesis of the Oxford English Dictionary,* Appendix, *Coleridgean Coinages: A Reference List*, pp 23–45.
For further discussion of Coleridge's linguistic innovations, see Owen Barfield, *Coleridge's Enjoyment of Words*, in John Beer (ed), *Coleridge's Variety: Bicentennial Studies*, The Macmillan Press, London, 1974, Pittsburgh PA, University of Pittsburgh Press, 1975, pp 204–218, accessed 18 January 2023. https://www.owenbarfield.org/read-online/articles/coleridges-enjoyment-of-words/

ADF doctrine describes fighting power as 'the result of the integration of three interdependent components'.[7] These three components are defined in ADF doctrine as:

- **intellectual** – the *knowledge to fight*, integrating ideas, concepts and lessons with mission command and manoeuvre [8]
- **moral –** the *will to fight,* integrating integrity, values, legitimacy, morale, mental toughness and determination with collective goals and shared purpose [9]
- **physical –** the *means to fight,* integrating people, platforms, systems, equipment, supplies and facilities with professional mastery,[10] education, training and discipline.[11]

Carl von Clausewitz,[12] emphasised the 'essence of military genius' as the intellectual knowledge to fight 'in a harmonious combination of elements'.[13] He further explained the interdependence of fighting power as the 'sum total of all these forces, of the physical as well as the moral'.[14]

Clausewitz's view was that the 'the moral effect of victory', depicted as a 'struggle of forces to the utmost', meant that the 'sum total of moral and physical powers cannot be so quickly altered'.[15] In other words, fighting power interdependence, nurtured through doctrine, training and preparedness, must be prepared before

7 Australian Defence Force, *Fighting power (Authorised Term)*, Australian Defence Force Joint Publication-C-0, Australian Military Power, Department of Defence: Australian Government, Canberra, 2021, pp 20–21, p 81.

8 See Australian Defence Force – Philosophical – 0 (ADF-P-0) *Command and Control*, ADF-P-0 ADF *Leadership*, ADF-P-3 *Campaigns and Operations* and ADF-P-3 *Campaigning in Competition*; Chris Field, 'Connecting good soldiering and mission command', *The Cove* website, Australian Army, 3 December 2019, https://cove.army.gov.au/article/connecting-good-soldiering-and-mission-command for more on mission command; William S Lind, 'Defining maneuver warfare for the Marine Corps', Marine Corps Association website, 1 March 1980, posted online 17 July 2019. https://www.mca-marines.org/gazette/defining-maneuver-warfare-for-the-marine-corps/

9 See ADF-P-0 *Military Ethics* and Australian Defence Force – Integration – 0 (ADF-I-0) *Rules of Engagement and Law of Armed Conflict*.

10 Chris Field, 'Five elements of campaigning', *Grounded Curiosity* website, 13 November 2021. https://groundedcuriosity.com/five-elements-of-campaigning/#.YzwNByKZKPs

11 Lieutenant Colonel Greg de Somer and Major David John Schmidtchen, *Professional mastery: the human dimension of warfighting capability for the army-after-next*, Land Warfare Studies Centre Working Paper No. 107, Canberra, October 1999, p 3. Enhancing our professional mastery, is the performance of our tasks, skills and actions with: competence, emotional self-awareness, flexibility in a range of environments and circumstances, self-confidence in volatile, uncertain, complex, and ambiguous conditions, Returning the investment of our service alongside senior coalition partners back to the ADF. See ADF-P-1 *Personnel*

12 Azar Gat. 'Carl von Clausewitz', *Encyclopaedia Britannica* online, last updated 17 January 2023, https://www.britannica.com/biography/Carl-von-Clausewitz

13 Carl von Clausewitz, *On War* (M Howard and P Paret eds and trans), Princeton University Press, Princeton NJ, 1976, p 100.

14 Clausewitz, *On War*, p 254.

15 Clausewitz, *On War*, p 254.

battle, otherwise required adaptation and change in a fighting force during battle, 'cannot be so quickly altered'.[16]

Supporting ADF doctrine and Clausewitz, Martin Van Creveld asserts that 'within the limits set by its size, a force's worth as a military instrument equals the quality and quantity of its equipment multiplied by its fighting power. He defines fighting power as:

> resting on mental, intellectual, and organisational foundations … manifesting, in one combination or another, as discipline and cohesion, morale and initiative, courage and toughness, the willingness to fight and the readiness, if necessary, to die.[17]

Van Creveld argues that in war, 'though the relative proportion of the individual qualities listed may vary from time to time, the qualities themselves, for the most part, are the same today as they were for Caesar's veterans 2,000 years ago'.[18]

This means that the interdependence of the components of fighting power, as a system, is not only crucial to enabling force capability, but has also been historically consistent for, at least, the last 20 centuries.

Building the fighting power system

This article now examines how the ADF purposefully builds the interdependence of its joint fighting power components into a cohesive fighting power system. This examination is built through six ideas: strategy interacting with tactics; planning; articulating design principles; control; building the theatre framework; and compounding escalation.

These ideas are intended to stimulate thinking on how the ADF builds the interdependence of its joint fighting power as a system. These six ideas integrate the three components of fighting power, as the: *knowledge to fight* (intellectual); *will to fight* (moral); and, *means to fight* (physical).

16 Clausewitz, *On War*, p 254.

17 Chris Field, *The canon and four generations of warfare – Part 3*, Land Power Forum, Australian Army Research Centre, 2 July 2017, accessed 18 January 2023. https://researchcentre.army.gov.au/library/land-power-forum/canon-and-four-generations-warfare-part-3

18 Chris Field, *The canon and four generations of warfare – Part 3*.

1. Strategy interacting with tactics

War has a grammar, but not a policy logic, of its own.[19] Clausewitz explains that there remains an enduring requirement for exponents of fighting power to understand the interdependence of both the 'grammar' or tactics of war – 'how war works as war … wherein people live and die in combat' – and the policy and strategic 'logic' of war'.[20] Although 'war is an act of policy, it is nonetheless war and war has a necessary tactical level that is about fighting'.[21]

Clausewitz wrote, 'in war more than in any other subject we must begin by looking at the nature of the whole'.[22] Colin S Gray attests to the 'pattern of multiple reciprocal dependencies that interconnect, indeed bind, strategy's many vital dimensions', including strategic principles, plans and behaviour.[23] Identifying 'complex interdependencies underlies the emphatically non-hierarchical concept of strategy'.[24]

Recognising that it is 'inherently sensible' to approach policy, strategy, operational art and tactics in a 'descending hierarchy', Gray argues that these 'realms need to be viewed as mutually dependent partners, related essentially horizontally, as well as on a ladder of subordination'.[25] The 'hierarchal view, with its inevitable implication of a descent from matters of greater to lesser importance, can conceal the interdependencies giving integrity to the whole'.[26]

Strategy interacting with tactics, with reciprocal dependencies, is how the grammar of tactics interacts, iterates and interplays with the logic of policy. This idea provides a foundation for the ADF to bias fighting power interdependence in our daily habits. Without integrated fighting power components strategy and tactics cannot interact. Concomitantly, without interaction strategy and tactics will struggle to originate, design, grow, adapt and evolve.

Emphasising strategy interacting with tactics, Gray argues that policy is 'not an absolute' or a 'given' handed to 'military commanders on tablets of stone'. Instead, strategic ideas 'need to be staffed, coordinated, priced and critically

19 Clausewitz, *On War*, p 605.

20 Clausewitz, *On War*, p 605; Colin S Gray, *Modern Strategy*, Oxford University Press, 1999, Oxford UK, p 93, p 272.

21 Clausewitz, *On War*, p 87 and Gray, *Modern Strategy*, p 97.

22 Clausewitz, *On War*, p 75.

23 David J Lonsdale, 'Colin S Gray: a reminiscence', *War on the Rocks*, 22 June 2020, https://warontherocks.com/2020/06/colin-s-gray-a-reminiscence/; Gray, *Modern Strategy*, p 357.

24 Gray, *Modern Strategy*, p 21.

25 Gray, *Modern Strategy*, p 21.

26 Gray, *Modern Strategy*, p 21.

reviewed'.[27] Gray writes that 'just as there is, in practice, a constant dialogue between strategy and tactical performance, as plan meets actions, so there is a constant dialogue between strategic performance and policy demand'. In summary, 'if troops cannot do it, the policy should not require it'.[28]

2. Planning

The purpose of *planning*, enabled through the six-step ADF collaborative, cooperative and interdependent planning process, is to build and employ interdependent fighting power. This process, harmonising the intellectual, moral and physical components of fighting power, defines and integrates disciplined thinking on: (a) environment; (b) what to solve; (c) how to solve; (d) analysis and testing; (e) recommendations; and (f) implementation.

The planning process is summarised below.

What is our environment?

Analysing the human factors (adversary, competitors, own forces, populations, stakeholders, history, culture, policy, diplomacy, civil society, information, infrastructure, the economy and military, etc.) combined with the geographic, technological, electromagnetic, space and cyber factors that affect the problem we must solve.

What problem must we solve?

Defining the problem, listening to the ideas of others, and preparing our plan/idea/concept for decision-makers. Creating momentum to enable follow-on work by identifying branch plans – decision points to change dispositions, orientation or direction – and sequel plans – options based on possible outcomes: victory, defeat or stalemate.[29]

How do we solve the problem?

Developing options or courses of action to solve the defined problem and confirming the resources required.

27 Gray, *Modern Strategy*, p 33.

28 Gray, *Modern Strategy*, pp 22–3.

29 Department of Defence*, Australian Defence Force Glossary*, accessed 9 January 2023. *Branch*: An option at a commander's decision point along a line of operation that allows the commander flexibility to anticipate decisive points by deviating from, and returning to, that line of operation. *Sequel*: An option at a commander's decision point along a line of operation, initiated by a significant shift in operational direction, which identifies a new line of operation to achieve a revised or new objective.

Will our proposed solutions work?

Analysing and testing options, or courses of action, that have been developed to solve the defined problem.

Recommend a decision

Deciding upon a solution to the problem.

Implement a solution

Completing and issuing direction, usually via an order, concept or plan. Assessing, consulting and reviewing until the task is complete or the task changes as the environment changes. Re-planning and re-resourcing as necessary.

Planning provides ADF leaders opportunities for interdependent thinking. This thinking employs intellectual, moral and physical components of fighting power to consider measurements optimising planning benefits. Measurements may include measuring effectiveness, to understand if we are *doing the right things*, and measuring performance, to understand if we are *doing things right*.[30]

These measurements seek to assure, for the mission and for the ADF, the interdependence and integration of fighting power by:

- understanding that stakeholders, their opinions and their authorities, will change and evolve as the plan/idea/concept is refined and developed
- gaining guidance and intent through regular meetings with teams, senior leaders and key influencers
- defining boundaries, acknowledging that boundaries can adjust, augment, and, preferably, mutually reinforce fighting power; while also acknowledging that boundaries are accompanied by inherent tensions, especially in constrained, concurrent and competitive resource environments, even as they enable organisational symbiosis.

30 Laura Stack, *Doing the Right Things Right: How the Effective Executive Spends Time*, 1st edn, Berrett-Koehler, Oakland, California, 1 January 2018, pp 2–3, accessed 18 January 2023. https://www.penguin.com.au/books/doing-the-right-things-right-9781626565661. *Australian Defence Force Glossary. Measure of effectiveness*: a criterion used to assess changes in system behaviour, capability, or operational environment that is tied to measuring the attainment of an end state, achievement of an objective or creation of an effect. *Measure of performance*: A criterion used to assess friendly actions that is tied to measuring task accomplishment.

3. Articulating design principles

Fighting power interdependence is enabled through design principles of *means* applied to the *ends* of military action. These principles ensure organisational *integration bias* creating an *integration reflex*, which may, through intellectual, moral and physical components, achieve design:

- simplicity – ensuring systems are fit for purpose and efficiency
- standards – developing capabilities that are the same by default; separate by necessity; and similar by exception
- convergence – integrating people-to-people experience, training and education alongside networks, architectures and technologies to enable force connectivity, compatibility and commonality
- adaptation – iteratively revising missions against threats, alongside stakeholders, technologies and operating environments
- autonomy – employing artificial intelligence; machine learning; robotic process automation; uncrewed maritime, land and air systems; edge computing; quantum computing; virtual reality; augmented reality; extended reality; blockchain; internet of things; fifth generation wireless technology; three-dimensional printing; and cyber security[31]
- alignment – nurturing partnerships across the defence organisational system.

Importantly, design principles connect people and relationships while unifying interdependent capabilities in time, place and mission.

For a fighting power system, the ADF must cooperatively integrate for constant competition and be designed, assured and ready for conflict. Fighting power interdependence is guided by policy objectives. These objectives are interpreted by leaders – through a system of intellectual, moral and physical perspectives. Leaders must continuously nurture joint design, joint development and joint education.

Each step of fighting power interdependence requires more systems connected with more systems to achieve policy objectives. Supporting this intent, design principles cultivate a 'bias' and 'reflex' enabling ongoing institutional creativity, operational excellence and professional mastery for the ADF's people to achieve mission success.

31 Scott Likens, *Eight emerging technologies and six convergence themes you need to know about*, Trust Technology, PwC Labs, PwC United States, 12 January 2022, accessed 18 January 2023, https://www.pwc.com/us/en/tech-effect/emerging-tech/essential-eight-technologies.html; Mohamed Mousa, 'Top 9 new technology trends for 2022', dKilo, Zamalek, Cairo, Egypt, 27 June 2022, accessed 18 January 2023. https://www.dkilo.com/post/top-9-new-technology-trends-for-2021

Mastering fighting power interdependence strengthens the system unifying ADF joint capabilities, cooperation and joint competencies. This unification, exponentially enhances the ability of the ADF to work with others to achieve more, which includes the ability of the ADF to constructively contribute to partnerships across the defence organisational system.

4. Control

Interdependence of fighting power is also realised by Admiral JC Wylie's concept of *control* through *sequential* and *cumulative actions*.[32]

Wylie defines 'the aim of war [as] some measure of *control* over the enemy',[33] describing control as the strategic objective of war itself.[34] Clausewitz supports this idea through stating 'war is nothing but a duel on a larger scale' – a physical contest between people, each using force 'to compel our enemy to do our will'.[35]

Wylie articulates three actions of control: taking, denying and exercising. These actions impose costs on an adversary through debilitating awareness, degrading resources and defeating resolve.[36]

Sequential actions include a series of discrete, interdependent and interconnected events, each relying on the previous event to achieve decision or, in ADF doctrine, a decision point.[37] Sequential actions are often associated with annihilation.[38]

In contrast, *cumulative actions* do not achieve decision from their individual actions, but rather from the sum total of, frequently disconnected, events. Cumulative actions occur when forces are not strong enough to execute sequential actions.

32 United States Naval Institute, 'Articles by Joseph Wylie' webpage, https://www.usni.org/people/joseph-wylie; Richard Ganske, 'Joint action: a personal theory of power, *The Strategy Bridge*, Washington DC, 27 May 2014, accessed 18 January 2023. https://thestrategybridge.org/the-bridge/2014/5/27/joint-action-a-personal-theory-of-power

33 JC Wylie, 'Why a sailor thinks like a sailor', *Proceedings, US Naval Institute*, vol 83/8/654, August 1957, accessed 18 January 2023. https://www.usni.org/magazines/proceedings/1957/august/why-sailor-thinks-sailor

34 James R Holmes, 'Cumulative warfare: war by statistics, the naval diplomat reflects on the cumulative/sequential dichotomy of understanding warfare', *The Diplomat*, Diplomat Media Inc., Arlington Virginia, 10 January 2015, accessed 18 January 2023. https://thediplomat.com/2015/01/cumulative-warfare-war-by-statistics/

35 Clausewitz, *On War*, p 75.

36 Wylie, 'Why a sailor thinks like a sailor'; Holmes, 'Cumulative warfare: war by statistics'.

37 *Australian Defence Force Glossary.* Decision Point: a point in space and time, identified during the planning process, where it is anticipated that the commander must make a decision concerning a specific course of action.

38 David Hood, 'Rear Admiral Wylie, Jr's approach to strategy', Defense.info, Arlington Virginia, 22 April 2020, accessed 18 January 2023. https://defense.info/book-review/2020/04/rear-admiral-wylie-jr-s-approach-to-strategy/

Cumulative actions, as a collection of independent tasks, produce an outcome through their compounding effect, often associated with attrition.[39]

To achieve control, Wylie argues it is necessary to unify sequential and cumulative actions, as interdependent elements of fighting power, to place maximum pressure on the adversary. This pressure creates a pattern of war compelling the adversary and establishing control over them.[40] In Wylie's own words:

> The primary aim of the strategist in the conduct of war is some selected degree of control of the enemy for the strategist's own purpose; this is achieved by control of the pattern of war; and this control of the pattern of war is had by manipulation of the centre of gravity of war to the advantage of the strategist and the disadvantage of the opponent.[41]

Through enabling control, the interdependence of fighting power, employing intellectual, moral and physical components, allows forces to shift their *strategic weight* against an adversary. Notably, shifting includes 'destroying the enemy's forces in battle'.[42]

Recognising the criticality of interdependent sequential and cumulative actions, Wylie articulates the notion of *equilibrium*. This is where war has come to a stalemate, requiring an effective *pattern* of unified actions, sequential *and* cumulative, to shift advantage towards either side.

For Wylie, realising interdependence of fighting power means control through sequential *and* cumulative actions. His theory of victory is that sequential and cumulative actions enable a leader to determine 'what kind of control is desired' and to appreciate 'under what circumstances will destruction or the threat of

39 David Hood, 'Rear Admiral Wylie, Jr's approach to strategy'.

40 Holmes, 'Cumulative warfare: war by statistics'.

41 J C Wylie, *Military Strategy: A General Theory of Power Control*, Rutgers University Press, 1967, Reprint, Naval Institute Press, 2014, pp 77–78. Wylie uses Clausewitz's definition of *centre of gravity*, which employs the interdependence of fighting power. This interdependence, enabled by a well-designed *centre of gravity*, can be overlooked by friendly forces. Planners, for example, may rush to ascertain their friendly force centre of gravity while biasing their intellectual energy in examining an adversary's centre of gravity. 'Clausewitz, *On War*, p 486, p 487. As Clausewitz explains, interdependence is central to: 'The armed forces of every belligerent … having a certain unity and, by means of this, cohesion … There are, therefore, in these armed forces certain centres of gravity, the movement and direction of which decide that of the other points'.

42 Heather Venable, *Military strategy: a general theory of power control*, Air Command and Staff College, Montgomery, Alabama, 6 July 2020, accessed 18 January 2023. https://www.airuniversity.af.edu/SSQ/Book-Reviews/Article/2255908/military-strategy-a-general-theory-of-power-control/

destruction bring about the desired means of control'.[43] This theory may be summarised as:

> Life is cumulative — usually. War may unfold sequentially, but that's the exception to the rule.[44]

Sequential actions may push a campaign into equilibrium if any single step in the sequence is thwarted along the way. In contrast, for cumulative actions, individual events can fail without ruining the entire plan.

However, cumulative actions are vulnerable, as they are often insufficiently decisive to defeat the adversary and achieve control.[45] For example, if from the beginning of a campaign a force is not appropriately resourced or armed, it is unlikely the campaign will create a decisive effect. Or, quoting Helmuth von Moltke the Elder, 'a mistake in the initial concentration of a force, can hardly be rectified during the entire course of the campaign'.[46]

5. Building the theatre framework

Emerging ADF doctrine defines building a theatre framework as a continuous, long-term process enabling an organisation to collaboratively understand, create and support deployed forces at an acceptable level of risk. In United States' doctrine, building a theatre framework is defined as *setting and maintaining a theatre*.[47]

Building a theatre framework integrates and aligns decision-making through command and control, intelligence, force generation, force projection, force application and, force protection, sustainment, access and partnerships. This framework supports the application of fighting power interdependence through the execution of overlapping operations, activities and actions across the spectrum of cooperation, competition and, when necessary, conflict.

A theatre framework requires a theatre team. While employing the intellectual, moral and physical components of fighting power, this team requires six

43 Wylie, *Military Strategy: A General Theory of Power Control*, p 40.

44 Holmes, 'Cumulative warfare: war by statistics'.

45 NerveAgent, 'J.C. Wylie: American Clausewitz?', *Visions of Empire* website, 12 April 2009, accessed 18 January 2023. https://visionsofempire.wordpress.com/2009/04/12/jc-wylie-american-clausewitz/

46 Gerhard Papke, 'Helmuth von Moltke', in Werner Hahlweg (ed), *Klassiker der Kriegskunst*, Darmstadt, Wehr und Wissen Verlagsgesellschaft, 1960, p 316.

47 Headquarters, Department of the United States Army, *Army Techniques Publication No. 3-93* [pdf], Theater Army Operations, US Army Publishing Directorate, Office of the Chief Information Officer, Washington DC, 27 August 2021, p 5-1. https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=1023486. The purpose of setting and maintaining a theatre, is to 'create conditions, gain access, support military operations, sustain joint forces, and facilitate the successful execution of a campaign plan and other strategic plans'. Setting and maintaining the theatre may occur in contact with the enemy.

interactive, integrated, interdependent and enduring actions, whether supporting one deployed person or 100,000 deployed people. Each of the team's actions:

- *empowers* people's personal, professional, and cultural potential through education, training and experience
- *builds* and *informs* relationships with others
- *commands* and *controls* assigned forces, including transitions between preparedness, priorities and phases
- *enables* task forces, joint components and support areas
- *creates* opportunities to innovate
- *assess* whether to tolerate, treat or transfer any risk to mission or force, while defining who holds, or 'owns', the risk and for how long risk is held; and where the risk to mission or risk to force is intolerable, terminate the task.

A theatre team employs a continuous, long-term process to build the theatre framework and an environment of understanding, creativity, support and risk reduction to aid the success of contingency forces and joint components.

Theatre team leadership, in building the theatre framework, empowers contingency forces and joint components to fight unencumbered by theatre responsibilities. This empowerment enables contingency forces and joint components to fully employ their knowledge to fight, will to fight and means to fight, with reduced theatre mission distraction, resource opportunity cost and organisational risk.

6. Compounding escalation

In 1965, Herman Kahn, employing a 44 rung escalation ladder metaphor, 'defined three dimensions of escalation: *increasing intensity* (vertical escalation), *widening the area* (horizontal escalation), and *compounding escalation*'. The compounding dimension of escalation combined both vertical and horizontal escalation.[48]

Increasing the 'intensity of armed conflict or confrontation, such as employing types of weapons not previously used in the conflict or attacking new categories of targets, [including frequency of attacks and number of targets], is often collectively described as *vertical escalation*'.[49] Expanding the geographic scope,

48 Herman Kahn, *On Escalation: Metaphors and Scenarios*, Penguin, Baltimore Maryland, 1965, pp 4–6.

49 Forrest E Morgan, Karl P Mueller, Evan S Medeiros, Kevin L Pollpeter and Roger Cliff, *The nature of escalation from dangerous thresholds, managing escalation in the 21st century*, RAND Corporation, Santa Monica USA, 2008, ch 2, p 18, accessed 18 January 2023. https://www.rand.org/pubs/monographs/MG614.html

including boundaries, access, basing and overflight, of a conflict is described as *horizontal escalation*.[50]

Without mentioning vertical and horizontal escalation, the ADF's capstone concept, Integrated Campaigning, emphasises that the ADF builds, unlocks, maximises and applies power in cooperation, competition and conflict.[51] Extrapolating this thinking, fighting power interdependence, through intellectual, moral and physical components, arguably *applies power* through vertical escalation and *builds, unlocks and maximises power* through horizontal escalation.

In addition, Integrated Campaigning encourages *compounding escalation* through 'fast adaptation', where the ADF embraces the risks and opportunities of research and development to generate capability advantage. Compounding escalation is also realised through *Integrated Campaigning*'s interdependent achievement of objectives in cooperation, competition and conflict, as well as through understanding, orchestration, effects and sustainment while applying, building, unlocking and maximising power.

Compounding escalation also enables *organisational learning*, defined as a combination of *single-loop learning*, which 'differentiates between adapting current competencies'; and *double-loop learning*, which involves developing 'entirely new skills and capabilities'.[52]

The late Chris Argyris, an American business theorist, described single-loop learning as 'relating to immediate and routine matters, where the group improves its skills, doing better, within its existing organisational values'. He described double-loop learning, as 'adopting new competencies and operating outside pre-existing policies and governing values'.[53]

Compounding escalation enables a fighting power system through developing *first-mover advantage* over adversaries – employing intellectual, moral and physical components – by: creating a technological edge, pre-empting access to scarce assets, and building an early firm base to impose costs on later

50 Morgan et al., *The nature of escalation*, p 18, p 20.

51 Bosio, 'Integrated campaigning (part 1): what it looks like tactically, operationally, and strategically'.

52 Frank G Hoffman, *Mars Adapting: Military Change During War*, Naval Institute Press, Annapolis, Maryland, 2021, p 29'; Chris Argyris, 'Double loop learning in organizations', *Harvard Business Review*, Harvard Business Publishing, Boston, Massachusetts, September/October, 1977, pp 115–124, 1977, accessed 18 January 2023. https://hbr.org/1977/09/double-loop-learning-in-organizations

53 Hoffman, *Mars Adapting*, p 29; Argyris, 'Double loop learning in organizations', pp 115–124.

entrants.[54] Achieving compounding escalation may involve theatre effects at the human, geographic or temporal point of need and decision, which are delivered over areas that are broad and wide or concentrated and dominant.[55]

Compounding escalation that imposes costs, to disrupt, deter or delay an adversary may include first-mover advantage tactics – such as building theatre economies of scale, scope and force in production, supply and distribution – combined with the creation of barriers to theatre entry and expansion.[56] Importantly for adversaries, despite high barriers to theatre entry, subsequent theatre expansion barriers can be low.[57]

Economy of force recognises that 'time management is a zero-sum game, where every passing minute either benefits our future strategic advantage or that of the adversary'. Time management includes optimising fighting power to 'harass the adversary', through intellectual, moral and physical components, or 'risk being harassed'.[58]

Other first-mover advantage compounding escalation tactics may raise adversary *exogenous sunk costs*, which all theatre entrants incur when building their theatre framework. Then through collaborative intelligence, a first mover seeks to understand and asymmetrically escalate adversary *endogenous sunk costs*.[59] This may occur through knowing how an adversary plans and budgets to build their own theatre framework and fighting power system, including the deployment of research, development, communications, training and logistics.

When adversary theatre entry occurs, the ADF must aggravate adversary theatre fragility, causing an adversary to miscalculate their utilisation of network effects enabling theatre entry, development and expansion. This aggravation enhances first-mover advantage compounding escalation through building a theatre framework and a fighting power system. This advantage and escalation includes theatre relationships and partnerships, combined with the generation of campaign tempo – applied incrementally or disruptively– to build, unlock, maximise and apply power.

54 Fernando F Suarez and Gianvito Lanzolla, 'The half-truth of first-mover advantage', *Harvard Business Review*, Harvard Business Publishing, Boston, Massachusetts, April 2005, accessed 18 January 2023. https://hbr.org/2005/04/the-half-truth-of-first-mover-advantage

55 Damien Geradin, Nicolas Petit, Mike Walker, Paul Hofer, Frédéric Louis, *The Concept of Dominance in European Community Competition Law*, College of Europe, Global Competition Law Centre, 5 August 2005, p 12, accessed 18 January 2023. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=770144

56 Geradin et al., *The Concept of Dominance in European Community Competition Law*.

57 Geradin et al., *The Concept of Dominance in European Community Competition Law*.

58 Dante K Earle, 'Quantum principles', *Military Strategy Magazine*, IJ Infinity Group, 2023, 8(3), accessed 18 January 2023. https://www.militarystrategymagazine.com/article/quantum-principles/

59 Geradin et al., *The Concept of Dominance in European Community Competition Law*.

Conclusion

This article examines how the ADF purposefully builds interdependence of its joint *fighting power* components into a cohesive fighting power system. This article first defined interdependence and fighting power. It then examined six ideas building the interdependence of fighting power's intellectual, moral and physical components.

The six ideas – strategy interacting with tactics, planning, articulating design principles, control, building the theatre framework and compounding escalation – are examples of how our ADF can practically bias the interdependence of fighting power, as a system, in our daily values, curiosity, learning, behaviours, training, education, exercises and experience.

Successful independencies require partnerships to build a *fighting power system*. Optimal partnerships learn from internal success and from the success of others. These partnerships include wider Defence, whole-of-Australian-government, interagency, multinational, multi-sector, multi-fora, coalition partners and allies.

'Australia never works alone', is the key message from the ADF's capstone concept, *Integrated Campaigning*.[60] This means the ADF must, for mutually beneficial outcomes, 'work with others to achieve more'. The ideas from this article would help to support ADF fighting power as a system by encouraging interdependence: working with others during cooperation, competition and, if necessary, conflict.[61]

60 Bosio, 'Integrated campaigning (part 1): what it looks like tactically, operationally, and strategically'.

61 This paper does not represent any official positions of the Australian Army, Australian Defence Force or the Australian Department of Defence.

China's discordant grey-zone grand strategy

Peter Layton

Abstract

China uses grey-zone actions to advance its creation and maintenance of a hierarchal international order. Its grey-zone approach is incremental, nibbling way slowly at the edges, making use of diverse military and non-military measures, and being careful not to drive others into a major war. It is controlled at the highest governmental levels and it is enduring. This commentary uses a grand strategic framework to better understand the rationale behind China's grey-zone actions, determine how they may evolve and uncover some possible weaknesses. The framework in encompassing, both applying and building power suggests China's grey-zone grand strategy is discordant and change is inevitable. The nearer term may be a dangerous period, as China tries out some more aggressive actions as it seeks to keep its existing approach viable.

Introduction

Today's most pressing geostrategic problem is Russia's invasion of Ukraine, but over the longer term, arguably the most important is China's incorporation into the international system. China has the potential to bring the system down or to use its great economic strength, large population and growing military power to work within it. At the moment, it's easy to be pessimistic.

Many fret about a major war between America and China, with Taiwan seen as a likely flashpoint. It's reasonable to claim no one seeks such a war but Russia's invasion upsets the calculus. National leaders can now demonstrably act in ways many consider irrational; their cost-benefit determinations may not be those of others. Concerningly, China's President Xi Jinping's 'no limits' friendship with Russia's President Putin could be more than simple rhetoric.

The gloom is deepened by the steadily worsening nature of China's many grey-zone actions. China is intent on continuing a long-running military dispute on the Indian border; both sides have thousands of troops deployed with soldiers now occasionally being killed.[1] Provocatively, China claims almost all of the South China Sea, an area about 50 per cent larger than the Mediterranean, irrespective of the Permanent Court of Arbitration's 2016 judgement that found this specious.[2] China is steadily militarising the sea, building evermore military facilities on reclaimed land and continually prodding its neighbours using naval warships, armed coastguard and militia vessels, government survey vessels and even oil rigs. China is sending large numbers of military aircraft almost daily to infringe Taiwan's Air Defence Identification Zone and flying deliberately threatening flight paths.[3] Last year, for the first time, China fired several ballistic missiles close to Taiwan and into Japan's Exclusive Economic Zone (EEZ).[4] In the East China Sea, naval ships and military aircraft frequently enter territory and airspace claimed by Japan.[5] Lastly, China is now trying to claim the parts of the Yellow Sea off South Korea's southern and western costs. A steadily increasing number of Chinese warships, government-owned vessels and fishing boats now operate inside South Korea's EEZ.[6]

Yet in this laundry list of worrying actions, it is significant that China avoids using violence – and hence the use of the term grey zone and not hybrid war.[7] The

1 Manu Pubby and Kumar Anshuman, 'Colonel Babu got hit in the head: a detailed account of the brawl at Galwan with Chinese soldiers', *The Economic Times*, 22 June 2020, accessed 23 January 2023. https://economictimes.indiatimes.com/news/defence/indian-soldiers-put-up-a-strong-fight-pla-officer-killed/articleshow/76499852.cms?from=mdr

2 Oriana Skylar Mastro, 'How China is bending the rules in the South China Sea', *The Interpreter*, 17 February 2021, accessed 23 January 2023, https://www.lowyinstitute.org/the-interpreter/how-china-bending-rules-south-china-sea; *The South China Sea Arbitrations (The Republic of Philippines v. The People's Republic of China),* Permanent Court of Arbitration, 12 July 2016. https://pca-cpa.org/en/cases/7/

3 RFA Staff, 'China flies 71 warplanes into Taiwan's ADIZ in one day', *rfa: Radio Free Asia*, 25 December 2022, accessed 23 January 2023. https://www.rfa.org/english/news/china/china-taiwan-warplanes-12252022234253.html

4 Bonny Lin, Brian Hart, Matthew P Funaiole, Samantha Lu, Hannah Price and Nicholas Kaufman, *Tracking the Fourth Taiwan Strait Crisis*, Center for Strategic and International Studies (CSIS), 5 August 2022, accessed 23 January 2023. https://www.csis.org/analysis/tracking-fourth-taiwan-strait-crisis

5 Edmund J Burke, Timothy R Heath, Jeffrey W Hornung, Logan Ma, Lyle J Morris and Michael S Chase, *China's Military Activities in the East China Sea: Implications for Japans' Air Self-Defense Force*, RAND Corporation, Santa Monica, 2018.

6 Chungjin Jung, 'China's gray zone operations in the Yellow Sea', *Security Nexus*, September 2021, accessed 23 January 2023. https://dkiapcss.edu/wp-content/uploads/2021/08/N2615-Jung-Chinas-gray-zone-operations-R3.pdf

7 Frank G Hoffman, *Conflict in the 21st Century: The Rise of Hybrid Wars*, Potomac Institute for Policy Studies, Arlington, December 2007, p 58. Hybrid warfare is a type of war used to try to conclusively win a campaign through the use or threat of violence. This is in sharp contrast to grey zone's gradualism built around carefully avoiding using violence. In broad terms China uses grey zone while Russia employs hybrid warfare; the two techniques or nations should not be conflated. The non-violence/ violence distinction is commonly used and first devised by Frank G Hoffman.

exception is the Indian border; but even here, the violence involves using sticks and stones, not modern weaponry. Indeed, China has not fought a war since its border conflict with Vietnam more than 40 years ago. Generations of People's Liberation Army (PLA) soldiers have come and gone and remained deskbound. Given this, the absence of violence appears not as an anomaly but rather suggests an enduring strategic intent.

Accordingly, this commentary applies a strategic framework to the problem to better understand the rationale behind China's grey-zone actions, determine how they may evolve and uncover some possible weaknesses. A grand strategic structure is used for this analysis as it considers the better future a nation seeks through its actions, encompasses building national power and includes using diverse instruments of national power.

The idea of grand strategy is inherently simple in connecting the application of power with both building it and the overarching intent of improving the relationship a nation has with particular others.[8] These are useful aspects to incorporate when analysing China's grey-zone actions but should not be taken too far. For some, grand strategy is all-embracing, grandiose in vision and extravagantly elaborate. A grand strategy framework is used here simply to help structure the discussion and bring a certain order.

Applying power

The relationships different states have with each other can be termed as an international order, usefully defined by John Ikenberry as 'a political formation in which settled rules and arrangements exist between states to guide their interaction'.[9] The primary purpose of a state's grand strategy is to attempt to change the current 'political formation' into a more desirable one from the implementing state's perspective.[10]

The international order China desires reflects a blend of Confucianist and realist perspectives.[11] The former favours benign hierarchical structures, where rulers bring harmony and subjects should be loyal; the later considers great powers as the only important players in the international system and that material power,

8 Peter Layton, 'The idea of grand strategy', *RUSI Journal*, 2012, 157(4), pp 56–61. https://rusi.org/explore-our-research/publications/rusi-journal/idea-grand-strategy

9 G John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order*, Princeton University Press, Princeton, 2011, p 36.

10 Peter Layton, *Grand Strategy*, Amazon, Brisbane, 2018, pp 15–17, accessed 23 January 2023. https://www.amazon.com/Grand-Strategy-Peter-Layton/dp/0648279308

11 Christopher D Yung, 'China's strategic culture and its diverse strategic options', in Matthew R Slater (ed), *Patterns of Influence: Strategic Culture Case Studies and Conclusions*, Marine Corps University Press, Quantico, 2019, pp 66–102, p 74.

whether economic or military, determines outcomes. As Chinese Foreign Minister Yang Jiechi indelicately declared at the 2010 ASEAN regional forum: 'China is a big country and you are small countries, and that is a fact'.[12]

China's favoured order is consequently hierarchical and led by itself, as befits its size and economic heft.[13] Importantly, this is not an empire built using military might but more of a core-periphery relationship, where lesser nations, themselves ranked against each other, esteem the massive central state and when necessary concede to it.[14] Such a hierarchy emerges from negotiations and disputes between the Chinese builders of the order and the presumed subordinate others.[15] These hierarchical orders are not immutable but rather dynamic in their operation; they need ongoing active maintenance to persist and prosper.

States should know their place in such orders, particularly in terms of respect and deference. Respect can at times appear a Chinese mantra. In many cases, this is phrased as 'mutual respect'; although it is often used in a manner that suggests it's one way. At the 2023 Shangri-La Dialogue, General Li Shangfu, then Chinese Minister of National Defense, declared the essence of respect was strategic autonomy, implying China will brook no external constraints on its freedom of action.[16] This is not how others may understand the essence of respect. In this regard, *The Economist* magazine in a large essay in 2014 determined that 'China… wants the respect it enjoyed in centuries past. But it does not know how to achieve or deserve it'.[17]

12 Tom Mitchell, 'China struggles to win friends over South China Sea', *Financial Times*, 13 July 2016, accessed 23 January 2023. https://www.ft.com/content/a9a60f5e-48c6-11e6-8d68-72e9211e-86ab

13 Nadège Rolland, *China's vision for a new world order*, The National Bureau of Asian Research, Seattle, January 2020, pp 50–51.

14 Rolland, *China's vision for a new world order*, p 51.

15 Joseph MacKay, 'Rethinking hierarchies in East Asian historical IR', *Journal of Global Security Studies*, October 2019, 4(4):598–611, p 599. https://doi.org/10.1093/jogss/ogy028

16 General Li Shangfu, 'Fifth Plenary Session 4 June 2023', *The 20th IISS Shangri-La Dialogue*, accessed 8 October 2023. https://www.iiss.org/globalassets/media-library---content--migration/files/shangri-la-dialogue/2023/provisional-transcripts/p-5/general-li-shangfu-state-councilor-minister-of-national-defense-china---provisional.pdf

17 'China's Future', *The Economist*, 2014, accessed 8 October 2023. https://www.economist.com/news/essays/21609649-china-becomes-again-worlds-largest-economy-it-wants-respect-it-enjoyed-centuries-past-it-does-not?fsrc=scn/fb/wl/pe/es/whatchinawants&fbclid=IwAR2ugUE6M4caIP0lEflYn5SNEisPgt97iPtLuN_T-4Uc3P2KLFOagqblZ2I

The Chinese Ambassador to Australia has written he believes good relations require Australia respects China in quite specific ways.[18] Britain should 'respect the legitimate rights and interests' of state-owned Chinese companies in its dealings with them.[19] In rejecting the showing of US blockbuster movies in China, China has said it wants American filmmakers to show more respect.[20] The Hong Kong based, English-language newspaper, the *South China Morning Post* has reported a survey of 1,000 people in China found 67 per cent said the world should show China 'more respect'.[21]

Channelling Machiavelli, it seems China doesn't care if it is loved or feared as long as China is respected.[22] The ruling Communist Party of China does not wish to own the world or to solve its problems, but for the world to self-police and instinctively place the Communist Party's concerns above that of others. It wants an unqualified respect that allows the Party to set the agenda of the matters in question and to ensure other countries always consider China before they take actions. Other states' strategic imaginations should be constrained by their intuitive understanding of what China wants.

The respect sought is to be gained through positive measures such as trade, financial grants, low-cost loans and belt-and-road infrastructure projects or by negative measures such as economic coercion, wolf warrior diplomacy or grey zone actions. States may often be subject to both simultaneously. Positive and negative measures can reinforce each other in achieving respect, meeting Machiavelli's advice that it is best to be both loved and feared.

This article focuses on the negative measure of grey-zone actions, as this has the potential to create incidents that could lead to major conflict. Other measures do not.

18 Xiao Qian, *Mutual respect: the political foundation for China–Australia friendly cooperation*, Embassy of the People's Republic of China in the Commonwealth of Australia, 12 May 2022, accessed 8 October 2023. http://au.china-embassy.gov.cn/eng/sghdxwfb_1/202205/t20220512_10684842.htm Xiao Qian places the obligation for better relations on Australia, writing: 'We expect the Australian side to view China and China's policies in an objective and rational light, act in the interests of Australia and its people, adopt a positive policy toward China, and work with China in the same direction with mutual respect as the political foundation, so as to push China–Australia relations back on the right track at an early date.'

19 Zhang Wenjie, Wu Chaolan (web editors), 'Britain should respect legitimate rights, interests of Chinese companies: spokesperson', *Xinhua*, 19 November 2022, accessed 23 January 2023. http://en.people.cn/n3/2022/1119/c90000-10173669.html

20 Shirley Zhao, 'China says Hollywood needs to show respect as films blocked', *Bloomberg*, 18 August 2022, accessed 23 January 2023. https://www.bloomberg.com/news/articles/2022-08-18/china-says-hollywood-needs-to-show-respect-as-films-blocked#xj4y7vzkg

21 Kawala Xie, 'More than half of Chinese adults say world should show more respect: survey', *South China Morning Post*, 31 August 2022, accessed 23 January 2023. https://www.scmp.com/news/china/diplomacy/article/3190832/more-half-chinese-adults-say-world-should-show-more-respect

22 Niccolò Machiavelli, *The Prince* (Rufus Goodwin trans), Dante University Press, Boston, 2002, p 93. Machiavelli famously asked 'should a Prince better be feared or loved?'

The Chinese grey-zone approach aims to progressively create new 'normals' and then continue to build on these. Early Chinese strategists thought of time as a river that flows ever onwards and which can be purposefully shaped. Strategy becomes a matter of knowing how to 'impinge upon the flow of time upstream, in such a way that an effect will then tend to "come" of its own accord'.[23] This lies behind Sun Tzu's advice that 'ultimate excellence lies not in winning every battle but in defeating the enemy without ever fighting'.[24]

Chinese ideas are then not about using agency to decisively shape the world, but instead exploiting the course the world is already on. The most important perceived trend is that 'the East is rising, the West is in decline and the tide of history is flowing in China's favour'.[25] Firstly, this leads Chinese strategists to hold that the international system is becoming multipolar so providing abundant space for China to strategically manoeuvre within. The second deduction is that economics, China's strongest card, is now the dominant force shaping the contemporary world, not military might.[26] Consequently, major power war is improbable. Accordingly, Chinese grey-zone actions can rely both upon this continuing peace and the overriding interest of other states in accessing the Chinese economy to shape other states' decisions about using military force.

These trends have allowed China to embrace an assertive grey-zone strategy to gain others' respect through inducing fear while still being able to usefully interact economically with other states. The broad characteristics of these grey-zone operations include: the purposeful pursuit of political objectives through carefully designed operations; a measured movement towards the objectives rather than seeking decisive results within a specified time period; acting to remain below key escalatory thresholds so as to avoid war; and the use of all the instruments of national power, particularly non-military and non-kinetic tools.[27]

Some implications fall out of this analysis. Chinese grey-zone actions aim to gradually accumulate successes. That is, they are a cumulative strategy not a sequential strategy in the classification schema of JC Wylie. A cumulative strategy is what Wylie thought air and submarine warfare strategies were: aircraft

23 François Jullien, *A Treatise on Efficacy: Between Western and Chinese Thinking* (Janet Lloyd trans), University of Hawaii Press, Honolulu, 2004, p 121.

24 Sun Tzu, *The Art of War* (John Minford trans), Penguin Books, London, 2005, p 12.

25 Colin Flint and Zhang Xiaotong, 'Historical–geopolitical contexts and the transformation of Chinese foreign policy', *The Chinese Journal of International Politics*, 2019, 12(3): 295–331, p 327. https://doi.org/10.1093/cjip/poz011

26 Zhou Fangyin, 'Chinese scholars view of international structure', in Huiyun Feng, Kai He and Xuetong Yan (eds), *Chinese Scholars and Foreign Policy: Debating International Relations*, Routledge/Taylor and Francis Group, London, 2019, pp 23–43, pp 24–25.

27 Michael J Mazarr, *Mastering the Gray Zone*, US Army War College Press, Carlisle, 2015, p 58.

and submarines went out every day, fought small tactical actions and gradually won. There was no single grand decisive battle, like Waterloo or Gettysburg or Krusk, just a day by day accumulation of successes until a tipping point was reached.[28]

This also means that grey-zone actions don't just happen. They are implemented in a carefully designed campaign plan. This further means they are controlled by strategic-level commanders. The highest levels of the Chinese Communist Party and PLA command structures are involved. Grey-zone actions are not those of tactical commanders freelancing. In that regard, with its dual-command concept, the PLA and the Party act as one.[29]

It is perhaps not surprising then – although it does not have to be so – that Chinese grey-zone actions tend to be rather formulaic. Each event fits into a carefully designed overall plan but each event seems similar. The recent Taiwan crisis appeared tightly choreographed with ships, aircraft and missiles all given specific parts to play. Moreover, the chorography tried to avoid creating unintended incidents through use of well-advertised moves and avoiding manned platforms interacting with other manned platforms.

The Taiwan crisis, though, highlighted that while Chinese grey-zone operations can involve non-military entities, they ultimately rely on the hard military power wielded by the PLA. Without the PLA, Chinese grey-zone activities would be very different and arguably much less effective.

Importantly, the aim in these grey-zone operations is to avoid and, indeed, prevent military escalation. The operation at the tactical level is tightly controlled as the Chinese strategic leadership don't want to unintentionally start a war. It's a form of carefully scripted brinkmanship.

Grey-zone operations, then, are appropriate only for a time of resilient peace. If the peace is delicate with all postured and ready to fight, grey-zone operations will be too risky to undertake. Grey-zone operations rely on a resilient peace that can absorb a grey-zone shock and bounce back, not a fragile peace that can suddenly shatter, starting a war. The implication of this is that the target of grey-zone actions needs to be cooperative. They must be invested in keeping the peace and not wishing to break it.

28 JC Wylie, *Military Strategy: A General Theory of Power Control*, Rutgers University Press, New Brunswick, 1967, pp 23–30.

29 Jeff W Benson and Zi Yang, *Party on the bridge: political commissars in the Chinese navy*, CSIS, Washington, 29 June 2020, pp 9–21. https://www.csis.org/analysis/party-bridge-political-commissars-chinese-navy

There are several other contradictory aspects in China's grey-zone schema. Seeking ongoing respect through continually provoking fear highlights that there is no end. The river of time flows on and on, meaning that the actions required to maintain the desired advantage are similarly forever, along with the accompanying implicit high resource burden for China.

Moreover, the river model leaves out that in human society actions tend to inherently lead to counter-actions; in reality, the river does not continue unchecked indefinitely, as others have agency. China's grey-zone activities are now generating their own countervailing forces. Countries are starting to take actions in response to China's grey-zone actions, reorienting their defence force structures and, most worryingly for China, beginning to come together to act collectively.

To be fair though, Chinese grey-zone actions can succeed even if they seemingly fail. Such actions are performative in design, that is they are taken specifically with a specific audience in mind and to elicit a particular reaction. From China's perspective, in simply experiencing grey-zone actions, smaller nations will understand they are subordinate to China and grant it the respect and deference craved. Grey-zone actions form part of the dialogue with smaller nations China uses to build and maintain its desired hierarchal order.

Building power

A nation's domestic economic power underpins its application of power externally in the international system. Internally, China is being remade under the Party's dual circulation policy.[30] This seeks to build a domestic China partly insulated from the external China that interacts with the world. Domestic China with its 1.4 billion population is large enough to be a detached world within the wider world, and be self-reliant with much less dependence on other nations. Internal China will be able to carry on somewhat separated from the outside world and better shielded from economic disruptions, financial turbulence, trade sanctions or supply chain shortfalls.[31]

As part of this, China is actively working to become independent in certain high technology fields. This investment may also mean others become dependent

30 Hung Tran, *Dual circulation in China: a progress report*, Atlantic Council, 24 October 2022, accessed 23 January 2023. https://www.atlanticcouncil.org/blogs/econographics/dual-circulation-in-china-a-progress-report/

31 Frank Tang, 'What is China's dual circulation economic strategy and why is it important?', *South China Morning Post*, 19 November 2020, accessed 23 January 2023. https://www.scmp.com/economy/china-economy/article/3110184/what-chinas-dual-circulation-economic-strategy-and-why-it

on China for certain goods and they will then be obliged to show respect and deference, and come within China's hierarchical order.

The idea that being the first with a new technology gives a marked geostrategic advantage has taken deep hold. For China, these are 'general purpose technologies' (GPT), those that will be implemented across a society, particularly artificial intelligence, big data and connectivity.[32] China sees itself as having a once-in-a-lifetime opportunity to get in early on these emerging GPTs and so vault into the leading ranks of economic and technological powers. The Chinese military in particular are attracted to the notion that a leapfrog technology might negate current American military advantages that have taken decades to build.

China passed a major policy turning-point in 2006, beginning a steadily increasing commitment to the use of government industrial policy focused on specific sectors and an accompanying declining reliance on the market to steer China's economic development. That commitment increased around 2009–2010, after the Global Financial Crisis.[33]

Between 2015 and 2016, China launched its Innovation-Driven Development Strategy (IDDS) that combined the earlier 'Made in China 2025' policies, the fourth industrial revolution plans, the Military Civilian Industry Fusion Plan, the Artificial Intelligence Plan and others. The IDDS is bigger, more intrusive and more comprehensive than any previous Chinese industrial policy, and it relies principally on economic levers, such as tax exemptions, subsidised depreciation and research and massive Industrial Guidance Funds.[34] Economist Barry Naughton writes, 'it is almost certain that the IDDS represents the greatest single commitment of government resources to an industrial policy objective in history'.[35]

Crucially, for IDDS to succeed China must draw on the world, as the country does not have the capabilities or capacities the strategy requires. China needs

32 Jeffrey Ding, *Techno-industrial policy for new infrastructure: China's approach to promoting artificial intelligence as a general purpose technology* [pdf], Institute on Global Conflict and Cooperation, San Diego, November 2022, accessed 23 January 2023. https://ucigcc.org/wp-content/uploads/2022/12/Ding_working-paper_IGCC-2022-1.pdf

33 Frederico Mollet, *China's grand industrial strategy and what it means for Europe*, European Policy Centre, 21 April 2021, p 2, accessed 23 January 2023. https://www.epc.eu/en/publications/Chinas-grand-industrial-strategy-and-what-it-means-for-Europe~3ded84

34 Central Committee of the Communist Party of China and the PRC State Council, *Outline of the National Innovation-Driven Development Strategy* (Etcetera Language Group Inc. trans), The Center for Security and Emerging Technology, 11 December 2019, accessed 23 January 2023. https://cset.georgetown.edu/wp-content/uploads/t0076_innovation_driven_development_strategy_EN.pdf

35 Barry Naughton, *The Rise of China's Industrial Policy 1978 to 2020*, Universidad Nacional Autónoma de México, Mexico City, 2021, p 82, accessed 23 January 2023. https://dusselpeters.com/CECHIMEX/Naughton2021_Industrial_Policy_in_China_CECHIMEX.pdf

the outside world to build the internal side of its dual circulation economy. It cannot be a modern, developed country without being part of a globalised world, as neighbour North Korea demonstrates. China needs commodities, like coal and iron ore, and food, like wheat and beef. To advance it also needs access to foreign intellectual property, technology and new innovations. The country cannot get all that it needs solely through its large-scale cyber campaign to pilfer scientific and industrial knowledge.[36] Moreover, technology is constantly evolving. China needs to continue drawing off external sources to keep abreast of global developments.

An example is IDDS plans to become the world's leader in artificial intelligence. China is actively developing its chip manufacturing capabilities but needs specialised tooling made in the US, Netherlands and Japan. The US is using the multilateral Wassenaar Arrangement concerning export controls, together with various targeted sanctions, to prevent China being able to mass produce the leading edge 5 and shortly 3 nanometre (nm) chips.[37] China is confidently manufacturing 24 nm chips; however, mass producing significantly smaller chips at commercially competitive prices looks problematic.[38] Recently, Semiconductor Manufacturing International Corporation (SMIC) produced 7 nm chips for a new Huawei smart phone, but some argue this was because SMIC exploited loose licensing and poor standards. Nonetheless, SMIC still faces limits because of US sanctions.[39] Additionally, the US is creating the Chip 4, a semiconductor industry alliance between the United States, Taiwan, South Korea and Japan to constrain China into the future; all are unimpressed by China's grey-zone actions.

36 Zack Cooper, *Understanding the Chinese Communist Party's approach to cyber-enabled economic warfare*, FDD Press, Washington, 2018. https://www.fdd.org/analysis/2018/09/05/understanding-the-chinese-communist-partys-approach-to-cyber-enabled-economic-warfare/

37 Yimou Lee, Norihiko Shirouzu and David Lague, 'Taiwan chip industry emerges as battlefront in US–China showdown', *Reuters*, 27 December 2021. https://www.reuters.com/investigates/special-report/taiwan-china-chips/

38 Nigel Inkster, Emily S Weinstein and John Lee, 'Ask the experts: is China's semiconductor strategy working?', *LSE: The London School of Economics and Political Science*, 1 September 2022, accessed 23 January 2023. https://blogs.lse.ac.uk/cff/2022/09/01/is-chinas-semiconductor-strategy-working/

39 Douglas Fuller, 'US regulators made Huawei's chip 'breakthrough' possible', *Nikkei Asia*, 4 October 2023, accessed 8 October 2023. https://asia.nikkei.com/Opinion/U.S.-regulators-made-Huawei-s-chip-breakthrough-possible

Looking forward

China's grand strategy is discordant. In applying power, China seeks respect by positive or negative means, with the later including grey-zone actions. These actions are formulaic in construct but the type of events being undertaken are steadily becoming more problematic. This is inherent in China's approach. It must keep ratcheting up the pressure on others to retain through fear their respect and deference. It must keep annoying others, and it is.

However, to implement IDDS and become technologically advanced, China needs the same outside world that external China continues to irritate through grey-zone actions. This dissonance cannot go on forever. In terms of the life cycle of the strategy, Chinese grey-zone activities are arguably reaching their Clausewitzian culminating point.[40] China's chosen strategy is now at a point where it might have achieved the greatest effects for the effort expended. Beyond this point, greater efforts may well yield diminishing results and bring only marginally greater benefits.

China could sense this and move to another strategy, hopefully abandoning its present course and shifting to a better one. On the other hand, the Party may double down. The nature of grey-zone actions, as already discussed, may provide some insights into future developments. Grey-zone theory and practice suggest that in terms of its application there are two principal variables. These are whether violent or non-violent actions are undertaken and whether non-military or military instruments are used.

These four drivers create four possible alternative futures: 'Playing by the rules China', 'Whatever it takes China', 'Pushing the envelope China' and 'Do as you are told China'. These are the manner in which future Chinese grey-zone activities might be undertaken irrespective of the context that eventuates but assuming the geostrategic environment continues to allow such activities, that is a resilient peace is maintained. None of these four futures is considered more probable than the others. Instead, the intent is that the future that actually occurs is broadly captured somewhere within the wide span of possibilities encompassed. These worlds are briefly described in the Figure 1.

40 Carl Von Clausewitz, *On War* (Michael Howard and Peter Paret eds trans), Princeton University Press, Princeton, 1984, p 528. For Clausewitz an offensive strategy continued until it could no longer advance and then the strategy needed to transition to the defensive. Applying this to grand strategy, at some time in its life cycle a grand strategy will reach a culminating point where it has achieved the greatest effect for the effort expended. Beyond this point greater efforts will yield diminishing effects and bring only marginally greater benefits.

Figure 1: Possible grey-zone futures

The 'Playing by the rules China' is an optimistic future where a responsible stakeholder China abides by the rules to which it has agreed with others. The 'Whatever it takes China' is a minor deterioration from now and is perhaps a near-term prospect. The 'Pushing the envelope China' is an evolved future where much greater use is made of the PLA but in a non-violent way. The 'Do as you are told China' is a near worse-case possibility that is arguably on the limits of grey-zone activities; there would be a high risk of peace breaking down and serious armed conflict starting. An indicator and warning of this might be the shooting down of an uncrewed maritime surveillance drone.

Chinese grey-zone activities need to be considered not just as static, isolated events. Instead they are conducted within an integrated campaign plan extending over lengthy periods, possibly decades long. Given this, the activities need to be thought of as dynamic and steadily evolving but not always necessarily in a worsening direction. As these long-duration activities are undertaken at the direction of the highest levels of the Chinese Communist Party leadership group, they could as easily be wound back towards something approximating the 'Playing by the rules China' future. The converse is equally conceivable.

Ascertaining the direction Chinese grey-zone activities are evolving towards could permit early indication of China's likely next steps. In this, the broad trendlines appear important to track as these could provide warning of future potential developments. Suitable responses could then be considered in a deliberate manner and without the time pressures induced by a sudden, unexpected crisis. To reiterate, the trendlines may not necessarily be negative. However, the 2020 killing of 20 Indian soldiers on the border with China is a worrying signpost. Monitoring the trendlines may ensure future Chinese grey-zone actions do not surprise and create a degree of panic.

Conclusion

China's grey-zone strategy is incremental, nibbling slowly away at the edges, making use of diverse military and non-military measures, and being careful not to drive others into a major war. It is controlled at the highest Communist Party levels, and it is enduring. A pushback by another country may mean a temporary Chinese pullback, but the Party's grey-zone strategists will be back better than ever, having learnt from their short-term reversal. China's particular grey-zone model is an approach that is a forever drain on the other smaller country's resources.

The happy times for Chinese Communist Party strategists may be coming to an end. Over the last few years there has been a steadily deepening concern about

Chinese grey-zone activities. International attention is now focused on them; indeed, they have become of great global media interest.

More compellingly, China's grey-zone grand strategy is discordant making change inevitable. The near-term may be a dangerous time, as China tries out some more aggressive actions seeking to keep its existing strategy viable; there is a distinct possibility of a shift from non-violence to violence. This may happen deliberately but more likely by accident. It may be timely to develop crisis management systems and skills that are ready to use at short notice. The aim would be to prevent a grey-zone incident escalating into a major war.

On the other hand, the alternative future diagram suggests that the future may not be grim. There may be ways to nudge China towards acting with more restraint and gradually moving into the lower left quadrant's preferred future. Measured responses may be able to frustrate, undermine and thwart local grey-zone actions.[41] As discrete frustrations add up, they may tip the balance away from grey-zone activities being an attractive or useful option for Chinese statecraft.

The future is uncertain and so prudence would suggest being prepared, both today and tomorrow, for good and bad possibilities. In this, we all have agency.

41 Peter Layton, *Grey zone challenges and Australia–Japan defence cooperation* [pdf], Griffith Asia Institute, Brisbane, 2022, pp 14–16.
https://www.griffith.edu.au/__data/assets/pdf_file/0026/1472507/Layton-grey-zone-challenges-web.pdf

Warfare in an age of mutually assured precision

Scott Richardson

In 1943, the German 'Fritz X' radio-guided antiship bomb saw its first successful use, sinking the Italian Battleship *Roma*, after earlier failed attempts against other allied targets.[1] Since their arrival on the battlefield, the proliferation of precision munitions has had a growing impact on how wars are fought. Once the domain of only the most technologically advanced military powers, the reduction in their size and cost has seen precision munitions becoming increasingly ubiquitous.[2]

Warfare has always been an evolution of technology and strategy. Military strategists and scholars must look forward and plan for the next war, no matter how imperfect such attempts may ultimately prove. This essay will examine the implications of the growing preponderance of precision munitions and argues that this will affect the strategic, operational and tactical levels of war in ways that are yet to be fully realised.

Fortunately, a war truly dominated by precision has not yet occurred. As a result, this essay will contemplate a hypothetical future conflict, a war of 'mutually assured precision'. This can be defined as a peer-on-peer conflict between two technologically advanced states, where antagonists have deep inventories of modern precision munitions combined with the technical, logistical, targeting and surveillance acumen to employ them effectively at scale. This scenario is not intended to be exhaustive, or to be inclusive of lower-intensity conflicts, such

1 Smithsonian – National Air and Space Museum, *Bomb, Guided, Fritz X (X-1)* webpage, n.d., accessed 18 October 2022. https://airandspace.si.edu/collection-objects/bomb-guided-fritz-x-x-1/nasm_A19840794000

2 Lauren Kahn and Michael C Horowitz, 'Who gets smart? Explaining how precision bombs proliferate', *Journal of Conflict Resolution*, Sage Publications, 2022, 67(1): 3–47, pp 4–5. https://doi.org/10.1177/00220027221111143

as counterinsurgency operations. Instead, it is intended to serve as a lens for examining the implications of the growth of precision munitions and to be a basis for stimulating broader discussion.

Broadly defined, precision munitions have the ability to be guided to a specific target point or to sense and track their target to achieve a desired effect. This covers the full spectrum from relatively short-ranged systems, such as guided antitank weapons, through to all types of missiles, guided artillery shells and rockets. Public discourse when referencing precision munitions has tended to have a particular focus on 'longranged strike' capabilities, and as a result, precision is often seen as synonymous with 'long range'.[3] This essay, however, will focus on the implication of precision munitions more generally, inclusive of capabilities across the range spectrum.

Unlike the Cold War concept of mutually assured destruction, which theorised a reduced risk of war between belligerents possessing weapons of mass destruction, the growth in conventional precision capabilities could have the opposite effect. This is not to say precision munitions lack deterrence value before hostilities commence, given the costs they can impose.[4] Equally, the use of carefully timed and targeted precision strikes could also prove effective in achieving a level of deterrence or de-escalation during a peer-on-peer conflict in some scenarios.[5] That said, once the decision to resort to military force has been made, the conventional escalation options that precision munitions offer could prove hard to control.

A true peer-on-peer conflict is a worst-case scenario and represents a potential existential threat or, at the very least, comes with a significant cost burden and risk level for the states involved.[6] As such, in the face of the high costs of strategic failure against a peer threat, the ability to rapidly prosecute the full spectrum of targets conventionally at all ranges increases the viability of military power as a tool to achieve policy outcomes. This may also increase the

3 Marcus Hellyer and Andrew Nicholls, *'Impactful projection': long-range strike options for Australia*, Australian Strategic Policy Institute, December 2022, accessed 5 March 2023. https://www.aspi.org.au/report/impactful-projection-long-range-strike-options-australia

4 Rowan Allport, *Long-range precision fires: a budget conventional deterrent for Europe*, Human Security Centre website, 4 January 2018, accessed 16 March 2023. http://www.hscentre.org/europe/long-range-precision-fires-a-budget-conventional-deterrent-for-europe/

5 John Harvey, *Conventional deterrence and national security* [pdf], Air and Space Power Centre, 1997, pp 16–17. https://airpower.airforce.gov.au/sites/default/files/2021-03/AP09-Conventional-Deterrence-and-National-Security.pdf

6 J Warden, 'Winning a peer war', *Æther: A Journal of Strategic Airpower & Spacepower*, Spring 2022, 1(1):118–128, pp 118–121. https://www.airuniversity.af.edu/Portals/10/AEtherJournal/Journals/Volume-1_Issue-1/14-Warden.pdf

possibility of intentional or unintentional escalation, such as through the relaxation of targeting restrictions.

The potential loosening of targeting restrictions will not be without considerable risks. The 'red lines' for participants may be uncertain, and the threshold between conventional and nuclear use may be thinner than previously thought, especially if a nuclear-armed state's home territory is targeted. There is likewise a danger that some conventional precision munitions are also nuclear capable. Their use against a nuclear-armed opponent carries the very real risk of being mistaken for a nuclear strike. This is a risk that has been characterised as 'warhead ambiguity'.[7] This essay will remain primarily focused on the conventional implications of precision munitions; however, the strategic nuclear dimension cannot be sidelined and is undoubtedly a topic worthy of its own detailed consideration at another time.

Russia's unprovoked invasion of Ukraine represents an important area for examination and is the latest iteration of the use of precision munitions on a large scale in conventional warfare. Although arguably not a conflict dominated by precision munitions, as unguided munitions are still prevalent, the war in Ukraine has seen the widespread deployment of precision capabilities by both sides. As such, the conflict can be seen as illustrative in some respects when considering the impact of precision munitions more generally.

Strategic implications

At the strategic level, a war of mutually assured precision will be unlike anything yet experienced. As the ongoing war in Ukraine has demonstrated, warfare in the modern age is a trial of industrial, financial and military strength. It is also a trial of collective willpower and maintaining the morale necessary to continue fighting in the face of the costs imposed by an adversary. Outwardly, this shares many similarities with total wars of the past; however, a war of mutual precision will further reduce the distinction of definable 'frontlines', even for warring nations separated by significant distances.

Conflict is a spectrum that ranges from limited and low intensity, to open and total where few if any limits or rules are adhered to. Mutually assured precision will have the effect of pushing even limited wars into conflicts that are increasingly total in conduct. Precision technology expands the number of viable targets

7 James M Acton, *Silver bullet? Asking the right questions about conventional prompt global strike* [pdf], Carnegie Endowment for International Peace, Washington DC, 2013, accessed 5 March 2023, pp 113–120. https://carnegieendowment.org/files/cpgs.pdf

and increases the ability to strike a wider range of strategic infrastructure.[8] This will support multiple escalation levers for decision-makers, both political and military, and will drive a tendency for target sets and rules of engagement to be expanded.

The increasing prevalence of long-ranged precision munitions allows an adversary to compress time and space for targeting purposes, and lowers the price of entry to deliver effects at the strategic level. Where previously it was a capability that required expensive assets beyond the reach of all but the most wealthy and powerful states, such as long-ranged bombers, precision munitions are now becoming more accessible.[9] The capability provided by precision munitions increases the viability, and perhaps attractiveness, of striking a state's entire industrial, economic and political architecture. This will include any civilian dual-use support systems that are seen as linked to the generation of military power. The pressure to loosen targeting restrictions is likely to increase if a conflict becomes protracted and costs rise.

Conversely, the ability to target an entire nation's military capabilities and infrastructure may drive attempts to avoid protracted conflict. With the costs of modern industrial warfare so ruinous, the massed employment of precision munitions to rapidly overwhelm a peer opponent at the outset of conflict through a *coup de main* will become both more attractive and more possible.

The factors mentioned above also carry notable implications for the likelihood of conflict escalation and strategic miscalculation. If the conflict includes nuclear-armed states, the risk of nuclear war will be present to some degree by default. However, the level of risk will only increase if a belligerent believes that deep, wideranging conventional strikes threaten their nuclear deterrent capabilities. This danger will need to be carefully considered and may act as a dampening effect on targeting priorities, even making some conventional precision munitions (those with warhead ambiguity) potentially unusable due to the risks involved.

Targeting by both sides in the war in Ukraine, although sometimes poorly executed, provides a glimpse of the future. From a military perspective, military bases, logistics hubs, maintenance facilities, training establishments, defence industry sites, fuel and munitions storage sites and dual-use civilian infrastructure (such as transport links, bridges, airports and sea ports) have all been subject

8 Maja Zehfuss, 'Targeting: precision and the production of ethics', *European Journal of International Relations*, Sage Publications, 7 October 2010, 17(3):543–566, pp 552–553. https://doi.org/10.1177/1354066110373559

9 Albert Palazzo, 'Precision and the consequences for the modern battlefield', *Small Wars Journal*, 19 August 2016, accessed 16 March 2023. https://smallwarsjournal.com/jrnl/art/precision-and-the-consequences-for-the-modern-battlefield

to precise targeting. In a war of mutually assured precision, it is also highly likely that hostile forces, as Russia has amply demonstrated,[10] will seek to strike critical civilian infrastructure, such as power, water and communications, as well as those targets seen as supporting the political and societal will to fight.

Countering the impact of precision munitions will require national-level efforts: both defensive (through investment in systems, such as layered integrated air and missile defence) and pragmatic (such as, building in infrastructure redundancy and premising crisis planning on the loss or damage of key facilities). It will also be necessary to have the technical, logistical and workforce capacity to effect repairs and implement workarounds when damage is sustained, potentially over an extended period. Although civilian populations have proven to be resilient in the face of aerial bombing,[11] preprepared information operations will also be necessary to limit the damage to national morale sought by an adversary.

At the strategic level, military planners will have to operate and plan on the assumption that previously safe force-generation mechanisms, such as fixed training and simulation facilities, will be damaged or destroyed. Likewise, the ability to craft strategic-level campaign plans based on access to known support systems, such as major air and naval installations, will be vulnerable to being compromised by enemy action in ways not previously possible.

Operational implications

At the operational level of war, the effects of precision munitions will be profound. This includes a growing ability to reduce unwanted collateral damage, such as in dense urban fighting, and to rapidly strike even mobile high-value targets. Another effect may prove to be the ability to quickly generate (or re-build) operationally relevant light forces, due to the modest training burden that modern light-precision munitions require. The most consequential implications at the operational level, however, may be those related to logistics.

Modern industrial warfare requires logistics on an enormous scale. Modern fighting forces consume fuel, food, munitions and all manner of supplies at a prodigious rate.[12] Equally, modern military aircraft, warships and combat vehicles

10 Christina Lu, 'Putin targets Ukrainian infrastructure', *Foreign Policy*, 11 October 2022, accessed 18 October 2022. https://foreignpolicy.com/2022/10/11/russia-ukraine-strikes-civilian-infrastructure/

11 Tim Luckhurst, 'Ukraine war: lessons from the Blitz suggest Russia's targeting of cities could backfire', *The Conversation*, 3 November 2022, accessed 23 November 2022. https://theconversation.com/ukraine-war-lessons-from-the-blitz-suggest-russias-targeting-of-cities-could-backfire-193688

12 Hlib Parfonov, 'Ukrainian strikes cause Moscow to re-think munitions supply and logistics (part two)', *Eurasia Daily Monitor*, 18 August 2022, Vol 19, Issue 127, Jamestown Foundation, accessed 18 October 2022. https://jamestown.org/program/ukrainian-strikes-cause-moscow-to-re-think-munitions-supply-and-logistics-part-two/

must have access to regular resupply and maintenance to remain effective. This is before the effects of battle damage are considered. Traditional approaches to these requirements include establishing forward operating bases and logistics hubs in rear areas to allow forward units to be rapidly supplied and equipment repaired.

Russia adopted a largely traditional and rigid approach to logistics during its invasion of Ukraine. It centralised munitions, fuel and other critical supplies behind the frontline in depots that relied on limited and inflexible mechanisms to facilitate distribution to forward units.[13] The introduction of the M142 high-mobility artillery rocket system (HIMARS), along with other precision strike systems, have revealed just how vulnerable these inherently fixed locations have now become, especially when sufficient stocks of precision munitions are available. Russian logistics points across Ukraine have become an endangered species and have been destroyed with alarming regularity.[14]

Other operational-level support mechanisms have also been ruthlessly targeted, including airfields, command and control systems, electronic warfare complexes, headquarters and vehicle repair and maintenance hubs. These attacks have crippled Russian forces at the operational level and resulted in numerous casualties among command staff and specialist support personnel.[15] It has also resulted in a marked decline in the ability of Russian forces to maintain a high operational tempo, with frontline units being choked off from resupply and suffering disrupted command and control.[16] The supply shortages have also likely had the second order effect of increasing the prevalence of looting and illdiscipline among Russian forces.

Future operational commanders will need to adapt to an inherently vulnerable support network. Additionally, the ability to build and stage operational-level logistics, reserves or manoeuvre forces to support large-scale offensive operations will be subject to the continued threat of interdiction by precision

13 Per Skoglund, Tore Listou and Thomas Ekström, 'Russian logistics in the Ukrainian war: can operational failures be attributed to logistics?', *Scandinavian Journal of Military Studies*, 2022, 5(1): 99–110, pp 104-107. http://doi.org/10.31374/sjms.158

14 Howard Altman, 'Giant explosions rock more Russian ammunition depots in Ukraine', *The Drive Warzone* website, 11 July 2022, accessed 18 October 2022. https://www.thedrive.com/the-war-zone/giant-explosions-rock-more-russian-ammunition-depots-in-ukraine

15 David Axe, 'The Ukrainians keep blowing up Russian command posts and killing generals', *Forbes* website, 23 April 2022, accessed 18 October 2022. https://www.forbes.com/sites/davidaxe/2022/04/23/the-ukrainians-keep-blowing-up-russian-command-posts-and-killing-generals/?sh=6d27d3e8a350

16 David Axe, 'There's a good reason Russia's artillery is running out of ammo. Ukraine keeps blowing it up', *Forbes* website, 24 July 2022, accessed 4 October 2022. https://www.forbes.com/sites/davidaxe/2022/07/24/theres-a-good-reason-russias-artillery-is-running-out-of-ammo-ukraine-keeps-blowing-it-up/?sh=5714eb5113d6

fires. This will drive a more dispersed posture at the operational level and an increased reliance on deception and camouflage techniques than required in the past. Operational-level commanders will have to work increasingly hard to minimise vulnerabilities, while maintaining the critical ability to coalesce sufficient forces at decisive points or in response to enemy action.

Tactical implications

At the tactical level of war, the reduced size and cost of precision munitions greatly enhances their prevalence and utility. If a frontline asset or unit can be located, precision munitions ensure it can and will be targeted. The conflict in Ukraine has demonstrated some of the realities that will be faced in a war of mutually assured precision. The proliferation of relatively simple uncrewed aerial systems (UAS) in Ukraine has blurred the lines of precision. Even low technology 'dumb' munitions, such as unguided mortar shells and grenades, can now be used to reliably and precisely strike vehicles and personnel.[17]

These weapons, combined with precision artillery systems, loitering munitions and guided direct-fire antitank missiles, such as the FGM-148 Javelin and next-generation light antitank weapons, have made the tactical battlespace an increasingly lethal and complex environment.[18] Individual soldiers are now subject to around-the-clock targeting by precision munitions across the length and depth of frontline and rear-area positions, often with little or no warning.

The proliferation of precision fires capabilities will make static defensive land warfare harder to sustain, as traditional defensive techniques provide little protection against precision munitions supported by near constant surveillance and agile targeting. This may drive a greater willingness to utilise congested urban terrain for concealment to improve unit survivability, regardless of the increased risks to civilian populations. The threat envelope of precision munitions will also continue to grow, and this may require an increased acceptance of risk when deploying valuable air and naval assets if battlefield objectives are to be achieved. This carries the clear implication of attrition and may represent a larger risk for smaller forces that lack the depth to absorb losses, further limiting the tactical utility and flexibility of high-value assets.

The persistent threat of munitions descending unexpectedly at any moment will also have a corrosive effect on the morale of combat units exposed to a sustained

17 Inder Singh Bisht, 'Taiwan supplying mortar-firing drones to Ukraine via Poland: report', *The Defense Post* website, 24 August 2022, accessed 16 March 2023. https://www.thedefensepost.com/2022/08/24/taiwan-mortar-firing-drone-ukraine/

18 Dan Rice, 'The untold story of the Battle for Kyiv', *Small Wars Journal*, 31 May 2022, accessed 16 March 2023. https://smallwarsjournal.com/jrnl/art/untold-story-battle-kyiv

menace where no countermeasures are readily apparent. Akin to the known impacts of snipers, the precise nature of the threat (being hunted at an individual level), represents a distinct difference to the randomised threats of shelling or bombing in past conflicts. Numerous incidents of Russian and Ukrainian forces suffering 'drone fright' have been seen in the war in Ukraine.[19] This may prove to be the key morale challenge associated with prolonged exposure to the constant threat of small-armed UAS. This will require close observation and, where possible, mitigation by tactical-level commanders to ensure unit cohesion and morale is sustained.

The ubiquitous use of precision fires across the tactical level will force changes in how operations are planned and conducted. This will include the need for ironclad signals security, enhanced signature reduction and camouflage, and innovative deception techniques. Survival will also require the skillful deployment of layered defensive systems to defeat or degrade incoming precision munitions. However, the cost and complexity of defending against agile precision munitions will make this difficult, if not impossible, to achieve. But perhaps the greatest consequence emerging from the threat of precision munitions at the tactical level may be an increase in the preference for mobility over static defence.

In a war of mutually assured precision, any static defensive operation will quickly trend towards one of costly attrition. Although traditional defensive operations will still be required in many scenarios, increased mobility for combat forces and their supporting logistics may become essential for survival at the tactical level. As demonstrated by the need for artillery systems to become highly mobile to survive in Ukraine,[20] fixed systems or static units are becoming unacceptably vulnerable to rapidly deployable precision munitions. Although still vulnerable, forces employing mobile tactics and techniques will complicate precise targeting and will have increased survivability over those in static positions when combined with defensive technologies, such as active protection systems and electronic warfare.

19 The Sun, *Hidden Russian soldiers run for their lives as Ukrainian drones drop bombs* [video], video uploaded by *The Sun* Newspaper 28 November 2023, YouTube, 0:05 to 1:31, accessed 16 March 2023. https://www.youtube.com/watch?v=s9B5SYySpJc

20 Michael Peck, 'Ukraine war proves big guns are back', *National Defense Magazine* website, 16 September 2022, accessed 24 October 2022. https://www.nationaldefensemagazine.org/articles/2022/9/16/analysis-ukraine-war-proves-big-guns-are-back

Planning considerations – intelligence, surveillance, reconnaissance and electronic warfare (ISREW)

Precision munitions, by their nature, are heavily reliant on accurate targeting information, especially over longer distances and against manoeuvring land, air and maritime targets. In a war of mutually assured precision, ISREW capabilities will be the critical enabler in leveraging precision munition capabilities and in degrading those of the adversary. Already an essential element of high-intensity conflict operations, ISREW capabilities, tradecraft and rapid data sharing will need to become an even more integral embedded capability at all force levels, including readily disposable or replaceable capabilities for small tactical units. This will require sufficient inventories, combined with sustained investment and training to produce professionalised and layered ISREW effects that are resilient to enemy action and losses.

In conjunction, the time available to observe, orient, decide and act (OODA) for commanders at all levels is reduced significantly by the prevalence of precision munitions. Speed of action and command will be increasingly vital to success. Decisions to utilise precision fires, to redeploy vulnerable units and assets, or take advantage of manoeuvre opportunities will need to be taken rapidly without recourse to higher headquarters. This will require a strengthening of existing mission command principles, and new tools and techniques that increase timely access to ISREW capabilities and data by commanders beyond those currently available.

Planning considerations – air and missile defence and deception

In the face of precision munitions able to prosecute targets across a nation's industrial, political and military architecture, as well as deep into the battlespace, defensive and deception systems will become critical to sustaining combat power. The traditional Western bias towards reliance on air forces as the core element of air defence has resulted in relatively low levels of investment in ground-based air and missile defence capabilities since the end of the Cold War.[21] The war in Ukraine has amply demonstrated that layered groundbased air and missile defences, including against rockets and artillery, have become

21 Paul van Hooft and Lotje Boswinkel, *Surviving the deadly skies: integrated air and missile defence 2021–2035*, The Hague Centre for Strategic Studies, The Hague, 1 December 2021, accessed 24 November 2022, pp 1–2. https://hcss.nl/report/surviving-the-deadly-skies/

a necessity to provide some level of protection against the growing threat of precision munitions.[22]

Layered air and missile defence capabilities will be essential in denying an adversary's ability to fully leverage their precision fires capabilities and in dictating the tempo of operations. Coordinated air defences will also be a key element in denying, degrading or destroying hostile ISREW assets, such as aircraft, helicopters and UAS of all sizes, in addition to defeating precision munitions themselves. Mobility for these capabilities will be essential, as even advanced fixed ground-based air and missile defence systems may prove unacceptably vulnerable and will require increased mobility and supporting tactics to prevent their targeting and destruction.

Even with increased investment in air and missile defence capabilities, it will be necessary to accept and plan for their inherent limitations. The effectiveness of current air and missile defence systems, especially against modern precision munitions, is likely to be low, and the cost–benefit ratio will remain firmly with the attacker over the defender. The task of fully mitigating the threat of precision munitions is likely to prove insurmountable, and other strategies to protect vulnerable targets, such as critical military and civilian infrastructure, may be necessary. Increased consideration will need to be given to the 'hardening' of likely targets to reduce the damage inflicted and complicate adversary targeting options. Additionally, where possible, increased system redundancy will need to be designed in, and the costs (in both financial and efficiency terms) of having higher numbers of smaller dispersed facilities may also need to be accepted.

In the face of the persistent threat of precision munitions and the practicable limits of air and missile defence, physical and electronic deception techniques will need to be priority areas for investment, innovation and training. Military assets, units and personnel across the strategic, operational and tactical domains will need to become adept at deception tradecraft combined with mobile operations to increase their survivability. This will need to include deliberate planning and capability creation to achieve, where possible, some level of deception for civilian and dual-use critical infrastructure. Using physical and electronic decoy systems to try and make an adversary waste weapons, as widely seen in Ukraine,[23] will also become an essential elements of warfare in an environment dominated by precision fires.

22 Col M Bremer and K Grieco, 'Air defense upgrades, not F-16s, are a winning strategy for Ukraine', *Defense News*, 26 January 2023, accessed 16 March 2023. https://www.defensenews.com/opinion/commentary/2023/01/25/air-defense-upgrades-not-f-16s-are-a-winning-strategy-for-ukraine/

23 John Hudson, 'Ukraine lures Russian missiles with decoys of US rocket system', *Washington Post*, 30 August 2022, accessed 18 October 2022. https://www.washingtonpost.com/world/2022/08/30/ukraine-russia-himars-decoy-artillery/

Planning considerations – munition inventories

Precision munitions range from the complex and expensive through to relatively low technology, low cost, modified commercial off-the-shelf systems. As such, not all precision munitions are necessarily expensive, even when compared to more traditional unguided munitions. The war in Ukraine reinforced the essential truth that modern industrial warfare consumes munitions of all types at a prolific rate. The 'shell crisis' being experienced in many Western nations as they seek to support Ukraine should not come as a surprise to any student of military history.[24]

Although the accuracy of precision fires does greatly reduce the number of munitions required to deliver a specific effect in comparison to unguided weapons, the ability to conduct precise targeting does not guarantee a commensurate reduction in munitions expenditure. To the contrary, precision munitions increase the ability to hit time-sensitive targets, and open up a wider number of assets across the tactical, operational and strategic theatres to targeting. The war in Ukraine has demonstrated that even major powers, with theoretically deep munitions inventories, will likely struggle to meet the demand of modern conflicts.[25] The war in Ukraine, especially for Russia, has seen a gradual shift to reliance on older systems, as stockpiles of high-end exquisite precision munitions run low.[26]

Since defence budgets will always have limits, a war of mutually assured precision, especially if protracted, may see advanced precision munitions having to be rationed, even when viable targets are identified. The requirement to reduce, or even cease, the use of some munition types to maintain a strategic reserve for contingencies can be reduced but not overcome by holding increased inventories. Even having a robust domestic production capacity is not a supply guarantee, as such facilities and their supply chains will also be high-value targets for an adversary.

Planning assumptions will need to ensure precision inventories, especially of high-end exquisite systems, are used sparingly and sufficient inventory remains available to support decisive points during a conflict. An acceptance in planning

24 A Vershinin, *The return of industrial warfare*, Royal United Services Institute, 17 June 2022, accessed 24 October 2022. https://www.rusi.org/explore-our-research/publications/commentary/return-industrial-warfare

25 Seth G Jones, *Empty bins in a wartime environment: the challenge to the US defense industrial base*, Centre for Strategic and International Studies, 23 January 2023, accessed 16 March 2023, pp 5–8. https://www.csis.org/analysis/empty-bins-wartime-environment-challenge-us-defense-industrial-base

26 MB Schneider, 'Lessons from Russian Missile Performance in Ukraine', *United States Naval Institute: Proceedings*, October 2022, Vol 148/10/1436. https://www.usni.org/magazines/proceedings/2022/october/lessons-russian-missile-performance-ukraine

assumptions that wars may trend towards attrition, as each side attempts to run the other out of precision munitions to gain an advantage, may also be necessary. In parallel, adaptive techniques and technologies should be exploited to allow for the more effective utilisation of inventories of cheaper and more easily produced legacy or unguided munitions

Conclusion – agility by default

Warfare in an age of mutually assured precision will not resemble the methodical and meticulously crafted coalition campaigns of recent memory. Unlike the recent past, which has been dominated by counterinsurgency operations, the future will require a return to, and expansion of, core high-intensity warfighting skills. Wars of mutually assured precision will be more sudden, violent, costly, total and carry greater risks. Regardless of who initiates a conflict, the entirety of a nation's infrastructure, both military and civilian, will be vulnerable from the commencement of hostilities. That vulnerability will remain persistent, and the ability to create relatively safe rear areas to support logistics and force regeneration activities, or to shelter civilian populations from war's realities, will be compromised to an extent not hitherto experienced.

The cost and complexity of mitigating these vulnerabilities across the strategic, operational and tactical levels will likely prove to be insurmountable in the face of the practicable limitations of defensive systems. Likewise, possessing ample precision munitions may prove no guarantee of either deterrence or victory. Losses are going to be taken, essential infrastructure damaged or destroyed and planning assumptions compromised. Military strategists will find themselves in a constant battle of agility against their adversaries, as they seek to make full use of the advantages that precision munitions bring while also degrading those of the enemy. At the national level, this will require a more comprehensive approach to warfare, where the threats and opportunities from precision munitions are assumed and ingrained in operational art at all levels, as well as in the political calculations that can lead to war.

Don’t look down: Australia’s Antarctic interests

Christopher Johnson

In just 25 years, the Madrid Protocol to the Antarctic Treaty can be tabled for review.[1] Nations can discuss the future of the continent and, subtly, make a case for their territorial claims. Given the current trajectory of geopolitics and international affairs, one thing is almost certain: nobody will agree. The Antarctic Treaty System was developed in the middle of the twentieth century to suspend strategic competition, champion environmental protection and prioritise scientific research. The Treaty explicitly states that ‘Antarctica shall be used for peaceful purposes only’, but various claimant states have interpreted those words differently.[2]

1 Secretariat of the Antarctic Treaty, *Antarctic Treaty System*, Antarctic Treaty Secretariat website, n.d. https://www.ats.aq/e/antarctictreaty.html The Protocol on Environmental Protection to the Antarctic Treaty (‘the Madrid Protocol’) was signed in Madrid on 4 October 1991, and entered into force in 1998. It designates Antarctica as a ‘natural reserve, devoted to peace and science’. Article 3 of the Madrid Protocol sets forth basic principles applicable to human activities in Antarctica and Article 7 prohibits all activities relating to Antarctic mineral resources, except for scientific research. After 2048, any of the Antarctic Treaty Consultative Parties can call for a review conference into the Protocol’s operation.

2 Secretariat of the Antarctic Treaty, *Antarctic Treaty System*. The Antarctic Treaty entered into force in 1961 and has a total of 56 constituent parties. It is the central element of the Antarctic Treaty System, governing all activities on the continent. The Treaty established the use of Antarctica for peaceful and scientific purposes only. It states that “*no acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting, or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.”* The Treaty suspended the extant claims of the seven original claimants (Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom). Despite suspending claims of sovereignty while remaining in force, the US, and Soviet Union (as additional, non-claimant, original signatories) exercised the right under the Treaty to stake a claim at a later stage. As a tool of strategic competition, the Treaty was employed to freeze the issue of territorial sovereignty and establish the continent as a global commons; permitting states to redirect attention and resources to other areas.

Australia is walking along a strategic tightrope in Antarctica, balancing science on one hand, and diplomacy on the other. Its approach is simple but disconcerting; 'don't look down'. The nexus between science and diplomacy is becoming unbalanced as states prioritise their own strategic interests over the common good. Decades of Antarctic cooperation is descending into an era of Antarctic competition.

Some states are using scientific activities to compete within the bounds of the Antarctic Treaty System.[3] This trend has seen states pursue long-term national interests below the threshold of detection by establishing infrastructure under the guise of scientific research that has the potential for military use. Australia, and many others, have adopted a modest and cautious approach to advancing their interests in Antarctica in line with the spirit of the treaty.[4] But is this conservative way of doing business enough to keep up with the pace of competition?

Australia risks being considered a strategic bystander unless it refines its approach to pursuing long-term interests in Antarctica. The Australian Government's 2022 announcement to 'strengthen Australia's Antarctic strategic and scientific capabilities' by investing $804.4 million over 10 years may not be enough to keep pace with its competitors.[5]

This commentary will examine strategic competition in Antarctica with an emphasis on the malign intentions of China and Russia. It posits that if Australia is to secure its long-term Antarctic interests and continue to be considered a scientific and environmental leader, it needs to do two things: improve access to the continent and enhance Australia's communications infrastructure in Antarctica. The responsibility for this approach does not lie singularly in the hands of one government department. It requires clarity in government messaging and an integrated approach using all instruments of its national power.

3 Doaa Abdel-Motaal, *Antarctica: The Battle for the Seventh Continent*, Bloomsbury Publishing USA, 2016, p 54.

4 Australian Antarctic Program (AAP), *2022 Changes to the Australian Antarctic science program* (AASP), Department of Climate Change, Energy, the Environment and Water – Australian Antarctic Division website, last updated 31 May 2022. https://www.antarctica.gov.au/science/information-for-scientists/changes-to-the-australian-antarctic-science-program/ In response to the recommendations of the 2021 O'Kane Review, the Australian Antarctic Division has formally asserted that '[s]cience is the central driver of all its activities' and has adopted as its unifying narrative that its purpose is 'building comprehensive knowledge of East Antarctica and its ecosystems to inform our Antarctic stewardship and enhance our understanding of climate change'.

5 Press Offices of The Hon Scott Morrison MP Prime Minister, Senator the Hon Marise Payne Minister for Foreign Affairs Minister for Women, The Hon Sussan Ley MP Minister for the Environment, *$800 million to strengthen our leadership in Antarctica* [joint media release], Parliament of Australia, released Tuesday 22 February 2022. https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22media%2Fpressrel%2F8433223%22%20;rec=0; The pace of China's investment in the polar regions is outlined in Anne-Marie Brady, *China as a Polar Great Power*, Cambridge University Press, Cambridge, 2017.

Territory as power

Landmass by itself may not exactly translate to power, but it can certainly help. Territory can have both tangible and intangible benefits for a nation's grand strategy.[6] Beyond natural resources such as minerals and food stocks, territories can hold significant geographic advantages pertaining to scientific research, civil infrastructure development and future military operations.[7] The precise future advantages of territorial possession in Antarctica remain unknown, but it has enough land and resources to attract significant ongoing geopolitical competition.[8]

Australia is a claimant to the 'Australian Antarctic Territory'; 42 per cent (approximately 5.9 million square kilometres) of the Antarctic continental landmass.[9] This equates to 80 per cent of mainland Australia. This claim is recognised by seven other countries and is one of seven claims that sit in competition with those of the US and Russia who have both reserved the right for a future claim to the entire continent. If any of these claims were to be resolved, they would result in possession of some of the world's largest external territories. Australia is currently considered to be the sixth largest country in the world by land mass, with approximately 7.7 million square kilometres. If the Australian Antarctic Territory is included, Australia would become the second largest country in the world (approximately 13.6 million square kilometres), after Russia.[10]

Antarctica is luring the world's most ambitious players for several reasons. The continent is rich with mineral resources including chromium, coal, copper, gold, iron, nickel, uranium and zinc. The Ross Sea has enormous deposits of hydrocarbons; approximately 50 billion barrels of oil and more than 100 trillion cubic metres of natural gas.[11] The continent also has unique and valuable marine and biological resources, including more than 80 per cent of the

6 Daniel J Dzurek, 'What makes territory important: tangible and intangible dimensions', *GeoJournal*, 2005, 64(4): 263–274. https://www.jstor.org/stable/41148008

7 Dzurek, 'What makes territory important: tangible and intangible dimensions'

8 Anne M Davis, *Resurgent geopolitics in Antarctica: the nexus between science and diplomacy in Antarctic policy making*, Department of Parliamentary Services, Parliament of Australia Summer Scholar Program, October 2021. https://www.aph.gov.au/-/media/05_About_Parliament/54_Parliamentary_Depts/544_Parliamentary_Library/pubs/apf/scholarship/AnneMichelleDavis2021.pdf

9 Secretariat of the Antarctic Treaty, *Antarctic Treaty System*.

10 Australian Government, *Australia's size compared*, Geoscience Australia website, last updated 4 October 2023. https://www.ga.gov.au/scientific-topics/national-location-information/dimensions/australias-size-compared

11 Alan K Cooper, Frederick J Davey and Karl Hinz, 'Liquid hydrocarbons probable under Ross Sea', *Oil & Gas Journal*, 1988, 86(46): 118–124. https://pubs.usgs.gov/publication/70014305

world's fresh drinking water reserves.[12] These resources, although not easily accessible now, present a very lucrative opportunity for those willing to ruthlessly extract value from Antarctica in the future at the expense of the environment.

Major powers have long sought to dominate and secure territories with high prospective value. For example, in 1867, the US agreed to purchase the territory of Alaska from Russia for US$7.2 million.[13] At the time, the sale of a frozen and dormant territory seemed to be a sensible decision for Russia to make. Despite the bargain price of roughly two cents an acre, the Alaskan purchase was ridiculed in the US Congress at the time as 'Seward's Folly', 'Seward's icebox',[14] and President Andrew Johnson's 'polar bear garden'.[15] The decision drew criticism from economists who failed to look beyond the initial financial outlay and consider the possible long-term strategic dividends for the United States. In the century that followed, the strategic circumstances changed significantly, and Alaska became geographically important for great power competition. Today, Alaska exports its vast energy resources and is one of the highest producing US states for gross domestic product per capita.[16]

Another example is the Russian militarisation of the Kola Peninsula. Russia's assertive and confrontational foreign policy has seen a remilitarisation of the peninsular in order to dominate the Arctic and demonstrate resolve to its Scandinavian neighbours.[17] Since the end of the Cold War, the area has transitioned from being a region of relative cooperation and stability to one characterised by high military tension and rapid infrastructure development. Russia has invested significantly in the Kola Peninsula developing infrastructure to enhance scientific research, boost industrial capacity and expand its latent military capability in the north. Russia will not make the same mistake it did with Alaska and has sent a clear message that its territory – although isolated and frozen – remains secure.

12 Klaus J Dodds, 'Sovereignty watch: claimant states, resources, and territory in contemporary Antarctica', *Polar Record*, 2011, 47(3): 231–243. doi:10.1017/S0032247410000458

13 US Library of Congress, *Primary documents in American History: Treaty with Russia for the purchase of Alaska*, US Library of Congress website, n.d., https://www.loc.gov/rr/program//bib/ourdocs/alaska. An estimated calculation for dollars in 2023 is approximately US$205 million.

14 Senator William H Seward secured the Alaskan deal.

15 Office of the Historian, Foreign Service Institute, *Purchase of Alaska, 1867*, US Department of State website, n.d., accessed 13 October 2023. https://history.state.gov/milestones/1866-1898/alaska-purchase

16 University of Kansas Institute for Policy & Social Research, *Per capita real GDP, by state all industry total – 2022* [pdf], Institute for Policy & Social Research, The University of Kansas; data from US Bureau of Economic Analysis and US Census Bureau, Vintage, 2022, Population Estimates (https://ipsr.ku.edu/ksdata/); https://ipsr.ku.edu/ksdata/ksah/business/percapGDP.pdf

17 Kristian Åtland, 'Russia's armed forces and the Arctic: all quiet on the northern front?', *Contemporary Security Policy*, 2011, 32(2): 267–285. https://doi.org/10.1080/13523260.2011.590354

Neither Alaska nor the Kola Peninsula offered much in terms of immediate value to their respective governments at the time of occupation. The long-term value of Alaska for the US has been immense, and the strategic advantages of the Kola Peninsula for Russia are beginning to emerge as the Arctic Circle becomes more congested. As geostrategic circumstances continue to change, major powers are becoming attuned to the ever-increasing value of territory.

In 2048, reviews and challenges to the Madrid Protocol have the potential to change the course of history for Antarctica and the world. Even if the continent provides no immediate dividend for global powers, the strategic circumstances are certain to change over the coming decades. Future technologies, the reliance on space-based communication, and climate change will all become more important for global powers. Antarctica is destined to become more regionally important by necessity, not just via the will of major claimants. Australia's stake must therefore be viewed longitudinally over time to consider the opportunities and strategic dividends that might be capitalised on in future.

Malign intentions

The Antarctic Treaty System serves to limit the amount of international power-broking regarding claims to territory in Antarctica, but it does little to prevent indirect competition under the veil of scientific research. International law consultant Jill Barrett said that for as long as the Antarctic Treaty System remains in place, 'the claimant states will … keep their claims in a box … with a lid on it'.[18] States are active in their attempts to enhance their legitimacy and influence while still technically conforming to the Antarctic Treaty System.

When compared to other global powers, Australia is transparent with its Antarctic strategy, pursuing legitimacy through scientific research and environmentalism. In a 2019 report, the Italian Institute for International Political Studies observed:

> Australian policy in Antarctica is developed both through diplomatic statements and scientific research projects, and its main objectives are the defence of the principle of environmental protection in Antarctica and the limitation of human activities in the continent.[19]

18 Martha Henriques, *The bones that could shape Antarctica's fate*, BBC Future website, British Broadcasting Corporation, 22 October 2018. https://www.bbc.com/future/article/20181019-the-bones-that-could-shape-antarcticas-future

19 Marco Genovesi, *Australia's key role in Antarctica, in defence of its environment*, Italian Institute for International Political Studies website, 18 July 2019. https://www.ispionline.it/en/publication/australias-key-role-antarctica-defence-its-environment-23529

In stark contrast to Australia's approach, China and Russia are increasingly jockeying for influence in Antarctica through the development of 'dual-use' facilities – those that can be used for both civilian and military purposes – for peace and for war. According to the US Department of Defense's 2022 *China Military Power Report*:

> [China's] strategy for Antarctica includes the use of dual-use technologies, facilities, and scientific research, which are likely intended, at least in part, to improve People's Liberation Army capabilities.[20]

China has declared its intentions to 'understand, protect, and exploit the Antarctic' region.[21] The regime is further blurring ideas about cooperation, competition and conflict that are already murky in international law. China's desperation to lunge into the South and East China Seas and lay claim to seemingly insignificant reefs demonstrates their intent to posture for the future.[22] China's interpretation of international law and willingness to challenge the existing rules-based global order is likely to extend to their Antarctic claims over the coming decades.[23] This creates a precedent of rule manipulation and exploitation of consensus frameworks, paving the way for further environmental and resource exploitation in the future.

China is taking a somewhat indirect approach to pursuing its interests in Antarctica which is entirely consistent with its strategy. Incrementally, China is seeking to gain influence by flooding environmental and scientific research journals with scholarly articles. Professor Anne-Marie Brady has noted that although the *quantity* of China's scientific research publications over the past decade was very high, the *quality* was relatively low.[24] China has made negligible contributions to new governance initiatives, has not contributed to committee

20 As quoted in: Matthew P Funaiole, Brian Hart, Joseph S Bermudez Jr and Aidan Powers-Riggs, *Frozen Frontiers: China's great power ambitions in the polar regions*, Center for International and Strategic Studies (CSIS) website, 18 April 2023. https://features.csis.org/hiddenreach/china-polar-research-facility/ ; US Department of Defence, *Military and security developments involving the People's Republic of China 2022 – Annual report to Congress*, Office of the Secretary of Defence, Washington DC, p 162. https://media.defense.gov/2022/nov/29/2003122279/-1/-1/1/2022-military-and-security-developments-involving-the-peoples-republic-of-china.pdf

21 Anne-Marie Brady, 'China's undeclared foreign policy at the poles', *The Interpreter*, Lowy Institute, 30 May 2017. https://www.lowyinstitute.org/the-interpreter/china-s-undeclared-foreign-policy-poles

22 Byron N Tzou, *China and International Law: The Boundary Disputes*, Greenwood Publishing Group, 1990. p 28.

23 Kane Wright, 'Offensive cooperation': an Australian policy framework to navigate great power competition in Antarctica [unpublished thesis], Deakin University, 2021, p 18. Provided to author.

24 Anne-Marie Brady, *China as a Polar Great Power*, pp 173–174.

membership, and has not taken responsibility as an environmental leader.[25] This suggests that China is far more interested in extracting value from Antarctica rather than genuinely investing into its future.

The subversion of international norms and rule-sets establish conditions to exploit fisheries and protein stocks in Antarctica.[26] The Chinese Ministry of Agriculture and Rural Affairs Five-Year Plan (2021–25) mentioned Antarctica only once while promoting the development of the country's distant water fishing industry. The plan specifically highlights their intentions to increase trawling of tuna and squid, and to develop other biotic resources in both the Arctic and Antarctica.[27] If China is trying to convince the world it truly cares about protecting natural resources and the environment in the Antarctic region, it is doing it poorly.

Russia, on the other hand, serves an example of a more direct approach to a state advancing its strategic aims in Antarctica. Russia has been clear in its policy objectives and has not attempted to hide behind a façade of environmental scientific research. The 2023 Russian foreign policy concept outlines objectives to expand its presence in the Antarctic region.[28] Russia's main policy driver is very clear; the protection of its own commercial and perceived national interests.[29] Citing the structure of the Antarctic Treaty System, Russia maintains that it can claim sovereign rights over parts of the continent.[30] Russia's position is that the region is a 'frontier' space, and an enduring presence at the South Pole allows Russia to project soft power and accumulate global prestige.[31]

In the late 1950s, Russia began using the pathway of scientific research to execute plans to establish access to 'ice free areas' and 'locations of interest',

25 Brady, 'China's undeclared foreign policy at the poles'.

26 Evan T Bloom, 'Might the politics of the South China Sea weaken the high seas treaty?', *The Strategist*, Australian Strategic Policy Institute, 1 May 2023. https://www.aspistrategist.org.au/might-the-politics-of-the-south-china-sea-weaken-the-high-seas-treaty/

27 The State Council of the People's Republic of China, *Govt policy moves from past week*, China Daily, 23 February 2022, english.gov.cn. http://english.www.gov.cn/policies/policywatch/202202/23/content_WS62156a6cc6d09c94e48a5580.html

28 Ministry of Foreign Affairs of the Federation of Russia, *The concept of the foreign policy of the Russian Federation*, Ministry of Foreign Affairs of the Russian Federation website, 31 March 2023. https://mid.ru/en/foreign_policy/fundamental_documents/1860586/

29 Mathieu Boulègue, *The militarization of Russian polar politics: addressing the growing threat of tension and confrontation in the Arctic and Antarctica*, Chatham House, 6 June 2022, pp7–8. https://www.chathamhouse.org/2022/06/militarization-russian-polar-politics

30 The ICAS Maritime Issue Tracker Team, *The Antarctic Maritime Tracker: All Claimants*, Institute for China-America Studies website, 2 November 2021. https://storymaps.arcgis.com/stories/61be8b9eb1bb4b308acb4920e062170b

31 Sergey Sukhankin, *Is Russia preparing to challenge the status quo in Antarctica? (Part One)*, Eurasia Daily Monitor, The Jamestown Foundation Global Research & Analysis website, 9 June 2020. https://jamestown.org/program/is-russia-preparing-to-challenge-the-status-quo-in-antarctica-part-one/

with an intent to discover and secure access to minerals and hydrocarbons.[32] Their stated aim is to build a comprehensive legal basis for a future territorial claim based on 'extensive exploratory, scientific and similar activities spreading from the initial bases in the Australian Antarctic Territory to all other parts of the continent'.[33] Russia initially established four bases in the Australian Antarctic Territory and declared an intention to make them permanent.[34] Two of them, Vostok in the interior and Mirny on the East Antarctic coast, remain among the largest facilities in Antarctica.

Since the 1950s, Russia has increased its footprint to a total of 10 facilities with three permanent and four seasonal bases in the Australian Antarctic Territory, one permanent station in Norwegian-claimed territory, and another on the Antarctic Peninsula in West Antarctica. In 2017, Russia announced it would transform its seasonal base, Russkaya, in unclaimed Marie Byrd Land into another year-round operating station by 2020.[35] In May 2021, Russia announced its plans to recommission Russkaya Station as an initiative of the state space corporation Roscosmos, in support of its global satellite tracking system and spacecraft tracking devices.[36]

China and Russia are, of course, not the only two nations vying for influence in Antarctica in the lead-up to 2048. Over the past two decades more than 15 new research stations have been established in Antarctica by 13 separate nations, including Australia's allies and partners. The existing claims of Argentina, Chile, and the United Kingdom partially overlap, and this has driven peaceful but competitive scientific research initiatives.

The question is, to what ends each country – including Russia and China – are seeking to leverage their positions and actions to gain influence in the region? Competition and challenging old ways to achieve modern needs in Antarctica can be a good thing. However, concerns should and must be raised at the highest levels, if the outcomes of some stakeholders' objectives are detrimental to the peaceful development and ultimate survival of this remote continent.

The different interpretations of the Antarctic Treaty erode its legitimacy and demonstrate that great power competition is not only present but is thriving in

32 Irina Gan, 'Soviet Antarctic plans after the International Geophysical Year: changes in policy', *Polar Record*, 2010, 46(3): 244–256.

33 Gan, 'Soviet Antarctic plans after the International Geophysical Year: changes in policy', p 248.

34 Dian Olson Belanger, *Deep Freeze: The United States, The International Geophysical Year and the Origins of Antarctica's Age of Science*, University Press of Colorado, Colorado, 2006, p 356.

35 Davis, *Resurgent geopolitics in Antarctica*.

36 Yan (ed), 'Russia to reopen mothballed Antarctic Station', *Xinhua News*, 16 July 2021. http://www.xinhuanet.com/english/2019-05/24/c_138083964.htm

Antarctica. Australia therefore needs to refine its approach so that it not only acknowledges this competition, but proactively seeks to shape it.

A blind spot in Australia's strategic narrative

The recent Defence Strategic Review indicates that Australia's national security spotlight is firmly directed on the Indo-Pacific region.[37] There was not a single reference to Antarctica in the public version of the document. The review suggests that Australia will 'deter through denial any adversary's attempt to project power against Australia through our *northern* approaches'.[38] In doing so, the review doesn't just brush over references to the south, it deliberately excludes them.

The Antarctic Treaty does not prevent nations from developing extreme cold-climate military capabilities: rather, it simply posits that Antarctica should only be used for *peaceful purposes.*[39] This is difficult because the very definitions of peace and war are not universally understood or accepted. The Treaty relies heavily on goodwill and is self-policed through a scientific lens. So long as parties declare their intentions to be peaceful, there are almost no controls on infrastructure development or activities on the continent.

The Antarctic Treaty provides each party the right to carry out inspections in the interests of environmental protection and transparency. Yet in practice this is a very difficult and costly undertaking. Since 1963, Australia has only carried out ten inspections, most recently in 2020.[40] Inspections are a critical component of regulating and monitoring competition in Antarctica and ought to be carried out more regularly and more vigorously. Due to resourcing constraints and limited access to the continent, the Australian Antarctic Division does not have the capacity to carry out these inspections as often as they ought to.

Australia's long-term strategic interests in Antarctica are underpinned by its considerable territorial claim, as well as its status as a scientific and environmental leader on the continent.[41] Australia's ongoing commitment to environmental protection and scientific research of the Antarctic region cannot be understated. The Australian Antarctic Division's *2020 Strategic Plan* outlined priorities to

37 Defence, *National Defence: Defence Strategic Review*, Australian Government, 2023. https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review

38 Defence, *National Defence: Defence Strategic Review*.

39 Secretariat of the Antarctic Treaty, *Antarctic Treaty System*.

40 Australian Antarctic Program, *Inspections under the Antarctic Treaty*, Department of Climate Change, Energy, the Environment and Water – Australian Antarctic Division website, last updated 27 May 2021. https://www.antarctica.gov.au/about-antarctica/law-and-treaty/the-madrid-protocol/treaty-inspections/

41 Genovesi, *Australia's key role in Antarctica, in defence of its environment*.

consider climate change impacts, conserve ecosystems, manage fisheries and engage in extensive environmental remediation.

As recently as June 2023, Australia announced the expansion of Macquarie Island Marine Park. The protected area will expand from 162,000 square kilometres to 475,465 square kilometres. Ninety-three per cent (or 385,000 square kilometres of the park – an area larger than Germany) will be completely closed to fishing, mining and other extractive activities, making a globally significant contribution to the health and resilience of the world's oceans.[42] Environmental protection and research are fundamental to upholding Australia's legitimacy by demonstrating a values-based approach to its Antarctic strategy. Australia's 2022–2036 *Antarctic Action Plan* identified 'scientific research' and 'environmental protection' as priorities for the next decade as follows.

Scientific research priorities: effectively administering a comprehensive, multidisciplinary and collaborative Antarctic science program to deliver key government policy and international obligations; science and management outcomes, including through long-term monitoring, data collection and analysis; and the development of digital infrastructure for data accessibility, scientific research and program evaluation and prioritisation.[43]

Environmental protection priorities: administering two of Australia's external territories – the Australian Antarctic Territory and the Territory of Heard Island and McDonald Islands – to conserve and protect their unique environments and manage environmental impacts; and meet our international obligations.[44]

The Action Plan falls somewhat short, however, of seriously enhancing Australia's status and competitiveness in Antarctica. There was no specified commitment to additional station inspections; rather, the document simply stated that the Australian Antarctic Division would 'undertake further Antarctic Treaty inspections in line with our Antarctic Treaty System obligations'.[45] Furthermore, the document does not commit to any upgrades to communications infrastructure

42 The Hon Tanya Plibersek MP, *World Environment Day: Macquarie Island Marine Park to triple in size* [media release], Minister for the Environment and Water, Australian Government, 5 June 2023. https://minister.dcceew.gov.au/plibersek/media-releases/world-environment-day-macquarie-island-marine-park-triple-size

43 Australian Antarctic Program (AAP), *Australian Antarctic strategy and 20 year action plan*, Department of Climate Change, Energy, the Environment and Water, Australian Government website, last updated 11 July 2022. https://www.antarctica.gov.au/about-us/antarctic-strategy-and-action-plan/

44 AAP, *Australian Antarctic strategy and 20 year action plan*.

45 Secretariat of the Antarctic Treaty, *Antarctic Treaty System*. There is no obligation for Antarctic Treaty System signatories to conduct inspections. The Treaty simply allows signatories to conduct inspections if and when they wish by stating 'all areas of Antarctica, including all stations, installations and equipment within those areas, and all ships and aircraft at points of discharging or embarking cargoes or personnel in Antarctica, shall be open at all times to inspection by any observers'.

and only hints at 'identifying new opportunities [to support] Australia's expanding space sector for Antarctic science, medicine, safety, environmental monitoring, and communications'.[46]

Australia has done well to maintain its status as a reputable scientific and environmental contributor and leader in Antarctica. But this alone will not be enough to secure its interests into the future. Recently, there have been clear signs that the nexus between science and diplomacy in Antarctic policymaking is under pressure from resurgent geopolitics.[47] Nations are moving their Antarctic science programs away from the Antarctic Treaty's collaborative foundation in favour of pursuing national resource ambitions.[48]

A forward-leaning Australian strategy for Antarctica

To keep up with the pace of change in Antarctica, Australia will need to invest considerably in the capabilities and infrastructure that support the Australian Antarctic Division. The path to ensure that Australia maintains an advantage during a period of geopolitical instability is twofold. First, Australia must improve access to Antarctica by land and by sea. Second, it must invest heavily in communications and ground-based space support infrastructure. Notwithstanding the scientific and environmental premise of Australia's current strategy in Antarctica, access and infrastructure initiatives must have the potential to benefit Australia's diplomatic, economic, intelligence and defence sectors in future.

Access

The first and most pressing issue for any nation attempting to exercise influence in Antarctica is one of *access*. Antarctica does not currently have an all-weather concrete runway, and one of the only suitable locations to construct one is in the Australian Antarctic Territory.[49] An all-weather runway would provide an opportunity to exercise soft power as a nation, extending access to Antarctic partners that uphold the treaty provisions.[50] It would provide an opportunity for year-round access and emergency support, which in turn would provide the Australian Antarctic Division with more flexibility to operate across the continent.

46 AAP, *Australian Antarctic strategy and 20 year action plan*.

47 Davis, *Resurgent geopolitics in Antarctica*.

48 Davis, *Resurgent geopolitics in Antarctica*.

49 AAP, *About the Davis aerodrome project*, Australian Antarctic Division website. Last updated 25 November 2021. https://www.antarctica.gov.au/antarctic-operations/travel-and-logistics/aviation/davis-aerodrome/about-the-project/

50 Wright, *'Offensive cooperation': an Australian policy framework to navigate great power competition in Antarctica*, p 31.

It would reduce operating costs by providing a permanent logistical link between mainland Australia and Antarctica. Furthermore, a runway would significantly reduce the burden of sustainment from the new Australian Icebreaker, RSV *Nuyina*, allowing an increased focus on scientific research.[51] Perhaps most importantly, an all-weather runway grants Australia control over access to the continent by air for our allies as well as our competitors. Other airfields on the continent, of course, would remain operational, but they will continue to be limited by weather conditions.

A 2,700 m all-weather paved runway near Davis Station was considered by the Australian Government in 2016 as part of the Antarctic Action Program but it was scrapped in 2021 due to environmental concerns. Issues such as cost, complexity and a long construction timeline also influenced the decision.[52] In a parliamentary submission, the Department of Defence claimed the Australian Antarctic Territory faced 'no credible risk of being challenged in such a way that it … [would require] a substantial military response for at least the next few decades'.[53] Since that decision was made, the strategic circumstances in Antarctica have changed considerably and the long-term dividends for Australia's strategy ought to be reconsidered.

Australia currently has two primary summer-only ice runways in Antarctica that offer a cost comparison to the all-weather runway proposal near Davis Station. The Casey Station Skiway was built in 2004 at a cost of approximately $8 million. The Wilkins runway was built in 2008 and cost approximately $46.3 million.[54] Due to the specialist aircraft and delicate network of staff required to manually clear and operate the runways, each of the existing runway operating costs are in the order of $10 million per year.

51 Australian Government, Senate Estimates, Question Details, *1098 – Lambie, Senator Jacqui to the Minister representing the Minister for the Environment and Water*, Parlwork website, 23 December 2022. https://parlwork.aph.gov.au/Senate/Questions/1098. The new Australian Icebreaker, RSV *Nuyina*, is contracted for an annual operating period of 200 days. Between 31 August 2021 and 22 December 2022, the ship had only completed 116 days of sailing (including the 47-day delivery voyage from the Netherlands). The majority of time at sea in the Antarctic region by RSV *Nuyina* was apportioned to sustainment rather than science.

52 Daniel Hurst, 'Australia's decision to scrap Antarctica runway exposes government divisions', *The Guardian*, 25 November 2021. https://www.theguardian.com/australia-news/2021/nov/25/australias-decision-to-scrap-antarctica-runway-exposes-government-divisions

53 Department of Defence (Defence), 'Department of Defence submission to the Joint Standing Committee on National Capital and External Territories inquiry in to the adequacy of Australia's infrastructure assets and capability in Antarctica', Australia's Antarctica Territory Submission 14, Parliament of Australia, Canberra, 2017 p 1. https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/National_Capital_and_External_Territories/AntarcticTerritory

54 Defence, 'Department of Defence submission to the Joint Standing Committee on National Capital and External Territories inquiry in to the adequacy of Australia's infrastructure assets and capability in Antarctica'.

The latest estimates for the establishment of an all-weather runway near Davis Station are in the order of $150 million, with similar annual operating costs to the existing ice runways. When the potential ongoing *value* of access is considered holistically, this is a sound investment. Not only would it reduce the number of logistics and sustainment tasks for RSV *Nuyina*, but it will also provide opportunities for the Australian Antarctic Division to conduct more quality scientific research. The operating costs required to sustain other operations in Antarctica would be dramatically reduced, and the aperture will be widened for Australia to exploit future opportunities regardless of season, weather or terrain.

Environmental scientists have claimed that the plan to invest in a permanent runway in Antarctica was a 'waste of money and could lead to a destructive construction race by territorial rivals'.[55] But the race for some nations is already well underway. When compared against the $368 billion recently announced for the AUKUS submarine deal, this is in fact a modest investment. To give further context to the costs associated with these projects, the latest upgrades to the Sydney Football Stadium were $828 million,[56] and the average cost of urban and rural highways in Australia was around $5.7 million per kilometre.[57] When compared to these domestic infrastructure projects, a $150 million investment into a future all-weather runway at Davis Station seems entirely reasonable. Securing Australia's long-term interests in Antarctica is surely worth more than the southern stand at the Sydney Football Stadium or 27 km of rural highway.

In addition to the proposal for an all-weather runway, Australia also can improve access to Antarctica and diversify its gateway options. This can be achieved through the development of existing facilities on Macquarie Island and establishing new facilities on Australian-owned territories such as Heard Island and McDonald Islands. These relatively unknown Australian territories are nestled in the sub-Antarctic region of the Indian Ocean and are considered to be some of the most remote locations on earth. They are located about 1,700 km from Mawson and Davis Stations, and about 2,400 km from Casey Station. As Australia's southernmost territories outside of mainland Antarctica, they offer an alternative – far from the congested and contested Southwest Pacific Ocean – for future operations. Much like Antarctica itself, investment into these islands may not provide an immediate dividend, but they will undoubtedly grow in importance

55 Hurst, 'Australia's decision to scrap Antarctica runway exposes government divisions'.

56 Infrastructure NSW, *Sydney Football Stadium redevelopment*, Infrastructure NSW website, n.d. https://www.infrastructure.nsw.gov.au/projects-nsw/sydney-football-stadium-redevelopment/

57 Bureau of Infrastructure and Transport Research Economics (BITRE), *Cost benchmarking for infrastructure investments*, Department of Infrastructure, Transport, Regional Development, Communications and the Arts: Australian Government website, Canberra, 2023. https://www.bitre.gov.au/data_dissemination/priority_projects/cost_benchmarking_infrastructure_investments

and utility over time. Developing gateway facilities now will save Australia from having to scramble in the future to react to unfolding strategic circumstances.

Enhancing infrastructure on Macquarie Island or establishing new infrastructure on Heard and McDonald Islands would require a considerable financial investment, but specific costs have not yet been quantified by a government-endorsed body. Access and development in remote locations inevitably brings with it costs associated with transportation, resourcing and remote project management. However, Australia has a proven track-record of embarking on useful offshore development projects in Australian territories, such as Cocos/Keeling Islands and Norfolk Island, as well as with regional partners, such as Papua New Guinea and the Solomon Islands.

Opening access to the continent allows Australia to operate with greater freedom within it. Not only will more access lead to more regular scientific inspections, especially on other consultative parties to the treaty, but it will also provide more cost-effective options for infrastructure development in the future.

Communications infrastructure

Operating in such a remote and challenging environment is underpinned by the necessity to maintain a reliable communications network. Communications networks to relay information across the continent, as well as back to mainland Australia are a vital part of planning for the future. Establishing quality, trusted and secure networks in such a remote area will require considerable effort, but an investment now is likely to pay dividends into the future. These networks must be capable of operating large bandwidths to support a variety of operations, including but not limited to scientific research and logistics support missions.

Any consideration of extended communications infrastructure in Antarctica must also include ground-based space support for satellites. As global powers become more dependent on space-based communications systems, Antarctica offers a unique opportunity for Australia to exert influence and maintain an advantage in the space domain. Control of Earth's polar regions allows states to control polar orbit and sun-synchronous orbit satellites. Both of these are used for reconnaissance, surveillance, weather forecasting and monitoring of areas over Earth's surface.[58] Despite tough weather conditions, the polar regions are highly suited to operating across the electromagnetic spectrum and are relatively unhindered by white noise and interference. Antarctica, albeit cold, is the driest

58 Matthew A Lazzara, Linda M Keller, Charles R Stearns, Jonathan E Thom and George A Weidner, 'Antarctic satellite meteorology: applications for weather forecasting', *Monthly Weather Review*, 2003, 131(2): 371–383. https://doi.org/10.1175/1520-0493(2003)131<0371:ASMAFW>2.0.CO;2

continent on earth and therefore has potential benefits for ground-based space support and communications systems. Although sustained communication with satellites and space control is not of vital importance to Australia now, it will likely become so in the future.

Australia's long-term strategy in Antarctica does not sit neatly in the hands of any one government department. Like so many other strategic endeavours, it requires cross-departmental whole-of-government consideration. The Australian Antarctic Division falls under Australia's Department of Climate Change, Energy, the Environment and Water, but the strategic considerations for Antarctica span far beyond one department's remit.

Australia's current focus in Antarctica – quite rightly – remains scientific research and environmental conservation, but long-term planning will require input from the Department of Foreign Affairs and Trade, Department of Industry, Science and Resources, Defence and the national intelligence community. An all-weather runway, for example, provides significant diplomatic value by allowing Australia to exercise control over the ingress and egress of personnel and cargo. It provides obvious national security benefits should urgent military access to Antarctica ever be required, and it provides options to rapidly increase the scale of scientific activities on the continent. Similarly, a trusted and reliable communications network provides benefits for the Australian Space Agency, the national intelligence community, and the commercial industries such as shipping, transportation and telecommunication.

Australia needs to take a broader look at what challenges might lie ahead in Antarctica, and how best to prepare for them by employing all instruments of national power. Long-term planning for activities in Antarctica should not be bound by the current provisions of the Antarctic Treaty System. While it is important for Australia to continue to uphold its commitment to the Treaty, contingency planning and investment into access and communications infrastructure provides a degree of flexibility as the geostrategic situation in Antarctica changes in the future.

Conclusion

Operating in remote regions is an enormously expensive endeavour. The costs associated with enhancing Australia's access and communications infrastructure on the continent are often cited as the primary counterargument to any investment proposal. Two dimensional comparisons are often made with alternate – and much cheaper – infrastructure or capability investments on mainland Australia or in our region. It is easy to argue that Australia ought to be addressing threats to its sovereignty and competition on its northern approaches now. But in order

to understand the true value of Antarctic investment, the problem needs to be considered over decades and centuries rather than months and years. The long-term cost of inaction in Antarctica is far greater than the cost of any investment into infrastructure or capability now.

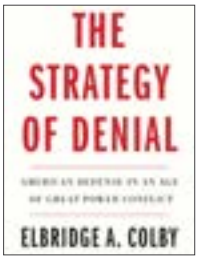
Australia cannot afford to take a myopic view of its Antarctic interests and must recognise the frozen continent's potential value into the future. It is an area that will influence and be influenced by Australia's strategy heavily in the next century. Now is the time to seize opportunities for infrastructure development to ensure Australia is adequately prepared for any potential Madrid Protocol discussions from 2048 onwards.

Antarctica's potential centrality to Australia's future prosperity needs to be raised in the national conversation. People need to look beyond Antarctica's intimidating frozen exterior and better understand the challenges and opportunities it presents. Science and environmental conservation remain the focus – for now. But Australians must have the courage to look down and see what the future might hold. The race to secure influence in Antarctica can still be achieved peacefully, but maintaining the status quo is not a viable option when compared to other more aggressive approaches being employed by other global powers. Ultimately, Australia's strategic vision must include Antarctica as a key consideration, not an afterthought.

Review Essay

Review Essay

Defence by denial: American military strategy in the twenty-first century and its implications for Asia



Michael Evans

The Strategy of Denial: American Defense in an Age of Great Power Conflict,
Elbridge A Colby,
Yale University Press, New Haven CT, 2021

In the northern summer of 2007, Elbridge Colby, then a member of the United States Office of the Director of National Intelligence, penned an article for the journal *Orbis,* calling for the restoration of deterrence as the central pillar of American security policy.[1] Colby's timing could not have been less promising, since his ideas ran contrary to the conventional strategic wisdom then dominating Washington. In the wake of the Islamist attacks of 11 September 2001 on the United States, the George W Bush Administration had embraced a doctrine of military pre-emption against adversaries that involved occupying Afghanistan and Iraq. Vice President Dick Cheney publicly dismissed deterrence as a relic of the Cold War, while strategists and policy advisers across the Washington beltway were fixated on non-state enemies and frantically busy rediscovering counterinsurgency warfare. Unmoved by an unfavourable zeitgeist, Colby insisted that deterrence remained the best overarching strategy for the United States. Not only was such a posture conservative and defensive, aimed at upholding an American-led liberal international order, it was also, he asserted, credible and prudent, unlike an endless global war on terror.[2]

A decade later, Colby – grandson of William Colby, Director of the Central Intelligence Agency (CIA) under presidents Nixon and Ford – found himself in

1 Elbridge Colby, 'Restoring deterrence', *Orbis: A Journal of World Affairs*, Summer 2007, 51(3): 413–448. https://doi.org/10.1016/j.orbis.2007.04.004

2 Colby, 'Restoring deterrence', pp 417–425.

the rare position of the theorist as practitioner. As Deputy Assistant Secretary of Defense for Strategy and Force Planning in the Trump Administration, he became the principal author of the 2018 *National Defense Strategy*.[3] This document drove a final stake through the heart of the doctrine of strategic pre-emption, elevating great power conflict, military modernisation and, above all, deterrence, to renewed prominence in American statecraft. Three years after leaving government service, Colby extended his ideas on American defence into a 2021 book, *The Strategy of Denial: American Defense in an Age of Great Power Conflict*, a tome dedicated to evaluating Washington's strategic options for an era in which the hubris of the Bush–Cheney era has evaporated in the face of China's rise to global power.[4]

Colby's study is a quest to find a 'a middle way' for American strategy between grandiose post-Cold War ambitions and the end of the unipolar dominance. Its pages reflect the shift in American defence thinking away from strategies of offence based on unipolarity towards defence-by-denial strategies that are optimised for the return of an era of great power competition focused primarily on Asia rather than Europe. Over the past decade, a plethora of American defensive strategies have emerged under such names as 'mutual denial', 'defensive defense' and 'active denial'. Nearly all have been propositions for waging a long-term geopolitical competition with Beijing. While these strategies have areas of commonality, they often differ in emphasis, detail and prescription. The importance of Colby's book is that he brings both synthesis and clarity to the meaning of defensive denial while also providing a military logic to underpin its precepts.[5]

3 Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*, Department of Defense, Washington DC, January 2018.

4 Elbridge A Colby, *The Strategy of Denial: American Defense in an Age of Great Power Conflict*, Yale University Press, New Haven, 2021.

5 See for instance Mike Gallagher, 'State of (deterrence) denial', *The Washington Quarterly*, Summer 2019, 42(2): 31–45, https://doi.org/10.1080/0163660X.2019.1626687; Eugene Gholz, Benjamin Friedman and Enea Gjoza, 'Defensive defense: a better way to protect US allies in Asia', *The Washington Quarterly*, December 2019, 42(4): 171–189, https://doi.org/10.1080/0163660X.2019.1693103; Eric Heginbotham and Richard J Samuels, 'Active denial: redesigning Japan's response to China's military challenge, *International Security,* Spring 2018, 42(4): 128–169, https://doi.org/10.1162/isec_a_00313; Stephen Biddle and Ivan Oelrich, 'Future warfare in the Western Pacific: Chinese antiaccess/area denial, US AirSea Battle, and the command of the commons in East Asia', *International Security*, Summer 2016, 41(1); 7–48, https://doi.org/10.1162/ISEC_a_00249; Eric Heginbotham and Jacob Heim, 'Deterring without dominance: discouraging Chinese adventurism under austerity', *The Washington Quarterly*, Spring 2015, 38(1): 185–199, http://dx.doi.org/10.1080/0163660X.2015.1038189; David Ochmanek, 'Sustaining US leadership in the Asia-Pacific region: why a strategy of direct defense against antiaccess and area denial threats is desirable and feasible', *Perspectives*, RAND Corporation, 2015, pp 1–20, https://www.rand.org/pubs/perspectives/PE142.html; Samuel Zilincik and Tim Sweijs, 'Beyond deterrence: reconceptualizing denial strategies and rethinking their emotional effects', *Contemporary Security Policy*, March 2023, 44(2): 248–275, https://doi.org/10.1080/13523260.2023.2185970.

Preparing to fight: American military strategy in Asia

Colby's book is an ice-cold analysis about military power and the manner in which it can be employed. He explains to readers the purpose of his work:

> This is a book about war: what it would look like and how to wage it to prevail. Its unabashed aim is to give the United States and those who ally and partner with it a strategy for doing just that.[6]

America's enemy in the war Colby envisages is a revanchist and authoritarian People's Republic of China (PRC). Preventing China's regional hegemony in Asia is the most important strategic objective of the United States and requires strict priority in US defence planning.[7]

The strategic framework that unfolds in the book is a reaction to the lost gamble on China's 'peaceful rise' by a generation of American policymakers, From Clinton through Bush to Obama, there was a policy orthodoxy in Washington that China could be coaxed and wooed by diplomacy and economics into being a 'responsible stakeholder' in an American-dominated world order. This orthodoxy alongside the parallel illusion of maintaining a 'geography of the peace' based on an enduring regional balance of power – with China dominating continental Asia and America supreme in maritime Asia – have both been shattered by Xi Jinping's revisionist strategic ambitions.[8]

For Colby, all available evidence indicates that the PRC is employing 'a focused and sequential strategy' in Asia designed to break apart the United States' alliance system and drive America out of the region. Since Asia is now the centre of world power accounting for 40 per cent of global gross domestic product (GDP), it is the region where America's most important geopolitical and economic interests lie.[9] The United States cannot prosper as a global power in an Asia that falls under China's geopolitical sway. Accordingly, resisting Beijing's attempt to achieve regional supremacy must be the overarching objective of US grand

6 Colby, The Strategy of Denial, p 282.

7 Colby, *The Strategy of Denial*, ch 1 and ch 2; p 236.

8 The literature is enormous. For a useful synthesis of views see the debate in 2021–22 involving John J Mearsheimer: 'The inevitable rivalry: America, China and the tragedy of great-power politics, *Foreign Affairs*, November/December 2021, 100(6): 48–58, https://www.foreignaffairs.com/articles/china/2021-10-19/inevitable-rivalry-cold-war; G John Ikenberry, Andrew J Nathan, Susan Thornton, Sun Zhe and John J Mearsheimer, 'A rival of America's making: the debate over America's China strategy', *Foreign Affairs*, March/April 2022, 101(2): 172–188, https://www.foreignaffairs.com/articles/china/2022-02-11/china-strategy-rival-americas-making. For the notion of a stable regional balance of power, see Robert S Ross, 'The geography of the peace: East Asia in the twenty-first century', *International Security*, Spring 1999, 23(4): 88–181. https://doi.org/10.1162/isec.23.4.81

9 Colby, *The Strategy of Denial*, p 6; p 15 and ch 1 and ch 2.

strategy in the twenty-first century.[10] Yet Washington's dilemma in countering China is the reality of a shifting balance of power that gives the impression of America as a 'weary titan'. Beijing's massive military modernisation program has eroded the clear margin of strategic dominance America enjoyed during the 'unipolar moment' of the 1990s.

In 2000, the US military budget was 15 times that of the PRC; In 2023, the Chinese defence budget is half that of the United States but five times bigger than that of Japan, the second most powerful Asian state. Emerging from the distraction of 20 years of protracted Middle East and South Asian insurgency conflicts, the United States finds itself confronting a powerful peer competitor in Xi Jinping's China, a state growing in military strength and committed to overturning the strategic status quo in Asia. By 2025, China is projected to have roughly an 8-to-1 advantage in ships and submarines over the United States in Asia, alongside comparable advantages in aircraft and an overwhelming lead in larger land-based missiles.[11]

The quandary of geography: differentiated credibility and America as Asia's external cornerstone balancer

Central to Colby's study is the need to realign American statecraft around the 'cardinal strategic aim' of constructing and leading an anti-hegemonic Asian coalition that can deter, and if necessary, prevail in any regional test of arms with China.[12] Such a strategy must be clear-eyed about both the weaknesses and strengths of America and its Asian allies and partners. Colby is admirably frank in stating that, alongside the loss of its unipolar military superiority over China, the Achilles heel of American strategy in the Indo-Paciifc arena is the reality of geography. China is in Asia; continental America is not. Because the United States is not physically located in Asia, the regional stakes for Washington while high indeed, are not existential. There is the long memory of the retreat from South Vietnam in 1975, while the Middle East and South Asian conflicts of 2001–2021 (especially the chaotic withdrawal from Afghanistan) have helped to sap Washington's reputation in Asia for reliability. Like Britain before it, America has a default option: it can always execute an 'East of Suez moment' and retreat from Asia. Even if such a disengagement signalled the end of the United States'

10 Colby, *The Strategy of Denial*, p xiii.

11 Colby, *The Strategy of Denial*, ch 1 and ch 2; Elbridge Colby and Walter Slocombe, 'The state of (deterrence by) denial', *War on the Rocks*, 22 March 2021. https://warontherocks.com/2021/03/the-state-of-deterrence-by-denial/

12 Colby, *The Strategy of Denial*, p xiii; pp 15–26.

global dominance, the American polity would endure and continue to remain supreme in its own hemisphere.[13]

Colby faces squarely the dogged issue of American credibility in Asia – what some regional observers variously call the 'China choice', 'fear of abandonment' or 'China has won' – mantras that stalk the corridors of several Asian capitals.[14] To remedy a regional sense of unease about an American 'East of Suez' moment, any anti-hegemonic coalition against China must possess an American centre of gravity that is credible and demonstrates Washington's staying-power. The need is for the application of what Colby describes as 'differentiated credibility'. The latter concept is defined by the degree to which important actors in the Asian region are convinced an American-led coalition against China's 'focused and sequential strategy' can prevail in any test of Sino-American arms should a 'systemic regional war' break out in the Indo-Pacific.[15]

In pursuing differentiated credibility with allies and partners, Washington must win the confidence of potential member states that the benefits of joining an anti-Beijing coalition are worthwhile.[16] The author states:

> [I]f the United States, under the shadow of China's focused and sequential strategy were to balk at defending a state in Asia to which it had provided a security commitment against Beijing, this decision would have profound consequences not only for other allies in the region but for the anti-hegemonic coalition as a whole. It would provide direct evidence of America's unwillingness to defend a confederate in the Western Pacific under the darkening shadow of Chinese military power – evidence that could not but be pointedly relevant to governments in Seoul, Manila, Hanoi, Jakarta, Kuala Lumpur, Bangkok, and even Canberra, Tokyo and New Delhi.[17]

13 Colby, *The Strategy of Denial*, ch 3; pp 38–40.

14 Colby, *The Strategy of Denial*, pp 39–40. For doubts on American credibility see Hugh White, *The China Choice: Why America Should Share Power*, Black Inc., Melbourne, 2013; Allan Gyngell, *Fear of Abandonment: Australia in the World since 1942*, La Trobe University Press, Carlton, 2017; Kishore Mahbubani, *Has China Won? The Chinese Challenge to American Primacy*, PublicAffairs, New York, 2020.

15 Colby, *The Strategy of Denial*, p 15; p 22, pp 56–64; pp 113–20. For the general importance of American alliance credibility see also Hal Brands, Eric S Edelman, and Thomas G Mahnken, *Credibility matters: strengthening American deterrence in an age of geopolitical turmoil*, Center for Strategic and Budgetary Assessments, Washington DC, 8 May 2018, pp 1–32. https://csbaonline.org/research/publications/credibility-matters-strengthening-american-deterrence-in-an-age-of-geopolit

16 Colby, *The Strategy of Denial*, pp 42–43.

17 Colby, *The Strategy of Denial*, pp 63–64.

Acknowledging the complexity of Indo-Pacific geopolitics and the diversity of the region, Colby is careful to reject the idea of a zero-sum game between deterrence of, and deference to, China. For states as varied as Japan, South Korea, Australia, India, the Philippines, Indonesia and Vietnam, relations with China are likely to reflect varied factors of geographical proximity and economic calculation. Each Asian state is likely to engage in different policies, value propositions and risk assessments in their strategic relations with China. By way of example, Colby compares Australia with Vietnam noting:

> simply because of distance, Australia is far less vulnerable to Chinese military attack than, for instance, Vietnam. Even if both states have the same level of resolve to protect their independence, Australia's risks in doing so are less severe than Vietnam's.[18]

Since there is no Asian version of a North Atlantic Treaty Organisation (NATO) to facilitate a common regional security architecture, any pro-American anti-hegemonic group of nations is likely to be a 'coalition of the willing' rather than an expanded alliance.[19] In seeking to enlist the support of countries such as India, Indonesia and Vietnam – all of whom have strong traditions of diplomatic non-alignment – the United States must accept that the choice for Asian states in strategic relations with China is not a binary one of 'balance and deter' or of 'bandwagon and defer'. Rather, strategic choice for many states is situation-specific and occurs across a spectrum of statecraft in a vast region more suited to informal coalition building than formal alliance statecraft.[20]

In turn, Asia's very diversity conditions the application of America's differentiated credibility. The latter will be calibrated by Washington on the basis of an Asian state's own willingness to spend on self-defence and to demonstrate resolve in resisting China's drive for regional supremacy. Here Colby issues an important corollary to his pledge of American differentiated credibility, to the effect that 'the less allies do … the more they will test not only the resilience of America's commitment to denying China hegemony over Asia but its ability to do so'.[21]

The vehicle for Washington's pledge of differentiated credibility for its allies and willing partners in Asia is for America to serve as the region's 'external cornerstone balancer' against Chinese predation.[22] On this vital point, it is important to note that Colby's concept of America as a cornerstone balancer in Asia differs

18 Colby, *The Strategy of Denial*, pp 19–22; p 23.

19 Colby, *The Strategy of Denial*, pp 40–45.

20 Colby, *The Strategy of Denial*, pp 16–25.

21 Colby, *The Strategy of Denial*, p 279.

22 Colby, *The Strategy of Denial*, pp 26–29; pp 38–39.

from the older idea of the United States acting as an 'offshore balancer', a view propounded by scholars such as Stephen Walt, John J Mearsheimer and Christopher Layne.[23] Offshore balancers are, in Colby's view, overly focused on burden shifting, local balancing and American retrenchment and neglect the power dynamics of coalition building. In contrast, writes the author, 'I emphasize the critical and active – not 'offshore', which heavily connotes aloofness – role of the cornerstone balancer in forming, sustaining and protecting the anti-hegemonic coalition'.[24]

In expounding the notion of cornerstone balancing, Colby is careful to explain that American aims in Asia remain limited and involve upholding the current regional status quo. There is no messianic desire in American statecraft to try to overthrow the Chinese state by regime change. On the contrary, the strategic aim of any anti-hegemonic coalition must be narrowly premised on mustering the military capability necessary to deny Beijing any territorial objectives that it may be tempted to try to seize from its neighbours.[25]

A defensive perimeter: the anti-hegemonic coalition and limited war against China

Emphasising differentiated credibility and upholding America's role as cornerstone balancer in the Indo-Pacific do not, however, nullify the geographic reality of distance facing Washington. Colby concedes that China's local geographical position in Asia allows Beijing to pursue its 'focused and sequential strategy' to intimidate, seduce or neutralise pro-American states. Such a salami-slicing strategy has great appeal to Xi Jinping and the Chinese Communist Party since it simultaneously denies America the opportunity to build an anti-hegemonic coalition while avoiding a shooting war in the Indo-Pacific.[26]

To prevent Chinese supremacy, it is necessary for the United States to define and uphold a defensive perimeter for an anti-hegemonic coalition in maritime Asia. US alliances and quasi-alliances in Asia are all with island states and one peninsula, South Korea. This security architecture provides a baseline for a

23 John J Mearsheimer and Stephen M Walt, 'The case for offshore balancing: a superior US grand strategy', *Foreign Affairs*, July/August 2016, 95(4), https://www.foreignaffairs.com/articles/united-states/2016-06-13/case-offshore-balancing; Christopher Layne, 'From Preponderance to Offshore Balancing: America's Future Grand Strategy', *International Security*, Spring 1997, 21(1): 86–124, pp 5–48, https://doi.org/10.1162/isec.22.1.86; Christopher Layne, *The Peace of Illusions: American Grand Strategy from 1940 to the Present,* Cornell University Press, Ithaca New York, 2006. See also Barry R Posen, *Restraint: A New Foundation for US Grand Strategy,* Cornell University Press, Ithaca New York, 2014.

24 Colby, *The Strategy of Denial,* p 296, fn 14.

25 Colby, *The Strategy of Denial*, pp 44–47.

26 Colby, *The Strategy of Denial*, pp 23–26.

defensive perimeter that extends from Japan and Taiwan in East Asia through the Philippines and South-East Asia to Australia and the small island states of the south-west Pacific. It is predominantly a maritime perimeter with even peninsula-bound South Korea accessible from the sea.[27]

Two of America's major allies, Japan and Australia serve as the perimeter's northern and southern strategic anchors, respectively. Given its proximity to China, Japan is 'the linchpin of the American defensive position in Asia'.[28] Australia, meanwhile, presents itself as a classic test case for American differentiated credibility in Asia. The continent is situated alongside the archipelagic and island states of the south and central Pacific that form 'a second island cloud' for American force projection, strategic depth and resilience.[29] Colby notes that while Australia is far away from China, it is a long standing and capable US ally deserving of support. He asks rhetorically, 'if the United States cannot effectively defend Australia, what hope do China's closer neigbors have for effective US aid?' [30]

If Japan and Australia serve as a coalition perimeter's northern and southern anchors, South Korea, the Philippines and Taiwan are vital to the first island chain that forms a critical military boundary for China. Any anti-hegemonic coalition without the Philippines and Taiwan would open a major gap in the first island chain allowing China to project is naval power into the broader Pacific and South-East Asia.[31] Moreover, the geography of South-East Asia from Vietnam and Thailand through Indonesia and Malaysia to Singapore and Myanmar, traces the first island chain and helps confine Chinese power projection to the South China Sea. These geographical realities mean that it is first island chain states and parts of South-East Asia around the South China Sea that are likely to be *'*the locus of strategic competition between the US-led anti-hegemonic coalition on one side and China and its pro-hegemonic affiliates on the other*'*.[32] It is in South-East Asia where 'the rubber meets the road' for the United States and its allies. With the possible exception of Singapore, South-East Asia remains vulnerable as 'contested space' between the United States and the PRC. Countries such as Cambodia, Laos, Indonesia, Malaysia and Vietnam remain

27 Colby, *The Strategy of Denial*, ch 4; pp 238–56.

28 Colby, *The Strategy of Denial,* p 77; p xiv; pp 65–72.

29 Colby, *The Strategy of Denial*, p 240.

30 Colby, *The Strategy of Denial*, p 75.

31 Colby, *The Strategy of Denial*, pp 76–78.

32 Colby, *The Strategy of Denial*, p 77.

aloof from Washington with Thailand, an American ally, being unreliable as a 'significant swing state' when it comes to relations with Beijing.[33]

Having outlined America's strategic stakes in the defence of maritime Asia, Colby moves on to consider what is required for a realistic military strategy.[34] A key assumption of *The Strategy of Denial* is that any war in Asia between a nuclear-armed United States and China will, by necessity of national survival, be a limited conflict. It will be a war waged by two rational actors who, while seeking major strategic advantages, understand the principles of proportionality and limitation to prevent any armed conflict from escalating into existential nuclear destruction. Channelling the work of strategic theorists Robert Osgood, Bernard Brodie and Henry Kissinger on limited war, Colby suggests, 'it would be utterly irrational and foolish to adopt an unrestrained approach to fighting China over stakes short of America's national survival because doing so would invite damage well beyond what the stakes were worth'.[35]

Colby's assumption that any major armed conflict in the Indo-Pacific will take the form of a limited war has the advantage of ruling out ambitious American strategies of preventive war involving regime change in China. As long as the United States refrains from strategies that seek China's national destruction or the collapse of the Chinese communist system, the incentives to avoid nuclear war on both sides will be strong.[36] The anti-hegemonic coalition must be able to frame and fight a limited war against China over interests that are systemically important but not existential. Military escalation must be controlled to avoid unforeseen risks and consequences on both sides. 'A battle of knife cuts and ultimately sharp and deep stabs' must not be allowed to descend into swordplay to the death.[37]

The Taiwan test: fait accompli and China's theory of victory

Because the envisaged anti-hegemonic coalition of the US, Japan, India and Australia would, in aggregate terms be more powerful than China, Beijing's best strategic options are to systematically isolate and subordinate pro-American states in a manner that renders America's differentiated credibility and role as

33 Colby, *The Strategy of Denial*, pp 247–51.

34 Colby, *The Strategy of Denial*, ch 5.

35 Colby, *The Strategy of Denial,* p 83; pp 79–96. For limited war theory see Robert E Osgood, *Limited War: The Challenge to American Strategy,* University of Chicago Press, Chicago, 1957; Bernard Brodie, *The Meaning of Limited War*, RAND Corporation, Santa Monica, May 1957; Henry A Kissinger, *Nuclear Weapons and Foreign Policy,* Harper, New York, 1957; and Antulio J Echevarria II, *War's Logic: Strategic Thought and the American Way of War,* Cambridge University Press, New York, 2021, ch 3.

36 Colby, *The Strategy of Denial*, p 83.

37 Colby, *The Strategy of Denial,* p 92; pp 84–96.

a cornerstone balancer hollow.[38] It is Taiwan that looms as the test case of American resolve to fight for its allies and partners in Asia. Colby quotes Asia expert, Ralph Cossa, the former President of the Center for International and Strategic Studies (CSIS) Pacific Forum, on the vital importance of Taiwan to America's credibility in Asia:

> Based on hundreds, if not thousands, of discussions with Korean, Japanese and other Asian officials and security specialists, I am convinced that the credibility of US alliances in Asia and elsewhere hinges upon the credibility of the de facto US defence commitment to Taiwan … US allies are comfortable with a degree of strategic ambiguity, especially since they don't want to publicly commit to lining up against China, but look to Taiwan as the proof in the pudding/canary in the coal mine'. If the US failed to honour this, allies would lose faith, seek independent nuclear capability or accommodation with Beijing.[39]

If Taiwan falls to China, then the states of South-East Asia are the next logical targets beginning with the Philippines or Vietnam. If all South-East Asia can be suborned, a pro-China hegemonic grouping might emerge that is powerful enough to defeat a quadrilateral coalition of the United States, India, Japan and Australia. A China dominating South-East Asia's estimated 10 trillion-dollar economy would be a geostrategic disaster for the United States, since it would provide a springboard for Beijing to project power into Central Asia, the Middle East and even the Western hemisphere.[40]

With these geopolitical possibilities in mind, Colby believes that Beijing's best limited war strategy against the United States is to systematically subordinate smaller, neighbouring states. In such a scenario, Taiwan looms as the most vulnerable part of the American security perimeter. In seeking subordination of its neighbouring states, Beijing could use either a *punishment approach* (using limited violence to impose costs until capitulation occurs) or a *conquest approach* (employing brute force to impose its will).[41] Of these two approaches, Colby is convinced a conquest approach using a swift, fait accompli strategy represents China's preferred 'theory of victory'. This is because a fait accompli attack exploits the gap between any coalition's latent power and how much that coalition is willing to dedicate to contest an invasion of Taiwan. If China

38 Colby, *The Strategy of Denial*, pp 113–15.

39 Colby, *The Strategy of Denial,* p 312, fn 10 citing personal correspondence, 25 August 2020.

40 Colby, *The Strategy of Denial*, pp 116–19.

41 Colby, *The Strategy of Denial,* pp 119–120; pp 132–136.

is able to launch a fait accompli strategy successfully against Taiwan, or other vulnerable states such as Philippines and Vietnam, American credibility in Asia would be shattered. India's strategic status in Asia would be compromised by such reverses, while Japan and Australia would be subject to long-term strategic isolation at the hands of Beijing.[42]

Denial defence and the binding strategy

To prevent such an epoch-changing shift in the Asian balance of power from occurring, Colby devotes a chapter to military strategy. He argues that the best strategy for America is not an unaffordable quest to restore 1990s-era military dominance over China. Nor should the United States pursue a strategy of compellence using punishment based on escalation for, as Thomas Schelling advises: 'It is easier to deter than to compel.'[43] Rather, the best strategy for Washington is a denial defence.[44] A denial strategy by the United States, forces China as the revisionist power to assume the responsibility for beginning any war of aggression in Asia. A denial defence also meets China's focused and sequenced strategy on its own strategic terms by seeking to directly blunt Beijing's military operations against a vulnerable state. The aim of denial is to defeat aggression not to subjugate an adversary. In this sense, the strategy of denial invites China to become Athens at Syracuse, the British and French at Gallipoli, Germany in the Battle of Britain and Argentina in the Falklands.

A perfect strategy must not become the enemy of a good one. As Colby puts it, 'a denial standard is highly compatible with an effective coalition approach to limited war'.[45] If an offensive fait accompli Chinese strategy can be denied, then, Beijing will be forced to fall back on coercion by punishment or be prepared to escalate hostilities. If China chooses to escalate offensive military operations, then it would risk the perils of a protracted conventional conflict and the possibility of nuclear weapons eventually being used in Asia for the first time since 1945.[46]

In an age of precision munitions and distributed kill chains, a US-led denial defence favours the archipelagic geography of maritime Asia against fait accompli attacks. Of all America's potential coalition partners, only Vietnam is

42 Colby, *The Strategy of Denial,* pp 136–146.

43 Thomas C Schelling, *Arms and Influence*, Yale University Press, New Haven, CT, 1966, p 69; p 100; pp 174–84.

44 Colby, *The Strategy of Denial*, ch 8; pp 149–50.

45 Colby, *The Strategy of Denial*, p 152.

46 Colby, *The Strategy of Denial,* p 152. See also David C Logan, 'Are they reading Schelling in Beijing? The dimensions, drivers, and risks of nuclear–conventional entanglement in China', *Journal of Strategic Studies*, 2023, 46(1): 5–55, first published online 12 November 2020. https://doi.org/10.1080/01402390.2020.1844671

truly vulnerable to a Chinese land invasion. The ultimate aim, then, of a strategy of denial is an inside-out approach to turn China's own anti-access and area denial strategy around.[47] 'Just as Beijing has sought to deny US forces the ability to operate inside the first island chain', writes Colby, 'so the United States, Taiwan, and other allies should seek to be able to deny Chinese People's Liberation Army's (PLA) ability to operate in the Taiwan Strait'.[48] In terms of operations, the logic of a strategy of denial falls on a spectrum of armed conflict with three options ranging from direct denial of any attack; a recovery employing defence-in-depth; and a reconquest of lost territory by air and amphibious assault.[49]

A major advantage of a direct denial defence against China in the Taiwan Strait is that operations can be limited to inflicting local, not total, defeat against engaged forces. Yet a strategy of denial need not be passive; it can embrace a 'frame shift' in a countervailing operational approach that combines denial elements with application of selective and conditional cost imposition on Beijing's forces and some of its mainland facilities.[50] At its most effective, a strategy of denial requires the integration of direct military denial with cost imposition to keep any Asian war below the nuclear threshold. Properly applied and waged according to the rules of limited war, a denial defence is the most effective way of inducing China to accept local defeat and agree to terminate any war.[51]

Yet, at no point, does Colby suggest that a strategy of denial can be easily applied to defending Taiwan or to other possible Chinese target states such as the Philippines or Vietnam. Denial might fail since it requires the United States, Taiwan, Japan and Australia to 'promptly and resolutely adapt their strategies and forces to meet the requirements of a denial strategy'.[52] Moreover, even if allied or coalition forces become well-aligned to prosecute a denial strategy, they may suffer heavy casualties and risk escalation into a systemic regional war against the PLA. A fait accompli attack by Beijing exploiting the power and velocity of China's local military superiority might simply 'punch through' any defensive coalition arrayed from far-flung nations.[53]

If a denial strategy fails and a defence-in-depth collapses, then a recapture approach by the coalition to liberate Taiwan or Luzon by air and amphibious

47 Colby, *The Strategy of Denial*, pp 153–60.

48 Colby, *The Strategy of Denial*, p 160.

49 Colby, *The Strategy of Denial*, pp 161–70.

50 Colby, *The Strategy of Denial*, pp 173–90.

51 Colby, *The Strategy of Denial*, p 190.

52 Colby, *The Strategy of Denial*, p 193.

53 Colby, *The Strategy of Denial,* p 193; pp 194–97.

assault might be undertaken. Here alliance partners would 'form the steel skeleton of the anti-hegemonic coalition' in an amphibious counteroffensive aimed at recapture of allied territory in 'an extraordinarily ugly fight'.[54] Such a counteroffensive is the ultimate test of America's differentiated credibility with its allies in that such a military transition risks rapid escalation to all-out war and the likelihood of Chinese missile strikes on the American homeland. As Colby notes, a successful denial defence that prevents the seizure of local objectives by China is far more preferable than any Taiwan and Philippines reconquest scenarios. Yet, his analysis of the perils of all-out war between China and America serve only to illustrate the 'central quandary facing the United States in seeking to deny China hegemony over Asia: American interests are significant but not necessarily of the highest order'.[55]

American willingness to defend distant allies is likely to be measured against the resolve of Asian states to view China as a common threat and to unite in what Colby designates as a 'binding strategy'.[56] A collective binding strategy is the corollary to an effective strategy of denial and serves to signal that any Chinese attack on Taiwan or the Philippines will precipitate a systemic regional war. The burden of escalation would, in an expanded as opposed to a confined war in Asia, be placed firmly on China. Colby explains that:

> a denial defence is the use of American and other power to stop China from seizing and holding allied territory; the binding strategy is a deliberate effort to compel China to have to behave in ways that catalyze US, allied, and partner resolve if it pursues its hegemonic ambitions.[57]

Ideally, for both denial and binding strategies to become effective, an integration of the coalition military efforts is required with regard to defending Taiwan and the Philippines. Both conflict scenarios are tests of America's differentiated credibility and suggest the need for Asian states to embrace an 'integrated denial defense-cum binding strategy' that can manifest into a regional anti-China coalition.[58] Here the aim would be for any coalition to create a 'boa constrictor effect' on the PRC – the more Beijing sought to escalate its way out of a military quandary – the more it would both widen and strengthen its circle of opponents.[59]

54 Colby, *The Strategy of Denial*, p 199.

55 Colby, *The Strategy of Denial,* p 202; pp 208–27.

56 Colby, *The Strategy of Denial*, ch 10.

57 Colby, *The Strategy of Denial*, p 237.

58 Colby, *The Strategy of Denial*, p 237.

59 Colby, *The Strategy of Denial,* pp 188–189; pp 229–230.

Colby's binding strategy has echoes of the debates in NATO in the 1970s and 1980s over conventional defence and graduated escalation against the Soviet-led Warsaw Pact. Investing in a coupled denial and binding strategy against China in Asia holds out the best prospect for producing US military forces that are optimised and postured for war in Asia. Colby believes, India, as an emerging Asian great power, must eventually become a 'critical member' of any future anti-hegemonic coalition. India could police the Indian Ocean and South Asia and balance China in those areas while the US, Japan and Australia concentrate on defending the Western Pacific and South China Sea against Beijing.[60] Yet it is the very absence of an Asian-style NATO that makes a collective binding strategy with countries such as India such a difficult prospect. As the author concedes, the US and its allies and partners in the Western Pacific are more likely to 'intertwine' rather than integrate their different defence postures.[61]

Japan and Australia in the strategy of denial and the fate of Asia

A binding strategy involving integration, then, remains better suited to formal 'hub-and-spoke' treaty allies such as Japan and Australia. Colby has military prescriptions for both countries. Japan must release its 'enormous unrealized military potential' by becoming fully integrated in its defence posture with the United States to protect both Taiwan and South-East Asia.[62] For its part, Australia must embrace a forward defence in the Western Pacific in support of any anti-hegemonic coalition against Beijing. This strategic posture is vital for Canberra 'because, though it [Australia] is distant from Taiwan and the Philippines, its fate is likely to be decided in the Western Pacific'. If China succeeds in dominating South-East Asia, then, facing a replay of the events of 1942–45, it becomes far harder for the United States to defend Australia. Colby concludes, 'Australia thus has a strong interest in ensuring that the anti-hegemonic coalition checks China's focused and sequential strategy well before it reaches Australia's shores'.[63] Not surprisingly, since Colby's book was published, only America's closest allies in

60 Colby, *The Strategy of Denial*, pp 240–244; pp 246–247.

61 Colby, *The Strategy of Denial,* pp 228–229.

62 Colby, *The Strategy of Denial*, pp 252–253.

63 Colby, *The Strategy of Denial*, p 253.

Asia, Japan and Australia, have shown any willingness to 'bind' by adopting variations of a strategy of denial, and even, then, these are not yet fully refined.[64]

Colby ends his study by noting that Americans are provided to take risks for their allies and partners in the pursuit of security, freedom and prosperity. Yet there is no unlimited liability involved. Those Asian states who fail to invest in realistic collective defence and who refuse to engage in burden-sharing will only test America's resilience and sap its public will. As the author warns:

> Americans [might] begin to ask themselves – not unjustly – whether the effort [in Asia] is worth the costs and risks, if people in the region itself do not fear Chinese dominance enough to strive to counteract it. If the nations Americans are preparing to defend at such great risk can survive Chinese hegemony over their region, this might be seen to lend strength to the argument that perhaps Americans can too.[65]

If the United States is unable to craft a middle-way strategy between its loss of unipolar dominance and the arrival of China as a peer power, then Asia will face two unpalatable strategic options in the future. The first strategic option will be for the region to accept Chinese regional hegemony and the consequent loss of sovereignty and policy independence that will ensue. The second strategic option will be for the United States to try to secure the region by permitting the spread of nuclear weapons to its allies.[66] 'Selective nuclear proliferation to such states as Japan, South Korea, Australia, and even Taiwan', the author notes, 'might help bridge the gap between regional conventional defeat and US willingness to employ its nuclear forces, especially at scale'.[67]

64 See Tokuchi Hideshi, *Japan's new national security strategy and contribution to a networked regional security architecture*, Center for International and Strategic Studies, Washington DC, 23 June 2023, https://www.csis.org/analysis/japans-new-national-security-strategy-and-contribution-networked-regional-security. For Australia see Paul Dibb and Richard Brabin-Smith, *Deterrence through denial: a strategy for an era of reduced warning time*, Australian Strategic Policy Institute, Canberra, May 2021 https://www.aspi.org.au/report/deterrence-through-denial-strategy-era-reduced-warning-time. For background see Adam Lockyer and Michael D Cohen, 'Denial strategy in Australian strategic thought', *Australian Journal of International Affairs,* January 2017, 71(4): 423-439. https://www.tandfonline.com/doi/abs/10.1080/10357718.2017.1278743

65 Colby, *The Strategy of Denial*, pp 279–79.

66 Colby, *The Strategy of Denial*, pp 279–80.

67 Colby, *The Strategy of Denial*, p 281.

Assessing denial: defence and deterrence in American strategy for Asia

Colby's book has been widely praised as one of the most important books of American military strategy so far published in the twenty-first century. Despite the outbreak of Russia's war of aggression on Ukraine, Colby's focus on China and Asia has been influential in both American and allied circles. In 2022, the Biden Administration adopted integrated deterrence as the centrepiece of its defence strategy embracing three logics – denial, resilience and cost imposition – all of which feature in *The Strategy of Denial*. Similarly, in 2023, Australia formally adopted a strategy of denial as the central pillar of its defence strategy.[68]

Yet despite its influence, *The Strategy of Denial* has not been without its critics. Perhaps the most thoughtful critique of Colby has come from the Quincy Institute for Responsible Statecraft in a report entitled *Active denial: a roadmap to a more effective, stabilizing, and sustainable defense strategy in Asia.* The Quincy Institute report, penned by ten authors, includes contributions by noted Asia specialists such as Eric Heginbotham, Mike Mochizuki and Michael D Swaine.[69] While agreeing with the main thrust of Colby's work on adopting a defence by denial approach, the authors suggest Colby's interpretation of denial is flawed by being drawn from an overly simplistic distinction made by early nuclear strategists, such as Glenn Snyder and Thomas Schelling, between 'deterrence by punishment' and 'deterrence by denial'.[70]

The Quincy authors believe a strategy of denial must be posited against the longer history of strategies of control, notably the dichotomy between sea control and sea denial. By failing to understand the differences between conventional strategies of denial and control, Colby's strategic prescriptions that 'have more in common with offensive or control-oriented strategies than they do with denial approaches'.[71] His approach is more akin to a 'control theory of conventional deterrence' that requires the kind of cost imposition on China's mainland military

68 US Department of Defense, *2022 National Defense Strategy of the United States of America*, Washington DC, Department of Defense, October 2022, pp ii-iv; pp 2–8; on a strategy of denial see, Defence, *National Defence: Defence Strategic Review*, Australian Government, Canberra, 2023, ch 7. https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review

69 Quincy Institute, *Active denial: a roadmap to a more effective, stabilizing, and sustainable defense strategy in Asia,* Quincy Paper No. 8, The Quincy Institute for Responsible Statecraft, Washington DC, June 2022. https://quincyinst.org/report/active-denial-a-roadmap-to-a-more-effective-stabilizing-and-sustainable-u-s-defense-strategy-in-asia/

70 Quincy Institute, *Active Denial*, p 72; Schelling, *Arms and Influence*, passim; Glenn H Snyder, *Deterrence by Denial and Punishment,* Center for International Studies, Princeton, Princeton NJ, 1959.

71 Quincy Institute, *Active Denial*, pp 73–74.

installations that risks inadvertent escalation. The authors of *Active Denial* go on to suggest:

> The [Colby] control strategy advances a theory of conventional deterrence by denial that requires the United States to fight through and negate China's A2/AD [anti-access and area denial] capabilities and seize decisive advantage as quickly as possible. This approach to conventional deterrence carries a high risk of inadvertent escalation because it requires the destruction of sensitive, nuclear-relevant capabilities to enable effective US conventional military operations.[72]

Yet, the proponents of *Active Denial* fail to note that conventional military control strategies remain unrefined in American military doctrine. Such approaches were advanced in the 1960s by American military intellectuals such as Henry Eccles, Herbert Rosinski and JC Wylie but failed to capture the attention of the American armed forces.[73] The criticisms of Colby by the Quincy Institute authors concerning control strategy remain abstract and underdeveloped, although they are certainly worthy of further debate.

It is most important to note that Colby's work is premised not on deterrence per se, still less a 'control theory of conventional deterrence'. Rather the study is concerned with the requirements for waging a limited war in Asia by denial defence as, primarily, a warfighting strategy. Deterrence is always best conceived as an outcome, not a starting point, of a military strategy. From this perspective, a strategy of denial 'makes deterrence of war in the first place, though by no means easy, more feasible'.[74] Colby's *The Strategy of Denial* concentrates on providing a conceptual structure for thinking about force structure, force posture and operational concepts for military effectiveness. If a strong warfighting posture yields deterrence, then, so much the better, but at all times a military force must be structured to fight and prevail in war. Peace, the author notes, does not come from unfocused readiness or from un-historical thinking. Rather peace comes from military establishments that maintain a constant warlike temperament and from leaders and strategists who understand the seriousness of statecraft and are always alert to the ever-present possibility of armed conflict.[75]

72 Colby, *The Strategy of Denial*, p 234.

73 For a discussion see Echevarria, *War's Logic: Strategic Thought and the American Way of War*, ch 7.

74 Colby, *The Strategy of Denial*, p 151.

75 Colby, *The Strategy of Denial*, p 283.

Conclusion

With its ruthless clarity and innovative concepts of differentiated credibility, cornerstone balancing and reinvigoration of the theory of limited war, Colby's *The Strategy of Denial* deserves the widest possible readership among policy specialists, strategic analysts and military practitioners. It is the kind of book earlier military intellectuals such as JFC Fuller and BH Liddell Hart would have admired for its erudition and icy grasp of realities. *The Strategy of Denial* is an uncomfortable and cold-blooded book but an essential one. It is about waging a Sino-American war in the Indo-Pacific and how the United States and its allies and partners might prevail in any contest of arms. Its value to theorist and practitioner alike is its willingness to situate military power within a strategic framework for a theory of victory around which an American-led coalition of Asian powers can resist any bid for Chinese regional hegemony.

Colby's book is a stark reminder of the fragility of Asia as a region where an immature security architecture exacerbates great power competition. There are few crisis management mechanisms, confidence-building measures or arms control protocols in Asia that can serve to keep US–China strategic relations on an even keel. Yet, *The Strategy of Denial* has not received the attention it deserves in Australia – perhaps because unlike so many studies of Asian security by Western scholars it is not situated in fashionable international relations theory – but in a hard-headed strategic analysis for military practice. One suspects Colby's recommendations that Australia embrace a forward defence into South-East Asia by assisting in the defence of the Philippines and Taiwan will disturb some commentators. Such 'steel skeleton' propositions may only induce a sense of dissonance, if not despair, in those Australian circles that still cling to the illusion of China as a benign, status quo great power.[76]

It is fitting that *The Strategy of Denial* cites Carl von Clausewitz's celebrated warning:

> The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into something that is alien to its nature. This is the first of all strategic questions and the most comprehensive.[77]

76 For a discussion see Paul Monk, 'The case for AUKUS', *The Weekend Australian*, 10 June 2023.

77 Carl von Clausewitz, *On War* (Michael Howard and Peter Paret eds trans), Princeton University Press, Princeton NJ, 1976, p 88 cf.; Colby, *The Strategy of Denial,* p vii.

Colby's lucid analysis of the likely parameters of military conflict in Asia reinforce the warning of the Prussian sage. While it will always be more preferable to avoid or deter the catastrophe of war in Asia, if it must be fought, then, Elbridge Colby has performed the task outlined by Paul in the New Testament: To ensure that he who blows the trumpet give a certain, not an uncertain, sound in summoning all those who must prepare for battle.[78]

78 1 Corinthians, 14:8, *King James Bible*, HarperColllins, London, 2020.

Reviews

War's logic: strategic thought and the American way of war

Antulio J Echevarria II

Cambridge University Press, 2021

Reviewed by Andrew Zammit

The American way of war has always mattered greatly for Australia. Decisions made in the United States over when, and how, to wage war have long influenced Australia's military fortunes. The American way of war has in turn depended on how American strategic thinkers have understood the logic of war, which has itself evolved over time in response to global politics, technological developments, intellectual trends and changes in American society. Antulio Echevarria's new book, *War's Logic: Strategic Thought and the American Way of War*, guides us through this tumultuous intellectual history. The book's value lies both in what it reveals about American military thought and what it reveals about the logic of war itself.

War's Logic explains the ideas of 12 American strategic thinkers from the late nineteenth century to the end of the twentieth century, who he divides into four groups.

First are the *traditionalists*, Alfred Thayer Mahan and Billy Mitchell, both military veterans and tireless enthusiasts of sea power and air power, respectively. Despite the different eras they wrote in, with Mahan 39-years older, they both brought Swiss theorist Antione Jomini's core principles, prioritising offensive action, into their own military domains.

The second group are the civilian *strategy intellectuals*, Bernard Brodie, Robert Osgood, Thomas Schelling and Herman Khan. They gained prominence after the Second World War and prioritised the need to avoid a third world war given the transformative impact of nuclear weapons. New understandings of war's logic followed: Brodie and Osgood's promotion of limited war; Schelling's view of war as bargaining and strategy as coercion (deterrence and compellence); Kahn's advocacy of a nuclear escalation ladder that could itself function as a form of bargaining. Yet the apparent failure of limited war doctrine in Vietnam, along with the easing of Cold War tensions in the 1970s, reduced the influence of the civilian strategists.

This prompted the rise of Echevarria's third group, the *military intellectuals,* Henry Eccles, J C Wylie, and Harry

Summers. While the strategy intellectuals had been concerned with how to prevent military escalation (despite coercively wielding the threat of war for the purpose of bargaining), the military intellectuals restored space to focus on how to conduct war for the purpose of winning.[1] Both Eccles and Wylie advanced the idea of strategy as control, an approach that Echevarria credits with synthesising both the traditionalist emphasis on offensive action with the civilian strategist emphasis on constraining military action to ensure it serves the purposes of policy. All three thinkers, particularly Summers, played a role in the post-Vietnam Clausewitz revival within the United States military.[2]

The final group are the *operational artists,* John Boyd, William Lind and John Warden. These thinkers gained prominence in the 1980s and 1990s, when the idea that nuclear weapons made conventional war obsolete had lost its hold. Their priority was to create the intellectual foundations for the United States to once again wage war successfully. They restored the seemingly archaic idea of winning wars through winning battles, but with new twists. Boyd and Lind, respectively best known for the OODA Loop (observe, orient, decide and act) and Fourth Generation Warfare, sought to prioritise indirect attacks through the idea of manoeuvre warfare, where synchronised air and ground operations could use speed and surprise to overcome the need for grinding attrition. Warden promoted a different version of manoeuvre warfare based on air power, which paved the way for ideas such as effects-based operations. Like Eccles, Wylie and Summers, this group focused more on the conduct of war itself than the control of war through policy, but they went far further. In Echeverria's account, Boyd, Lind and Warden's ideas of prioritising operational art amounted to an intellectual insurrection.

This is the story that *War's Logic* tells, and Echevarria is well suited to tell it. He is a professor at the US Army War College and brings both military and scholarly credentials to the formidable task of synthesising a nation's strategic thought across a contentious century. Readers of this journal

1 Antulio J Echevarria II, *War's Logic: Strategic Thought and the American Way of War* Cambridge University Press, 2021, p 164. As Echevarria puts it: 'The strategy intellectuals had maintained military strategy was too important to be left to military practitioners. The military intellectuals countered by saying strategy was too important to be left to academics.'

2 Echevarria II, *War's Logic*, pp 128–29, pp 141–42, pp 143–65.; Lukas Milevski, 'Clausewitz at the nexus of competing Fashions in Western strategic thought', *Journal of Strategic Studies*, 2023, 46(4): 787–808, published online 13 June 2023, https://doi.org/10.1080/01402390.2023.2220930. This is consistent with other accounts Lukas Milevski has credited the original 1943 edition of *Makers of Modern Strategy*, edited by with Edward Mead Earle, with first introducing Clausewitz into US military thinking, while noting both the influence of Summers and that it was not until the 1970s that Clausewitz's theories became ascendant. Of course, an essential role was played by Michael Howard and Peter Paret with their 1976 translation of *On War*, but the discussion in *War's Logic* is concerned specifically with the role of American thinkers.

will likely be familiar with Echevarria's work, as he has authored multiple books on military strategy and is a regular contributor to *Military Strategy Magazine* and similar outlets.

War's Logic is highly theoretical while also engagingly biographic, treating each thinker as a whole person with a life story that shaped their intellectual practice. It has three major strengths that distinguish it from other histories of strategic thought. The first major strength is that *War's Logic* is not just another book on strategy; it is a book on *American* strategic thinking. Echevarria places great weight on what sort of America each of these thinkers lived in. He delves deeply into their intellectual development in light of changes in America's social structure through periods of industrialisation, racial conflict and social progress. This story stretches from Mahan writing at a time when America was deeply divided but expanding economically and geographically (incorporating many more states in the Civil War's aftermath) through to Boyd and Lind writing in the era of post-Vietnam malaise. The book covers changes in America's role in the world, as well as changes in each era's dominant scientific ideas and understandings of what intellectual inquiry requires, and how they shaped American military thinking.

One consequence of Echevarria's willingness to truly place American strategic thought in the context of American society is that the book does not shy away from politics; yet at the same time, it does not reduce everything to politics. Echevarria describes Mahan and Mitchell as 'egregiously imperialist and racist' but does not suggest that this renders their strategic thought irrelevant.[3] He is similarly frank about the far-right politics of Boyd and Lind. This is remarkably rare, as books on military strategy often avoid these sorts of overt discussions of politics.[4]

The second major strength of *War's Logic* is that it is no mere outline of other people's ideas. Echevarria presents his own distinctive take on the value and relevance of each body of American strategic thought and does not hide whether he agrees or disagrees with the arguments of any of these 12 thinkers. In fact, he is willing to render judgement on their entire intellects. He describes Mahan's intellect as 'seldom innovative or daring'.[5] He critiques Brodie for being 'as ever, conspicuously stingy with specifics'.[6] He describes Schelling's most famous

3 Echevarria II, *War's Logic*, p 11.

4 James R Holmes, *A Brief Guide to Maritime Strategy*, Naval Institute Press, 2019. For example, James R Holmes' book on maritime strategy tends to allude to Mahan's politics rather than discuss them as directly as Echavarria does.

5 Echevarria II, *War's Logic*, p 14.

6 Echevarria II, *War's Logic,* p 69.

intellectual contributions as based on 'risky assumptions' that 'contributed to the failure of his theories in practice',[7] and argues that Schelling's 'transition away from strategic theory was more successful than his transition into it'.[8] He describes Summers' most famous work, *On Strategy*, as 'far-ranging but superficial',[9] and the ideas of Boyd and Lind as based on 'wishful thinking and on the selective study of history'.[10]

This is what makes *War's Logic* not only a book about how 12 thinkers have understood the logic of war, but a book that itself makes a contribution to explaining the logic of war. Echevarria's own sympathies appear to lie most strongly with the modernist military intellectuals, and specifically with Eccles and Wylie rather than Summers. He proposes that their concept of strategy as control, was 'qualitatively superior' to Schelling's concept of compellence.[11] Yet he does not suggest that the military intellectuals' contributions require overturning the ideas of the civilian strategists; he instead praises Eccles and Wylie for 'partially' achieving 'a workable synthesis between traditional core principles and those of the strategy intellectuals'.[12]

The third major strength is that *War's Logic* provides a consistent framework to illuminate the intellectual foundations and unique contributions of each thinker, making this a far more cohesive book than many other histories of strategic thought. The framework centres on each thinker's fundamental assumptions about the nature of war (underlying attributes that remain consistent across all contexts) and the character of war (evolving attributes that differ depending on the context).[13] For war's nature, he divides the work of these 12 thinkers into four distinct paradigms (traditional, political, modern and material) depending on their view on war's fundamental principles and relationship to policy.[14] For war's character, he examines how each thinker addresses up to four distinct dimensions of war, 'political, military,

7 Here he acknowledges the larger strategic community may disagree. Echevarria II, *War's Logic*, p 91.

8 Echevarria II, *War's Logic*, p 92.

9 Echevarria II, *War's Logic*, p 218.

10 Echevarria II, *War's Logic*, p 191.

11 Echevarria II, *War's Logic*, p 124.

12 Echevarria II, *War's Logic*, p 163.

13 Echevarria II, *War's Logic*, p 2, p 192. Echevarria notes that this framing (of war's nature as constant and its character as ever changing) in itself represents a change, as this framing only became widespread among military theorists after the 1980s. He describes this framing is useful but not above scrutiny, stating that this 'dichotomous construct of war's nature and character, though flawed, enables military professionals to study warfare systematically'.

14 Despite the similar terms, these four paradigms do not neatly line up with the four groups of thinkers (traditionalists, strategy intellectuals, military intellectuals and operational artists) the book covers.

economic and psychosocial'.[15] Each group of thinkers similarly varies in how much emphasis they place on each of these dimensions.

Mahan and Mitchell represent the traditional paradigm of war's nature, which saw war as a violent extension of human nature with fundamental principles that favour offensive action. Both men promoted an Americanised understanding of Antoine Jomini's core military principles of 'concentration, offensive action, and decision by battle'.[16] Their understanding of war's character prioritised the military and economic dimensions, particularly evident in Mahan's emphasis on the role of sea power in protecting trade.[17] Mahan also gave some consideration to the political dimension, and little to what Echevarria calls the psychosocial dimension. Mitchell predominantly focused on the military dimension, particularly the changing role of technology.

The strategy intellectuals – Brodie, Osgood, Schelling and Khan – represent the political paradigm of war's nature. This sees war as a tool of policy that can be wielded rationally but also as a dangerous force that poses the constant risk of escalating out of control if the instincts of the armed forces and the passions of the public are not held in check. The strategy intellectuals saw war as a coiled spring, which could expand uncontrollably if released, and were deeply wary of traditionalist claims about fundamental principles of war that favour the offensive. Brodie devoted great intellectual effort to rebut Jominian understandings of the value of offensive action and argued it had no place in a world of nuclear weapons.[18] However, Kahn proved a partial exception, as his concept of the escalation ladder posited many rungs on which policy could regain control. Despite their scepticism of talk about war's principles, the strategy intellectuals in effect proposed new principles of war, albeit in a policy-constrained form through doctrines like limited war. On their understanding of war's character, Echevarria argues that Schelling's 'strategic perspective remained binary, focused on two dimensions, political and military' and that this broadly applied to all four strategy intellectuals.[19] With the partial exception of Khan, they tended to neglect the psychosocial dimension of war, despite the proliferating counterinsurgency literature of the era and the popular turmoil within American society itself.

15 Echevarria II, *War's Logic*, p 224.

16 Echevarria II, *War's Logic*, p 13.

17 Echevarria II, *War's Logic*, p 224. Echevarria notes that Mitchell's emphasis on the economic dimension was more limited, with airborne freight being less important to the United States economy at the time.

18 Echevarria II, *War's Logic*, pp 66–71.

19 Echevarria II, *War's Logic*, p 91.

The military intellectuals – Eccles, Wylie and Summers – represent the transition from the political to the modern paradigm of war's nature. All military men, they waged a counterrevolution against the dominance of the civilian strategists and what they saw as an excessive subordination of the principles of war to the principles of policy. However, this did not mean a return to the dominance of Jominian ideas from the era of Mahan and Mitchell. Instead, this new generation of military intellectuals drew more from Clausewitz than Jomini, by being more reflective and less prescriptive.[20] Their understanding of war's character emphasised the political dimension less than the strategy intellectuals had, but without neglecting it entirely. They sought to give the military dimension the attention they felt it deserved, after it was sidelined during the civilian strategist heyday of the early Cold War. The military intellectuals also focused on the psychosocial dimension of war, a necessity for understanding the role (and lack) of popular support for the Vietnam war. They focused on the military dimension first and the psychosocial dimension second, while still allowing room for the political dimension.

Echevarria similarly places the operational artists, Boyd and Lind, broadly within the modern paradigm of war's nature; although they had a different understanding of war's character, which left little space for the political dimension. Their elevation of operational art played a part in the creation of the concept of an operational level of war, which was later accused of undermining the bond between tactics and strategy.[21] Boyd and Lind also allowed greater space for the psychosocial dimension of war, but Echevarria shows how this was tied into their ultra-conservative political views, where they portrayed multiculturalism and diversity as sinister forces undermining America. Of the 12 thinkers, only Warden represents the material paradigm of war's nature, marked by the faith that technological advancement would allow the United States to overcome the friction and uncertainty that others saw as inherent in warfare. This paved the way for ideas of effects-based operations as part of the revolution in military affairs, where the story told in *War's Logic* ends.

20 Echevarria II, *War's Logic*, p 217.

21 Echevarria II, *War's Logic*, p 223. Echevarria writes that: 'Incorporating the operational level of war into American doctrine was expected to remedy the problem of operationalizing policy's guidance, and it partially did so; but it also further enabled the decoupling of strategy from tactics'. However, Michael Evans has provided a detailed account of the backlash against the operational level of war during the War on Terror years in this journal, and notes that the backlash may itself be facing a backlash in light of renewed conventional challenges including the Russian invasion of Ukraine. See: Michael Evans, 'Of Young Turks and Mustache Petes: deconstructing the operational level of war, review of *On Operational Art and Military Discipline*', *Australian Journal of Defence and Strategic Studies*, 2022, 4(1): 135–50.

The book is an impressive intellectual history that is hard to find fault with. One question that can be raised is whether its critical judgements of the early Cold War civilian strategists are well-founded. It is one thing to argue today that Brodie, Osgood and Schelling's fears of military escalation were excessive; it would have been harder to argue that at the time, shortly after the horrors of the Second World War and when nuclear brinkmanship was an entirely new experience. Yet Echevarria's critical take on these thinkers is nonetheless a welcome corrective to portrayals of them as emblematic of the golden age of strategic studies, as is his effort to raise the profile of Eccles and Wylie's contributions to strategic thought.

The decisions over which thinkers to include can also be questioned, but a book as ambitious as this can always be accused of omissions. Going into such depth on a selection of individual thinkers inevitably means leaving other thinkers out. Echevarria addresses this by providing some brief discussions, where relevant, of other influential individuals like Samuel Huntington and Henry Kissinger.[22] However, one omission does stand out: Andrew Marshall. A contemporary of Boyd, Marshall worked at RAND before moving to the Pentagon and running the Office of Net Assessment from 1973 to 2005. He answered directly to the Secretary of Defense over many different administrations and proved greatly influential as a proponent of the revolution in military affairs, the concepts of net assessment and competitive strategies, and helped to shape American strategic thought.[23] It is difficult to see why Lind was deemed so influential as to be included while Marshall was barely mentioned.[24] After all, Marshall had the ear of multiple US Defense Secretaries and a lasting legacy within the field of strategic studies. Lind, most well-known as a proponent of 'Cultural Marxism' conspiracy theories, tends to be either forgotten within strategic studies or

22 Echevarria II, *War's Logic*, p 9. Echevarria notes that twenty-first century thinkers are outside the scope of his study.

23 Thomas G Mahnken, 'Andrew W Marshall: in memoriam', *War on the Rocks,* 8 April 2019, https://warontherocks.com/2019/04/andrew-w-marshall-in-memoriam/. Thomas Mahnken, a protégé of Marshall's, has written that: 'Even more pervasively, Marshall's influence can be felt in the evolution of the field of strategic studies. In fact, the field would not exist in the shape that it has without Marshall's influence. Over the decades, he spurred the study of intelligence and deception, military innovation, and military effectiveness, among other topics. He also nurtured the careers and sponsored the research of several generations of scholars, including Dmitry Adamsky, Graham Allison, Mie Sophie Augier, Eliot A Cohen, Jacqueline Deal, Aaron Friedberg, Edward Luttwak, Williamson Murray, Stephen P Rosen, and Martin van Creveld, and many others.'

24 Echevarria II, *War's Logic*, p 201. Andrew Marshall is not listed in the index and the only mention of him I found in the book was on a single page. In contrast, two chapters in *The New Makers of Modern Strategy* devote extensive attention to Marshall. Hal Brands (ed), *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, Princeton University Press, 2023.

treated as an embarrassment.[25] A chapter on Marshall instead of Lind could have improved this book, yet Echevarria may well have answer for this, as deep thought appears to have gone into the decisions over what to include and exclude.

War's Logic should be of interest to students of strategy and military theory, and not just within the United States. The shifts in the American way of war, traced by Echevarria throughout the twentieth century, always had consequences for allies and partners, and this continued to be the case in the twenty-first century, particularly for Australia. The US-led overthrow of the Taliban in 2001, through the use of air power, special operations forces (with an Australian contingent) and local insurgents, seemingly vindicated the 'light footprint' ideas that grew out of the revolution in military affairs that Echevarria's book ends with. The 2003 invasion of Iraq, though far from a light footprint, similarly involved ideas of manoeuvre warfare and the concept of an operational level of war, most evident when General Tommy Franks demanded that the Deputy Defence Secretary, Paul Wolfowitz, 'Keep Washington focused on politics and strategy. Leave me the hell alone to run the war'.[26] Yet these once dominant ideas lost their sheen as the US became bogged down in both Afghanistan and Iraq, prompting a backlash against technology-centric visions of victory and against the posited operational level of war.[27]

This created room for the rise of population-centric counterinsurgency (COIN) concepts, which sat well with Australia's military history in South-East Asia and its more recent experiences in stabilisation and peacekeeping operations in the Pacific.[28] Population-centric COIN itself soon became unpopular, after its apparent success in Iraq was not replicated in Afghanistan. Elements of both the revolution in military affairs and the COIN revolution came together in the United States Joint Special Operations Command counter-network operations led by Stanley McChrystal in Iraq, often referred to by terms such as 'industrial counter-terrorism' and 'find, fix, finish, exploit,

25 Brands (ed), *The New Makers of Modern Strategy*. For example, Lind does not appear at all in the index of *The New Makers of Modern Strategy*.

26 John Kiszely, 'The political-military dynamic in the conduct of strategy', *Journal of Strategic Studies*, 2019, 42(2): 235–258, p 240, published online 23 February 2019. https://doi.org/10.1080/01402390.2018.1497488; Patrick Bury, 'US special forces transformation: post-Fordism and the limits of networked warfare', *International Affairs*, 2022, 98(2): 587–607, p 588, published online 7 March 2022. https://doi.org/10.1093/ia/iiab213

27 Evans, 'Of Young Turks and Mustache Petes'.

28 Mark O'Neill, *Confronting the hydra: big problems with small wars*, Lowy Institute Paper 28, Lowy Institute for International Policy, Double Bay NSW, 30 October 2009, https://www.lowyinstitute.org/publications/confronting-hydra-big-problems-small-wars; Peter Dean and Tristan Moss, *Fighting Australia's Cold War: The Nexus of Strategy and Operations in a Multipolar Asia, 1945–1965*, ANU Press, Canberra, 2021.

analyse, disseminate' (or F3EAD).[29] The Australian Defence Force participated heavily in such operations in Afghanistan through the Special Operations Task Group (under which the war crimes examined by the Brereton inquiry were perpetrated with lasting impacts for both the victims and for Australia's military reputation).[30]

The US subsequently sought to disengage from the wars in Iraq and Afghanistan and restore great power competition to its military thinking. This was initially through uncertain initiatives like the Pacific Pivot (derailed in part by a return to the Middle East to fight Islamic State) and the Third Offset Strategy but eventually solidified into new defence and national security strategies that prominently involved Australia through the AUKUS partnership. In short, when and how the United States wages (or plans for) war has always mattered far beyond America and will continue to prove consequential for allies like Australia.

War's Logic is a valuable guide to the intellectual history behind the American way of war, told through Echevarria's distinctive take on 12 strategic thinkers.

The echidna strategy: Australia's search for power and peace

Sam Roggeveen

La Trobe University Press, 2023

Reviewed by Andrew Maher

In the notes of his recent book, *The Echidna Strategy*, Sam Roggeveen writes that his latest work grew from a book review he undertook in 2019. Such is the value of a review; it sparks a critical consideration of the assumptions that may be hidden and unchallenged until an analytical eye unearths a new line of inquiry. I hope that I might be able to do the same.

The premise of his book responds to a theme of questioning assumptions,

29 Jon R Lindsay, 'Reinventing the revolution: technological visions, counterinsurgent criticism, and the rise of special operations', *Journal of Strategic Studies*, 2013, 36(3): 422–453, p 440. https://doi.org/10.1080/01402390.2012.734252

30 Ben Mckelvey, *Find Fix Finish: From Tampa to Afghanistan – How Australia's Special Forces Became Enmeshed in the US Kill/Capture Program*, HarperCollins Australia, 2022. and also our most secretive. In the craggy mountains, green belts and digital battlefields of Afghanistan, concepts of heroism and decency started to warp and Australian special forces operators moved apart on the question of how the war should be conducted - with tragic consequences. For more than a decade, Australia's special forces (SASRBen Mckelvey makes the argument that the US-led counter-network operations incentivised killing for its own sake and helped establish the context for the Australian war crimes.

a somewhat Churchillian intention to 'pester, nag, and bite'. Roggeveen argues that 'Australia's public debate on defence policy is marked by a shortage of expertise on China's military'. Australia's decision to embark upon nuclear submarine acquisition, in response to a perceived Chinese threat is, to him, illogical and yet under-examined.[31] Roggeveen's argument is that the Australian commitment through the AUKUS partnership to acquire nuclear submarines brings us closer to the United States at a time when we should be considering a more independent policy. He thus contributes to the Australian national security debate by questioning the general azimuth of defence policy. Whether the military practitioner, policymaker or academic observer agrees with Roggeveen's upfront argument, its logic and his conclusions, the questioning of Australian defence logic and considering other options, is the true value in this work.

Indeed, I found myself sharpening the pencil for a vicious attack on the logic outlined in the first chapter. I had been asked to write a review of *The Echidna Strategy* due to my recent examination of resistance strategy for the AJDSS, describing the Estonian 'indigestible hedgehog', Swiss 'porcupine', and Singaporean 'poisonous shrimp', to which the metaphor of an Australian echidna strategy seemingly subscribed.[32] In this context, at first I struggled with Roggeveen's logic. But by the conclusion of his book, I came to realise his intent was not that Australia follow these resistance strategy metaphors. Whether he knew he was intimating these international models or not is unclear.

Rather, Roggeveen uses the echidna metaphor to evoke a defensive strategy in which the Army fields mobile, land-based anti-ship missiles; large naval vessels are abandoned; and Australia pursues closer relations with Indonesia.[33] He argues that our coming national security strategy must respond to a highly complex environment. Therefore, some deep thinking is needed before sins of omission (or worse, commission) advance a strategic response to our environment that might actually prove counterproductive.

However, as Sir Hew Strachan recently reminded an audience at the

31 Sam Roggeveen, *The Echidna Strategy: Australia's Search for Power and Peace*, La Trobe University Press, Collingwood VIC, 2023, p 215.

32 Andrew Maher, 'A 'Plan B' for the ADF: supporting resistance as a strategy', *The Strategist*, ASPI, 21 July 2023. https://www.aspistrategist.org.au/a-plan-b-for-the-adf-supporting-resistance-as-a-strategy/; Andrew Maher, 'Resistance strategy: lessons from the Russo-Ukraine conflict for Europe, Australia and the Indo-Pacific', *Australian Journal of Defence and Strategic Studies*, 2023, 5(1):127–147. https://www.defence.gov.au/research-innovation/research-publications/australian-journal-defence-and-strategic-studies-vol-5-number-1

33 Roggeveen, *The Echidna Strategy,* p 6, p 186, p 196.

Australian Defence College, if military power were the sum of platforms and budgets, the Americans should have never failed to achieve their military objectives. Yet, Vietnam and Iraq (amongst other examples) show that there are limits to such power. Strachan's point is that morale, tactics and other intangibles matter. This view is not always apparent from what seems to be an increasingly technology and platform-focused Department of Defence.

The examination of military power should therefore take a more nuanced approach, as scholars like Stephen Biddle suggest. A modern military system must manage cover, concealment, dispersion, suppression, independent manoeuvre, combined arms, reserves and concentration: all of these variables matter.[1] In short, analysis of military power must consider *how* one fights, not only the tools *with which* one fights. This nuance is an oversight in Roggeveen's analysis.

Roggeveen's logical gaps in analysis erode his intent of a compelling strategy. For example, he states: 'At first glance, it is difficult to see how China's [ideological] fears could translate into a direct threat to American democratic institutions'.[2] This is a most curious statement to be made in an age of election interference and misinformation.

Indeed, the Chinese Communist Party's (CCP) strategic subversion of Hong Kong ended the 'one country, two systems' without a shot being fired, over a comparably short timeframe of some 30 years. Despite the importance of this exercise in political warfare (particularly given what it implies in a Taiwan reunification case), these Chinese actions in Hong Kong weren't mentioned.

Roggeveen thus has not interrogated unorthodox or unconventional forms of state power. Instead, his consideration jumps straight to the options for the employment of military platforms in conflict scenarios and thereby oversimplifies a number of critical issues relevant to today's examination of what a national security strategy needs to do.

By using a predominantly conventional military lens, Roggeveen argues that 'America's core security interests are not [physically] threatened by China's rise … Even China cannot threaten America's territory'.[3] If we are only considering a conventional military amphibious operation, then yes, Roggeveen is correct.

Yet, it could be argued China presently threatens at least six core American

1 Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle*, Princeton University Press, Princeton and Oxford, 2004.

2 Roggeveen, The Echidna Strategy, p 33.

3 Roggeveen, *The Echidna Strategy,* p 16, p 18.

values using non-military means. CCP subversion – manifest in extrajudicial police stations, Confucius Institutes, and cyber misinformation and disinformation – erodes the deeply held American value of freedom of speech.

Such actions inhibit the appropriate functioning of a democratic government – a second deeply held value.

Nor is such subversion geographically limited in scope; CCP penetration of the Americas, and particularly its prominent demonstration of influence in Cuba, rubs up against the now 200-year-old Monroe Doctrine – a third value.

Remember also that a sizeable segment of the American public embraces their right to bear arms to be able to resist a tyrannical government – a fourth value.

Through subversion, the tyrannical government of the CCP is threatening the very essence of what it is to be a state; to secure *all* of those who are protected by that state from intimidation and harm – a fifth value.

Audaciously, the CCP subverts not only at a global scale, but particularly within the United States – the 'city upon a hill' – a sixth value: American exceptionalism.

It is hard to view actions that clearly attack America's core values as *not* threatening America's core interests.

The same argument holds vis-a-vis Australian interests. Roggeveen again takes a conventional mindset to the issue of Australian defence by noting that:

> the chances of China ever invading Australia, bombing it or isolating it economically are extremely low … [yet] despite the absurdity of the prospect of a Chinese invasion of Australia, this doesn't quite exhaust the topic.[4]

Here, Roggeveen makes the same mistake of ignoring the daily subversion, economic coercion and united-front tactics the CCP employs to undermine Australian interests, despite having recognised that the alternate employment of conventional military power makes little sense.

Roggeveen is thus right to question the pervasive narrative within the Department of Defence and military commentary, suggesting imminent exercising of military power well beyond China's land borders. Yet by failing to address the unconventional elements of power the CCP is presently using, he inadvertently downplays the more potent threats posed by Chinese power; those that are not constrained by overland logistics chains. If debt-trap diplomacy secures for the Chinese government, the exclusive use of a port facility in the South Pacific, from which PLA forces are smuggled into

4 Roggeveen, *The Echidna Strategy,* p 72, p 92.

position in force, enabled with air defence and anti-ship missile capabilities, a *fait accompli* invasion might conceivably be attained. Such a scenario is hardly inconceivable if certain corrupt officials lend support – or turn a blind eye to – such infringement of their sovereignty. Indeed, some South Pacific partners, with nothing more than constabulary forces to defend themselves, might be incapable of resistance. Robust analysis of such grey-zone threats and the implications that might flow from seemingly innocuous 'salami slices' is a notable deficiency in Roggeveen's analysis.

We live in an age of systemic responses. A particular strength of Roggeveen's analysis is that he highlights this point when noting that Australia adapted to economic coercion from China – new markets were found. This dynamic was most prominently featured in the Russia–Ukraine war, where cyber-militias, corporations and states at a global scale responded to unburnished use of force. This is a critically important point that must be considered in the context of Australian strategy; we should expect emergent behaviour that might support Australian defence – a 'crowdsourcing' dynamic.[5] The implication is then, how might such a dynamic be strengthened?

Do not let my criticisms overshadow my opening point. Sam Roggeveen has done a magisterial service to the creation of the Australian national security strategy. He has questioned, nagged and bitten into the logic of acquiring nuclear submarines. He calls out an incomplete Defence narrative and demands better explanations for the incredibly expensive decisions Australia's people are, and will continue to be, asked to bear. This is the primary strength of this book and its value to the national security policymaker, academic and practitioner.

To sum up, *The Echidna Strategy* is an essential requirement for the well-rounded Australian strategist. One might not agree with the breadth of Roggeveen's assertions but nonetheless, certain Defence strategic assumptions were well-challenged and plausible alternate positions are well-argued within this book, regardless of whether one agrees with the complete thesis as advanced. And this is *The Echidna Strategy's* value – it ensures that Australian strategic discourse pauses before the pen is put to paper on Australia's 2024 National Security Strategy. A dialogue is necessary, to which Roggeveen admirably places a marker on a dissenting view to the dominant Defence narrative.

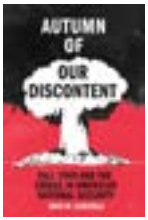
5 Major General Richard Angle, Lieutenant Colonel Samuel Hayes and Captain Tommy Daniel, 'Crowdsourcing: changing how nations resist', *Military Review* website, November 2022. https://www.armyupress.army.mil/journals/military-review/online-exclusive/2022-ole/hayes/

Autumn of our discontent: Fall 1949 and the crises in American national security

John M Curatola

US Naval Institute Press, Annapolis Maryland, 2022

Reviewed by Dave Lowe



One of the main threads of historiography dealing with the United States in the postwar world is the rise of national security as a totalising concept shaping US defence, foreign and economic policies and, indeed, the American way of life. In *Autumn of our Discontent*, John Curatola, professor of military history at the US Army School of Advanced Military Studies at Fort Leavenworth (Kansas) drills into the events of autumn 1949. These were months when a particular conjunction of alarms, assessments and unknowns about Soviet intentions and capabilities joined with internal struggles between services in the US to result in a 'national security' crisis.

This is a book for those who enjoy diving deeply into a discrete time period, and who are interested in the close-up views of policymakers grappling with developments of profound proportions. Key characters, such as Nitze, James Forrestal and Curtis LeMay, stride through its pages, benefiting from Curatola's eye for a quotable quote. Curatola also has a great eye for detail, chance and human uncertainty and makes excellent use of both archival sources and the rich trail of secondary sources dealing with the rise of the US national security state.

Suddenly worried that they had less time to organise than they had guessed, US policymakers sought a basis for security planning that was consistent with the global implications of atomic warfare and their fears for defending their nation. Reminding us of these fears and the multilayers of debates beneath them, Curatola shows that the expansionist, missionary quality of some subsequent policy documents needs to be read in the rich context of autumn 1949.

The end point for Curatola is NSC 68, the crucial document of 1950 championed by the State Department's Paul Nitze, at the expense of the more moderate and nuanced apostle of 'containment', George Kennan. NSC 68 received huge status and prescience by the official outbreak

of the Korean War in June 1950. The events of autumn 1949, argues Curatola, were key factors behind the development of NSC 68. This is an uncontroversial claim, but Curatola fleshes it out well. The more we are encouraged to zero in on autumn 1949 in isolation, the more novel the argument becomes. But Curatola pulls back from going too far in this direction, suggesting that the events of autumn were 'key in the germination of a more assertive national security policy'.[6]

With the Soviet detonation of their own atomic bomb at the end of August 1949, well in advance of US expectations, a mushroom cloud figuratively hung over all of the hurried deliberations concerning the so-called 'loss' of China, as Chiang Kai-shek vacated the mainland to Taiwan, and the internal feuding between the US Navy and Air Force over which service was best placed to safeguard US defence in this dangerous new world. The internal hearings determining whether money would flow to super-sized aircraft carriers or the troubled long-range B-36 bomber were brutal for their inter-service animosity. One of the richest features of this book is its detail on such matters, reminding us just how desperately the different services were competing for the status of being able to take a nuclear war to the Soviet Union and win.

Coinciding with these exchanges was bitter debate over China, both before and after the publication of the China White Paper,[7] charting the sorry story of the US attempts to prop up Chiang, in August 1949. Although the building of a thermonuclear weapon, the 'Super', suddenly gained momentum, it would be some time before the Americans felt that they had a nuclear stockpile affording them some supremacy in any imagined nuclear exchange, so these debates mattered. Nitze, arguing for fission-based and fusion-based weapons, as well as substantial conventional forces, was unafraid of the costs and the US defence budget quadrupled. The effectiveness of the Soviet command economy, bringing all resources to bear behind a new war effort, demanded an in-kind response.

6 John M Curatola, *Autumn of Our Discontent*, US Navy Institute Press, Annapolis Maryland, 2022, p 19. https://www.usni.org/press/books/autumn-our-discontent

7 Formally known as the *United States Relations with China, with Special Reference to the Period 1944–1949*, published in August 1949 by the United States Department of State. For more see the US Department of State Office of the Historian website, https://history.state.gov/historicaldocuments/frus1949v09/d1443

Autumn of Discontent is less a book for those wanting to take a wider lens to the question of how national security grew as a concept and how it infiltrated so many levels of American governance, including the major political parties. Recent publications on the rise of the concept of national security have encouraged us to look harder at the late 1930s and the multiple challenges Roosevelt faced, both in generating a more holistic approach to citizen's security during a time of depression and efforts to prepare a nation for involvement in what would be called 'total war' against the Germans, Japanese and their allies. In other words, fewer historians are treading a path of the lead-up to NSC 68 than previously. However, this book is a reminder that detailed research into the late 1940s still yields rich pickings on the implications of nuclear weaponry held by two major powers.

Mahan, Corbett, and the foundations of naval strategic thought

Kevin D McCraine

Naval Institute Press, 2021

Reviewed by Alastair Cooper

Rear Admiral Alfred Thayer Mahan and Sir Julian Corbett were not the first people to consider the role of maritime power as an element of a broader national power; many acclaimed individuals preceded them. But Mahan and Corbett most certainly did provide the modern analytical basis for understanding and describing the role of maritime power. The two historians were rough contemporaries and while they worked independently, with different purposes, their analysis and conclusions are similar and generally complementary. Since their writing in the late nineteenth and the early twentieth centuries, technology has progressed far beyond what

Mahan and Corbett could ever have anticipated, yet their work remains the fundamental intellectual framework. Many people have reviewed and added to Mahan and Corbett's work, but nothing has replaced them. Mahan's *The Influence of Sea Power on History, 1660–1783* and Corbett's *Some Principles of Maritime Strategy* have a level of influence matched by few; perhaps only Clausewitz's *On War* could be considered to have had a greater impact. Yet, like *On War*, Mahan's and Corbett's works are more often quoted than read. There is a reasonable excuse for Mahan's work in particular, which is written in a style contemporary readers could well find difficult, and his thought evolved significantly over a long career; however, the same does not hold true for Corbett, *Some Principles* is comparatively concise and coherent.

So, why not just read *Some Principles of Maritime Strategy*?

Well you should. And Mahan (and Clausewitz) too. But you will likely get more out of it if you have read Kevin McCranie's *Mahan, Corbett and the Foundations of Naval Strategic Thought* (Foundations) first. As much as Mahan and Corbett's work has transcended subsequent generations, they were both firmly focused on their contemporary problems. Understanding the context in which they wrote as well as the substance of their analysis is an exceptionally valuable outcome, particularly if you intend to apply that understanding to current matters of maritime strategy. It is one great strength and a singular value of McCraine's work.

Kevin McCraine is the Philip A Crowl Professor of Comparative Strategy at the US Naval War College. His research and teaching experience over decades is apparent in this book on Mahan and Corbett. *Foundations* provides a rock solid, summarising account of their work, clear and useful comparative analysis, and a superbly useful description of their circumstances and purposes. His command of the original material, of maritime power and naval strategy, and of naval history more generally is evident.

The book is very well organised, with a logical structure. Matched with McCraine's clarity of expression and an excellent contents section, the book is on the whole easy to read. But it can also dip into for specific issues. The bibliography is comprehensive, as would be expected and the endnotes similarly useful. This reviewer wishes otherwise excellent publishers like the Naval Institute Press would move back to footnotes, which would enable the depth and quality of research to be more easily used and followed. With that relatively minor quibble, the book is well produced.

At over A$80 for a hardcopy (and much more via some retailers) and no less than A$43 so far as this reviewer

could find, *Foundations* is reasonably expensive for an individual. However, for Australian Defence Force students seeking a really good understanding of two of the primary works relevant to Australian national strategy, it is hard to go past this book. It is possibly the most efficient, time-saving means to meaningfully read into Mahan and Corbett. For institutional libraries, particularly those dealing with any form of professional military education, this book should be a standard reference, available at scale.

In summary, *Mahan, Corbett, and the Foundations of Naval Strategic Thought* is an excellent book.

Strongly recommended.

Obituary

In memoriam

Rear Admiral James Goldrick, AO, CSC, RAN (Rtd)

8 August 1958 – 17 March 2023

David Stevens

With the passing of Rear Admiral James Goldrick, Australia has lost its most accomplished and internationally acclaimed naval historian and maritime strategist.

Born in Sydney on 18 August 1958 to Peter and Caroline Goldrick (nee Purcell), James Vincent Purcell Goldrick was a child of the Cold War. The youngest of three children, James Goldrick's formative years were subject to regular removals as the family followed their father, a naval aviator, from appointment to appointment. Peter Goldrick had entered the Royal Australian Naval College (RANC) in January 1941 as a 13-year-old and eventually retired as a captain. James Goldrick early on expressed his own desire to join the Service and in 1974 entered the RANC with 30 other 15 and 16-year-olds from Australia and New Zealand. Already a top secondary student, he matriculated with high marks, and in 1976 began an Arts degree at the University of New South Wales' Kensington campus.

Goldrick not only sailed through his degree with ease, but also found time to begin writing his first book. An interest in naval history had started well before 1974, but he now felt ready to make an original contribution. Widely read and always ready to look further afield, by 1978 he had established a steady correspondence with Captain Stephen Roskill, RN, a senior research fellow at Churchill College and best known on both sides of the Atlantic for his three-volume official history on the Second World War at sea. Roskill, quickly recognising Goldrick's potential, encouraged his desire to look anew at the first six months of the Great War in the North Sea and provided him with introductions to both the up-and-coming and more established scholars of the era. As Roskill wrote to one of the latter in 1979:

> I have recently given your address to a very intelligent and energetic young Australian naval officer called James Goldrick. He is coming here in December and wants very much to meet you. I shall be putting him up in my College for a few days and hope that you can bear yet another exploiter of your brains. I'm sure that you will like him and he has the sort of mind which is unusual in any navy and which I think should be encouraged.

Goldrick established his career in naval history at a critical juncture, the discipline then being transformed by a number of landmark studies that demonstrated how naval policy and operations could no longer be described without regard to the political, economic and technological environments within which navies must operate. Goldrick benefitted greatly from his association with those leading these new avenues of research, and he cited Paul Kennedy, Jon Sumida and Eric Grove as chief among his early influencers. When, in 1984, the US Naval Institute Press published his first book, *The King's Ships Were at Sea,* it generated comparable notice. *Navy International*'s reviewer describing the volume as 'a first class story and a valuable contribution to naval history with many lessons for the present day … This really is one book that anyone interested in sea power should read'. The ability to show how past challenges could help inform the decisions facing modern navies, became one of the hallmarks of Goldrick's work, as did his understanding of the eternal problem of reconciling resources with requirements. As one senior US Navy admiral confirmed after Goldrick's passing, his 'insights really were exceptionally helpful for those officers having to deal with today's problems'.

An active member of the Australian Naval Institute, by his early twenties Goldrick had also become an elected council member of the Navy Records Society and regularly published articles on naval policy and history in the leading English-language professional journals. From 1982 to 1991, for instance, he and his close friend and classmate Peter Jones wrote an annual 'Asian navies review' for the US Naval Institute's *Proceedings*. From 1978 until 2022, Goldrick also provided a regular 'Letter from Australia' to the UK's *Naval Review*, the longest continuing correspondence of its kind in that journal's more than a 100-year history. From the start these articles showcased Goldrick as a remarkably mature observer of Australian and regional maritime affairs. Always clear and concise, the 55 letters offer a unique insight into the RAN's development from the perspective of a progressively more senior and experienced naval professional and deserve to endure as an important historical resource. In step with his deepening professional understanding, Goldrick likewise took to contributing directly to international debates on issues of common maritime interest. He twice won the *Naval Review*'s Guinness Prize for best article and later in life won the US Chief of Naval Operations Naval History Essay Contest. His submission, which sought to highlight lessons applicable to current and future challenges in the South China Sea, had the title: 'Anti-access for sea control: the British mining campaign against Germany in the First World War'.

Goldrick's external academic pursuits raised eyebrows within the RAN early on in his career; but his obvious intellect and natural courtesy also generated

considerable respect, and he always found supporters among those who counted. No significant obstacles were ever put in his way, and his various appointments and rapid advance to senior rank confirm that the RAN recognised his talents. His early sea time included watchkeeping training with the Royal Navy and a posting as executive officer of the heavy landing craft HMAS *Tarakan*. After returning to the United Kingdom and specialising as an anti-submarine warfare officer, he next completed a two-year exchange in the Type 42 destroyer HMS *Liverpool*. The exchange culminated in 1986 with an operational peace patrol in the South Atlantic, one of the first RAN officers allowed by the Australian Government to do so in the aftermath of the Falklands War. Back in Australia, Goldrick served as commanding officer of the patrol boat HMAS *Cessnock*, executive officer of the guided-missile destroyer HMAS *Perth* and twice commanded the guided-missile frigate HMAS *Sydney*. Reflecting on this experience, Goldrick observed that your first command is about proving yourself to yourself, and that every subsequent command is about helping others prove themselves to themselves. In between these periods at sea, he served ashore as the naval aide-de-camp to the Governor General, inaugural research officer to the then Chief of Naval Staff, Vice Admiral Michael Hudson, and officer in charge of the RAN's Principal Warfare Officer training and tactical development cell. These appointments did much to hone Goldrick's practical understanding of the constraints under which the RAN worked and, more than this, encouraged his personal quest to get the Navy 'to understand itself'.

Since graduating from UNSW Goldrick had been awarded a Master of Letters from the University of New England and, rather than completing a staff course in Australia, in the mid-1990s he received approval to spend 12 months as an international research fellow at the Advanced Research Department of the US Naval War College. Under the supervision of Professor John Hattendorf, another long-time friend and mentor, Goldrick began a major study into the post–Second World War development of the navies of India, Pakistan, Bangladesh and Sri Lanka. Published in 1997 as *No Easy Answers*, the book examined how navies functioned when working with very limited resources in less than ideal circumstances and brought him far greater recognition in South Asia. More importantly for the RAN's intellectual growth, the time at Newport also helped clarify Goldrick's thinking on the development of modern naval and maritime strategy. In 1999, after his promotion to captain, he became director of the Navy's think tank the Maritime Studies Program. At the direction of the then Chief of Navy, Vice Admiral Don Chalmers, Goldrick drafted the first edition of the RAN's capstone doctrinal publication, *Australian Maritime Doctrine*. Published in 2000, and designed to be accessible by professionals and public alike, the book brought together the key concepts and themes of sea power, placed them in

an Australian context and explained them in a clear and straightforward fashion. Equally important for the other two Services, it described how the RAN operated as part of a joint and integrated ADF. For his 'outstanding achievement', Goldrick received the Conspicuous Service Cross in the 2001 Queen's birthday honours list. An acknowledgement in the book's second edition in 2010 confirmed how important Goldrick's influence remained:

> His ground-breaking and thorough explanation of the Royal Australian Navy's unique role in national security has largely stood the test of time and remains central to this edition. When considering the revised text, Rear Admiral Goldrick's contribution to the Navy's intellectual development should never stray far from the reader's mind.

After leaving what had since been renamed the Sea Power Centre, Goldrick moved once more into the Chief of Navy's office, this time as Chief Staff Officer to Vice Admiral David Shackleton. Though the two developed an extremely trusting relationship, the terrorist attacks on New York and Washington in September 2001 brought about Goldrick's early return to sea and the operational highlight of his naval career. From March to June 2002, he served as commander of the three-ship RAN Task Group in the Arabian Gulf and, in rotation with an equivalent ranked US Navy officer, commander of the multinational Maritime Interception Force that enforced UN economic sanctions on Iraq. Goldrick revelled in the complexity of the role and, in a nod to one of his early twentieth-century heroes, Sir Julian Corbett, put into practice the maritime strategic concepts of sea control and close blockade. During his time in command, coalition forces greatly reducing the flow of smuggled oil and, in recognition of his broader success, on 26 January 2004 he was made a Member in the Military Division of the Order of Australia (AM) for 'exceptional command and leadership'.

Before finally retiring from the Service in 2012 as a rear admiral, Goldrick's senior appointments included Director General of Military Strategy, Commandant of the Australian Defence Force Academy (2003–2006), Commander of Border Protection Command (2006–2008), Commander of the Australian Defence College (2008–2011) and then a return to ADFA as acting Commandant from August 2011 to March 2012, during a particularly difficult period for the institution. Between 2005 and 2008, he also found time to be president of the Australian Naval Institute. He made important contributions in all his appointments, but it was at ADFA and the Defence College that he had the greatest impact on those who would become the ADF's future leaders. Always even-tempered and approachable, he displayed a genuine interest in the individual development of each student and did all he could to guide and support them. Fittingly, the

University of NSW awarded Goldrick the degree of Doctor of Letters *honoris causa* in 2006 for 'eminent service to the community'. The citation for his appointment as an Officer of the Order of Australia (AO) on 26 January 2013, meanwhile recorded that 'his distinguished service and devotion to duty in senior command positions have been critical to the effectiveness of the Australian Defence Force now and in the future'. In reporting the honour, the *Canberra Times* described Goldrick as a pre-eminent defence educator and one of the city's most respected former naval officers.

In retirement, Goldrick remained in international demand as a writer and speaker, but also chose to return regularly to the Defence College as a lecturer. Moreover, he maintained his interest in the welfare of Service personnel by serving as a member of both the Defence Force Remuneration Tribunal and the Defence Honours and Awards Appeals Tribunal. In truth, however, retirement simply allowed him to pursue his interests in naval history and naval strategy with even greater fervour. Among a number of ongoing associations, he became a founding member of the Naval Studies Group at UNSW Canberra, a visiting fellow at the Sea Power Centre – Australia, a visiting fellow at the Lowy Institute and a professorial fellow of the Australian National Centre for Ocean Resources and Security at the University of Wollongong. During 2015, he also spent six months as a visiting fellow at All Souls College, University of Oxford. Two books arose out of this last major period of overseas research. Published in 2015, the first, *Before Jutland: The Naval War in Northern European Waters August 1914 – February 1915*, was an extensive revision of his earlier, *The King's Ships Were at Sea*. Its companion, *After Jutland: The Naval War in Northern European Waters June 1916 – November 1918,* followed in 2018.

The international naval and maritime community received both volumes with great praise, the British Society for Nautical Research awarding Goldrick their prestigious Anderson Medal for *Before Jutland*. The judging panel found that the volume exhibited exemplary research and that the author 'has a manifest understanding of the nature and problems of command at sea and [that] his analysis and his judgments, when he makes them, are acute'. Not to be outdone, in 2022, the president of the US Naval War College, Rear Admiral Shoshana Chatfield, awarded Goldrick the Hattendorf Prize for distinguished original research in maritime history. In discussing Goldrick's impact on naval history, Chatfield noted:

> Your acute historical understanding and your professional naval experience have worked in complementary and interlocking ways that has informed your scholarship in vividly recreating and understanding naval history in a period of rapid technological

> change. We honor you today as a highly successful professional naval officer with an intimate and authoritative knowledge of how navies work, both in the past and in the present.

On his return from this last trip to the United States, Goldrick felt unwell and so began many rounds of treatment first for lymphoma and then for leukaemia. He met the successive medical hurdles with politeness to the caring staff and great fortitude, but tragically did not go into remission and passed away in the Clare Holland Hospice in Canberra on 17 March 2023 aged 64. Goldrick is survived by wife Ruth, sons Owen and Edmund and sister Frances and will long be remembered by the many others he encountered as a friend, mentor and shipmate. His final manuscript, a multi-author work examining Australia's Chiefs of Naval Staff, their careers, achievements and the challenges they faced, awaits publication.

Australian Journal of Defence and Strategic Studies

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