

The deepening Australia–India geostrategic relationship

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The relationship between Australia and India is rapidly evolving, influenced in part by the changes across the Indo-Pacific region. This vast area, where more than half the people of the world live, is moving towards a new regional order, but what this will be is not yet decided. Australia and India intend to use their agencies to shape a favourable future for themselves in terms of greater prosperity and enhanced security. This paper initially reviews the contemporary Australia-India relationship with its newly created institutions and rapidly developing interactions. The second section considers some key present-day issues regarding prosperity where cooperation would be mutually advantageous: cyber, hydrogen energy, rare earths, and critical and emerging technology. The third section deliberates on security collaboration through discussing the two nations' strategic focuses, the possibilities for increased defence interaction and a potential defence technology cooperation approach. The final section considers the longer-term aspirations of both nations and concludes that Australia may need to be as pragmatic as India. Future progress will require effort and with both nations' limited resources, some tough prioritisations may be necessary.

1 Introduction

Australia and India are both continental-sized nations within the Indo-Pacific region, whose shores are connected to the Indian Ocean. For some decades, it seemed that the relationship between the two was limited to simply Commonwealth, cricket and curry. Times have changed. Geostrategic forces, globalisation and the rush of technology are now overcoming geographic separation and pushing the two nations into an ever-closer political, economic, diplomatic and military embrace.

This shift has not happened slowly. Instead, the last five years have seen an accelerating flurry of activity between the two nations and between them and other regional and extra-regional states. The most important of these for both Australia and India has arguably been

the formation of the Quad, a formal but rather loose arrangement that unites the United States (US), Japan, India and Australia.

The Quad remains a work-in-progress but has quickly become a dynamic grouping with considerable ambition. Prime Minister Narendra Modi, speaking recently, declared that the Quad is now a 'force for global good', with a positive and practical agenda that will advance prosperity and security in the Indo-Pacific and beyond (Press Trust of India, 2021).

This paper focuses on the evolving relationship between Australia and India in this time of Indo-Pacific dynamism. This immense area, where more than half of the world's population reside, is moving towards adopting a new regional order. What that will be, however, remains undecided. Australia and India thus intend to use their agencies to shape a favourable future. This paper accordingly takes a forward-leaning stance and

considers the forthcoming decade¹.

The first section of this paper reviews the current Australia–India relationship with its newly created institutions and rapidly developing interactions. The second section considers some key contemporary issues concerning prosperity where cooperation might deepen the relationship: cyber, hydrogen energy, rare earths, and critical and emerging technology. The third section deliberates on security collaboration through discussing the two nations' strategic focuses, the possibilities for increased defence interaction and a potential defence technology cooperation approach. The final section considers the different longer term aspirations of both nations and concludes that Australia may need to be as pragmatic as India, future progress will require effort, and tough prioritisation may be necessary due to both nations' limited resources.

2 A quickly deepening rapport

In June 2020, Australia and India upgraded their relationship to the level of a Comprehensive Strategic Partnership (CSP). This strategic-level agreement is built on a vision of an open, free, rules-based Indo-Pacific with common national interests and shared values of democracy and the rule of law. The CSP is remarkably wide-ranging and covers many diverse areas for cooperation, including science, technology, maritime security, defence, economics, agriculture, education, culture and tourism (Department of Foreign Affairs and Trade, 2020). Australia and India simultaneously decided to upgrade their Secretaries 2+2 dialogue (Defence and Foreign Affairs) to the ministerial level. Their first meeting was held in New Delhi in September 2021 (Payne, 2021b).

The CSP's first major achievement is arguably the Australia–India Economic Cooperation and Trade Agreement (AI ECTA), the first trade agreement signed by India with a developed economy in over a decade. Earlier work on a trade agreement had stalled in 2015, but with the CSP in place, negotiations recommenced in September 2021 and led to the AI ECTA being signed by the two country's trade ministers on 2 April 2022. Such agreements often take approximately a decade to conclude, and the AI ECTA's extraordinarily rapid progression was considered by Prime Minister Scott Morrison to be 'built on our strong security partnership and our joint efforts in the Quad, which has created the opportunity for our economic relationship to advance to a new level' (Tehan, 2022).

The two countries are also members of several regional and global institutions and sometimes coordinate their positions on specific issues. These include the Indian Ocean Rim Association, the G20 intergovernmental forum and three ASEAN-led groups: the

ASEAN Regional Forum, ASEAN Defence Ministers' Meeting Plus and the East Asia Summit. There are further connections through two mini-lateral groupings: the Australia–India–Japan dialogue, with the most recent involving trade ministers, and the Australia–India–Indonesia dialogue, recently promoted to foreign and defence minister level (Jaishankar, 2020, pp18–19). While these various institutions may overlap, they all strengthen regional cooperation and trust building.

Given this increasing contact, there have been several specialised arrangements between Australia and India, three of which particularly pertain to geostrategic matters. First, in June 2020, the Mutual Logistic Support Arrangement and the Defence Science and Technology Implementing Arrangement were concluded. The logistics arrangement aims to improve military interoperability through enhanced cross-servicing, enabling more complex military-to-military engagement and faster responsiveness to regional humanitarian disasters. The science and technology arrangement provides a solid framework for Australian and Indian defence research collaboration, supporting maintaining a technological edge and the development of new defence capabilities (Reynolds, 2020).

Second, in April 2021, the Supply Chain Resilience Initiative was launched by the Australian, Indian and Japanese trade ministers. The initiative aims to create resilient supply chains through risk management, continuity plans, trade and investment diversification, enhanced utilisation of digital technology and the sharing of best practices (Department of Foreign Affairs and Trade, 2021b).

Third, in November 2021, the establishment of an Australia–India Centre of Excellence for Critical and Emerging Technologies was announced. This centre will provide a practical platform for Australia and India to cooperate in shaping technology governance that aligns with their shared values and advances an open, inclusive, rules-based Indo-Pacific. The centre will also work to reduce delays in policy and regulatory changes needed for emerging technologies, promote such technologies and serve as a prototype for an envisioned Indo-Pacific critical technology network (Critical Technologies Policy Coordination Office, 2021).

In the defence domain, there is also an increasing pace of activity. The bilateral Australia–India Exercise (AUSINDEX) has been held every two years since 2015. AUSINDEX 2019 was the largest ever Australian defence deployment to India and involved four warships, P-8 maritime patrol aircraft and over 1,000 navy, army and air force personnel. A Collins-class submarine also participated (Pyne, 2019). The 2021 exercise, while affected by the COVID-19 pandemic, saw two Indian warships, Indian Naval Ship (INS) Shivalik and

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Kadmatt, operate from Darwin and exercise with Australian warships, P-8s and fighter aircraft (Department of Defence, 2021c).

Australia warships also participated in the large multilateral Exercise Malabar in 2020 and 2021, working with Indian, US and Japanese naval vessels (Department of Defence, 2021b). India agreed to Australia's ongoing participation in this major exercise at the inaugural Foreign and Defence Ministers' 2+2 meeting.

In 2018, the Indian Air Force undertook its first participation in Exercise Pitch Black, a major multinational air defence exercise in Darwin. India deployed four Sukhoi Su-30MKI fighters, a C-17 strategic transport and a C-130 tactical transport aircraft. The exercise also included the first mid-air refuelling of an Indian fighter aircraft by an Australian air-to-air refuelling aircraft, a KC-30A (Jaishankar, 2020, p21). These exercises highlighted that the Australian and Indian militaries are becoming increasingly interoperable in operating C-17, C-130 and P-8 aircraft and Chinook heavy-lift helicopters.

Ongoing personnel and training exchanges are less apparent. Both nations, for instance, send senior officers to their respective staff and defence colleges. In March 2022, these connections were extended with the establishment of General Rawat India-Australia Young Defence Officers' Exchange Program. General Bipin Rawat was India's first Chief of Defence Staff, appointed in January 2020 and killed in a helicopter crash in December 2021. The program aims to enhance professional military contacts and facilitate the exchange of ideas and operational experiences (NRI Affairs News Desk, 2022).

Against this backdrop of an accelerating bilateral relationship has been the sudden revitalisation of the Quad. The Quad's origins date back to the December 2004 tsunami, the associated humanitarian crisis and the cooperation it engendered. After some membership turmoil, the Quad was reconfigured and recommenced in 2017 as a senior officials meeting. By 2021, it had grown into a significant international meeting at the national leadership level and hosted by the US at the White House. The Quad has become a diplomatic network where Australia, India, Japan and the US engage through four principal channels: leaders, foreign ministers, senior officials and experts.

From initially lacking purpose, through unease about possibly being a quasi-military pact, the Quad now has a declared galvanising 'spirit'. Drawing on this, the four nations' leaders have defined the Quad as being committed 'to promoting a free, open rules-based order, rooted in international law to advance security and prosperity and counter threats to both in the Indo-Pacific and beyond' (The White House, 2021a). Such a broad vision means that today's Quad is not narrowly focused; instead, it covers an expansive set of issues,

including vaccines, critical and emerging technology, cybersecurity, climate change, infrastructure, maritime security, countering disinformation, counterterrorism, and humanitarian assistance and disaster relief (Department of Foreign Affairs and Trade, 2021a).

Such diversity of interests reflects that, in the contemporary international system, these issues are interconnected and cannot be addressed separately. The Quad thus offers a forum where each partner can share assessments of the region's emerging challenges and discuss possible initiatives that might be implemented individually, collectively or even in conjunction with other states outside the group.

This forum demonstrates that the Quad is, by design, highly flexible. It is not being institutionalised and there will be no permanent secretariat. Nor are there plans to expand the Quad's membership, although some other countries have apparently displayed interest. Instead, the intention is to allow the four countries to develop patterns of cooperation as they seek to advance prosperity and security, regionally and beyond (Bagchi, 2021).

3 Fast-tracking prosperity

In the Australia-India relationship and the wider Quad association, there is an increasing emphasis on both defending prosperity and building it. In today's globalised world, there are non-traditional threats that can potentially adversely affect prosperity at the individual, national and global level. These threats to be defended against include cyber issues, global warming and politically instigated supply chain disruptions. On the other hand, building future prosperity requires involvement in technological innovation and access to trusted, resilient global supply chains.

Cyber technology is deeply embedded across the modern world in all societies and economies. However, its rapid development and spread have meant the laws, regulations and norms governing its use and future development have lagged behind (Basu et al., 2021). India has so far been non-committal in the major contemporary debates on international cyber norms and, accordingly, less influential than it could be in elaborating new laws and regulations (Basu et al., 2021). India has the global heft to shift the debate from adopting the norms that some authoritarian states would prefer, and prefer and become a rule maker rather than a rule taker. Cyber norms is an area where Australia and India could collaborate in the 'spirit of the Quad'.

Beyond norms, cybersecurity remains a significant problem affecting all information technology developers and users. Keeping ahead of cyber threats is greatly helped by information sharing. Australia and the US can share through the Five Eyes network, but India and Japan are outside this. A framework for effective

cybersecurity information sharing between the Quad partners could be usefully established (Takahashi et al., 2021, p20).

Another non-traditional threat is global warming. Accordingly, the Quad Climate Working Group has been recently established to act as a platform for cooperation on climate change mitigation, adaptation, resilience, technology, capacity-building and finance (Australian Government, 2021). A particular focus area is hydrogen energy, a technology of direct interest to Australia and India. Hydrogen can be converted into a storable and high-efficiency fuel that can be used in fuel cells to generate electricity and heat. Cooperation is envisaged across the hydrogen value chain, including its production, transportation and use.

Australia and India are both undertaking high-quality research into hydrogen energy, with India more advanced than Australia in related policy development. Beyond government, Australian and Indian companies are both actively exploring production possibilities along similar timelines, predicting about 5–10 years to reach initial hydrogen production (Liao et al., 2021).

Collaboration opportunities concerning hydrogen energy and related to prosperity are readily apparent, with some useful overlaps with the security objective. Moreover, this would link to other research within Quad working groups concerning supply chains, including a Quad Shipping Task Force examining the major ports of Los Angeles, Mumbai Port Trust and Sydney (Botany) and Yokohama to form a decarbonised shipping network (The White House, 2021b).

Trusted, resilient supply chains are a prominent issue in the importation of rare earths, which are increasingly being used in advanced technology manufacturing. Australia and India have significant reserves of rare earths but have only limited processing capabilities. There may be value in collaborative research partnerships that devise more cost-effective and environmentally sound methods of rare earth extraction and processing (Ray et al., 2021, p23). Australia's long-established Australia–India Strategic Research Fund could provide seed funding (Australian Trade and Investment Commission, 2021, p18).

Beyond rare earths, in June 2020, Australia and India signed a memorandum of understanding (MOU) on Cooperation in the field of Mining and Processing of Critical and Strategic Minerals that supports not only research but also building trusted and resilient supply chains (Department of Industry, Science, Energy and Resources, 2020). India largely relies on imports for many critical minerals, including cobalt, lithium, germanium, rhenium, beryllium, niobium, tantalum, vanadium, strontium, nickel and rare earths.

In contrast, Australia has significant reserves of many of these minerals available to be developed to form part of an integrated mining and mineral processing supply

chain. Australia, for example, has the world's largest concentration of electric battery minerals, including lithium, cobalt, nickel and manganese reserves (Australian Trade and Investment Commission, 2021, pp23–27). The Supply Chain Resilience Initiative, noted earlier, could further contribute and combine with the 2020 MOU in developing a reliable supply chain for critical minerals involving Australia and India.

Stressing building prosperity, and less connected to non-traditional threats, is the new Quad Critical and Emerging Technology Working Group. Strategically important technology areas are termed 'critical' technologies, defined by Australia's Foreign Minister as 'technology that can significantly enhance or pose risks to ... national interests, including ... prosperity, social cohesion and national security' (Payne, 2021a).

The Critical and Emerging Technology Working Group's early tasks include the following: facilitating coordination on technology standards development; encouraging cooperation on telecommunications deployment, equipment supplier diversification and when developing future telecommunications technology; monitoring trends and opportunities concerning critical and emerging technology developments, including biotechnology; and convening dialogues on critical technology supply chains (Australian Government, 2021).

An initial focus for collaboration is the 5G wireless network, which, with high data throughput and very low latency, is essential for fully implementing the fourth industrial revolution and Internet-of-Things' devices and systems. However, the centrality of 5G in a modern networked society has raised concerns about its vulnerability to cyber-attack, intrusion and spying. Although the initial solution appeared to be using only trusted suppliers, the option of open radio access networks (open-RAN) has taken hold in the last two years. Many functions of a network using vendor-specific hardware are then undertaken by vendor-agnostic software, a process called 'network virtualisation'. Advantages include better interoperability, supply chain resiliency, improved security and probable cost savings (Rasser & Riikonen, 2020).

The Quad countries are well placed to collaborate in actively assisting 5G open-RAN development, acquisitions, rollouts and use across the Indo-Pacific and globally. Open-RAN supporters see the technology as meeting the 'spirit of the Quad', attuned to democratic values and norms and countering so-called techno-authoritarianism and foreign state surveillance (Curtis & Rasser, 2021, pp2–4). Further downstream, 6G is now being actively developed in several countries; early design involvement by Australia, India and the Quad could avoid the cybersecurity problems of 5G (Rasser et al., 2021, pp11–16).

Terrestrial 5G networks connect to other critical global communications infrastructure, particularly seabed

cables across which 95 per cent of intercontinental global data transmissions flow. There are concerns about possible espionage or sabotage, but no easy technological solutions are apparent. Some advocate Quad members adopt a multifaceted approach involving public diplomacy to warn of the dangers, targeted industry collaboration incentives, government financing, cable monitoring and strengthened legal frameworks (Curtis & Rasser, 2021, pp5–7). Seabed cables appears to be another area where Australia and India can use the Quad Critical and Emerging Technology Working Group to advance and protect their common national interests.

4 Hastening security

There has been a flurry of recent activity between Australia and India concerning prosperity, arguably accelerated and strengthened by the increasing importance of the long-term security interests of both nations. These interests only partly overlap, although they are significant enough to closely engage the two countries.

India's upgrade of its 1992 Look East policy in late 2014 to the more activist Act East policy has noticeably repositioned India's geostrategic focus. While the Look East policy focused more on the South Asia region, the Act East policy places ASEAN at the centre of the Indo-Pacific, takes in the Pacific Islands and Australia, and 'incorporates the entire region from the east coast of Africa to the western Pacific up to the US' (Singh, 2020a). This is an expansive vision.

In the Pacific Ocean, practicalities associated with India's relatively limited economic and military power constrain India's attention mainly to the geographically closer ASEAN region. Importantly, this includes the strategically important waters between the Strait of Malacca and the Taiwan Strait and, crucially, the South China Sea (Nagda, 2020).

In contrast, it is in the Indian Ocean where India has the greatest capabilities and capacities to act. Across the western and eastern Indian Ocean littorals, India has fostered valuable diplomatic, economic and military links with many nations, proclaiming itself as the net security provider for the Indian Ocean region. This involves cooperating with friendly nations to improve maritime security and make the region more prosperous. As part of this strategy, India aims to be the first responder in a crisis. India now regularly conducts humanitarian and disaster relief (HADR) exercises with its Indian Ocean neighbours, deepening HADR cooperation and coordination, sharing its expertise and building local capabilities (Sagar, 2020). This is a strategy of building friends across the Indian Ocean who can then be relied upon to provide Indian naval and air deployments access and support.

The Indian Ocean has steadily become a part of

modern India's national identity, how it sees itself relative to others. Taking a more utilitarian perspective, the Indian Ocean is the only practical way India can undertake merchandise trade with the wider world, given its geographic position. For India, the Indian Ocean in its entirety will always take geostrategic precedence over the Pacific (Basu, 2021).

Australia's strategic gaze is starkly different. South-East Asia will always be the nation's key geostrategic area, with the South-West Pacific effectively considered in geostrategic terms—perhaps with some hubris—as an extension of Australia. The rise of the Indo-Pacific terminology has, however, served to promote the Indian Ocean in Australia's strategic consciousness. In matters of security, Australia historically perceived the Indian Ocean as being stabilised by the British and then by the US, after United Kingdom (UK) forces withdrew in the 1970s. In recent years, with the US' focus shifting to the Pacific, Indian Ocean security is now becoming more a matter for its littoral states, with India prominent as the region's most powerful state.

Australia's Indian Ocean gaze is mainly limited to the eastern half, although that reaches south to the MacDonal and Heard Islands, and Antarctica. Most attention is given to along the Indonesian archipelago, Christmas and Cocos Islands and then into the Bay of Bengal. The maritime security of this area and freedom of passage across it is an abiding Australian interest. It is in this part of the Indian Ocean that the most powerful security alignment between Australia and India is apparent (Wesley, 2021).

5 Advancing defence interaction

The overarching framework for Australia–India defence interoperability is mostly in place and proven in large maritime exercises like AUSINDEX and Malabar. The time seems favourable to be more ambitious, particularly in the air domain.

The Indian Air Force has deployed to Australia's Pitch Black exercise with expectations this will become a regular event. India and the US Air Force have held several Cope India air exercises, the last in West Bengal (Press Trust of India, 2018). The RAAF could perhaps join and deploy Super Hornets and a KC-30A tanker, mirroring Indian participation in Pitch Black. The involvement of an E-7A Wedgetail AEW&C aircraft might also be useful.

In April 2022, the Indian Navy deployed a P-8 to Darwin to exercise cooperatively with a RAAF P-8. Air Vice-Marshal Stephen Meredith stated that this deployment indicates 'the deepening trust between India and Australia's defence forces and our enduring commitment to work together on common security interests' (Department of Defence, 2022). The two countries could consider extending this by undertaking reciprocal

P-8 maritime surveillance patrols through each other's airfields.

Australia is upgrading the Cocos Islands airfield for P-8 deployments, while India is upgrading the runways at INS Kohassa and Baaz on North Andaman and Great Nicobar Island, respectively (Price, 2020; Singh, 2020b). Maritime patrols through such airfields would deepen interoperability and significantly increase maritime domain awareness across the strategically important Malacca, Lombok and Sunda straits. Until INS Kohassa or Baaz are ready, Australian P-8s could operate from the Veer Savarkar International Airport at Port Blair on South Andaman island, as Indian P-8s occasionally do now.

Similarly, the Royal Australian Navy could usefully develop a deeper relationship with the Indian Coast Guard. The Navy is in the early stages of bringing 12 PV80 Arafura Offshore Patrol Vessels (OPV) into service. These 1,640-tonne vessels built by Leurssen Australia will undertake constabulary missions, maritime patrol and response duties, replacing the much smaller 300-tonne Armidale- and Cape-class patrol boats. The Indian Coast Guard has considerable OPV experience with some 26 OPVs in service, some quite large in being twice the Arafura class's tonnage. Both services could gain through cooperating in this potential new field for collaboration.

Another new area with potential for collaboration might be joint warfare. India's army, navy and air force have considerable individual expertise and experience, though some consider this is less joint than it could be (Hashim, 2021, pp225–227). Australia, having much smaller individual services, embraced jointness several decades ago. For example, Australia's Chief of Defence Force was first appointed in 1984, whereas India's comparable position was established in 2020 (Philip & Dutta, 2019). India could leverage Australia's considerable experience in joint organisational structures, staff processes and doctrinal matters to avoid repeating Australia's earlier missteps and to gain possibly useful insights from Australia's perceived successes.

At the recent 2+2 Ministers' meeting, Australia invited India to fully participate in Talisman Sabre in 2023 (Peri, 2021). This is Australia's largest combined and joint, multilateral military training exercise, held biennially in Queensland. Talisman Sabre 21 included amphibious forces, brigade-sized land forces and considerable air assets from Australia, the US, Canada, Japan, South Korea, the UK and New Zealand (Department of Defence, 2021a). Being part of Talisman Sabre would enhance the joint warfare capabilities of the Quad partners overall. Some consider this crucial as joint warfare seems a potential key area of military strength relative to regional competitors (Hashim, 2021, p233).

Finally, the above possibilities would be more achievable and effective if an agreement on secure commu-

nications could be formalised. This would appear a sensible next step in the overall building of formal Australia–India defence cooperation agreements, given the collaboration engendered in signing the mutual logistics supply arrangement in 2020. India already has a Communications Compatibility and Security Agreement with the US, and this might form a useful model for an Australia–India bilateral secure communications agreement (Jaishankar, 2020, p21).

6 Defence technology cooperation

Defence industrial cooperation is a problematic issue for many countries who instinctively default to supporting their own defence companies, fret over the reliability of the implicit multinational supply chains and worry about other nations' equipment security measures. Such cooperation can also be fraught with bureaucratic complexities that dramatically delay programs. A recent examination of critical technology collaborations among Quad partners proposed purposefully avoiding such problems through designing the defence technology cooperation approach quite differently. Their framework envisaged the following (Takahashi et al., 2021, p22):

1. basing the cooperation on innovation rather than on developing and then mass producing new major military equipment;
2. placing the focus on start-ups rather than on large defence companies that, given their scale, always concern public policymakers as they are too big to fail and employ many people; and
3. avoiding an accidental coupling of the advocacy of cooperation with implementing protective trade measures to stop innovations being shared, as this reduces development possibilities and constrains local manufacturers thinking.

The fourth industrial revolution (4IR) has made this framework a practical option as it allows research organisations, start-ups and small companies to quickly innovate and produce small numbers of items. Under 4IR, small organisations can directly design one-of-a-kind items over the internet, pass this to an advanced manufacturing facility, negotiate schedules, be part of the testing regime and arrange delivery. With techniques such as additive manufacturing, production batch sizes can now be small or on-demand without significantly affecting production efficiency. 4IR's key drivers are the following: 'big data' analysed using artificial intelligence; high capacity connectivity; new human–machine interaction modes such as touch interfaces and virtual reality systems; and improvements in transferring digital instructions to the physical world, including robotics and 3D printing.

Such processes allow the implementation of a two-phase prototype warfare concept. In the first phase, a wide array of diverse prototypes are developed and

then evaluated in short experimentation programs. In the second phase, prototypes that have proven successful in the trials are produced in limited numbers and quickly introduced into service. The intent would be to rapidly field a variety of low-cost, less complex systems and then replace these with improved variants or something totally new on a regular basis. In some respects, these could be called 'short-life cycle capabilities', but the 'prototype warfare' phrase captures that these limited production items are rather immature and less than fully developed (Layton, 2018, p24).

Importantly, a crucial factor is that these would be best suited for operations other than war. Nations always wish to keep their best capabilities concealed in case a major war erupts. Operations other than war covers a large field, with both Australia and India deeply involved in HADR activities, maritime security, counterterrorism and the countering of grey zone activities (Layton, 2021). The Australian Defence Force (ADF) already has a range of organisations and processes in place to find such new technology applications, including the Defence Innovation Hub, Army Innovation Days, Navy Warfare Innovation Workshops and Air Force Plan Jericho.

Future Australian and Indian defence technology innovation could use the Jericho process that accords with the framework noted earlier. In this process, the Jericho Edge team initially engages with partners to identify and understand opportunities. The Jericho Edge team, together with Jericho Labs, then convenes communities across organisations, start-ups, small companies and universities to discover, test and prototype opportunities and explore problem areas. The separate Jericho Analytics team tests the new ideas using net assessment, wargaming and red teaming (RAAF, 2021). Recent examples include balloon-born sensors to quickly give wide-area situational awareness useful to finding and tracking bushfires, using artificial intelligence to locate life rafts in disaster at sea situations, and command and control using augmented reality (Kitchener, 2020, 2021; RAAF, 2019).

Embracing the prototype warfare concept and using the Jericho processes could allow Australia and India to readily collaborate in the near term to create innovative capabilities. This would seem to be a better and much faster way to develop patterns of cooperation than considering together developing and then mass producing some very complicated, leading-edge military hardware optimised for major conflict warfighting. That approach could easily take decades, as European defence cooperation has illustrated on many occasions.

7 Same bed, different dreams

Over the last five years, Australia and India have considerably deepened their cooperation in their pursuit of national prosperity and security. This cooperation could

wax or wane in the future as circumstances change. The two nations do not necessarily always share aspirations, although they currently share several significant interests.

Under Prime Minister Modi, India is aiming to become a 'leading power' able to shape international order, in contrast to a great power that might determine the international order by using force if necessary (Tellis, 2016, pp3–6). The grand strategy to become a leading power includes *atmanirbhar*, considered by the Indian Foreign Secretary to translate as 'strategic autonomy' and as the first pillar of Indian diplomacy (Ministry of External Affairs, 2021a).

Strategic autonomy is the ability of a state to pursue its national interests and adopt its preferred foreign policy without being unduly or disproportionately constrained by other states. Such autonomy is most achievable in a multipolar international system where the several great powers can be purposefully manoeuvred between, that is, played off against each other (Kalyanaraman, 2015). Unsurprisingly then, the second pillar of Indian diplomacy 'is its multipolar focus' (Ministry of External Affairs, 2021a).

The objective of strategic autonomy in a multipolar world has shaped India's current approach to international diplomacy. India's foreign policy and strategic orientation have shifted from last century's idealism to this century's pragmatism (Kukreja, 2020, p10). Great strategic flexibility is required to purposefully manoeuvre in the international system. For this, taking a pragmatic issue-by-issue approach, rather than deciding all matters based on fixed values, is necessary. In turn, the need for strategic flexibility means India prefers strategic partnerships rather than formal alliances, and managing multiple alignments rather than committing to particular allies (O'Donnell & Papa, 2021, p821). Indian foreign policy may then, at times, appear unpredictable and sometimes perplexing to its major partners. Harsh V. Pant and Chirayu Thakkar (2021) wrote:

"the frequency at which India votes in line with the United States at the United Nations remains dismal compared to most U.S. allies. This chasm has been a source of both frustration and anxiety for U.S. policymakers. Given India's frequent multilateral alignment with Russia and China, some believe India is part of a counterhegemonic bloc that can jeopardise many Western interests."

The implications of this strategic pragmatism have become apparent in the Russia–Ukraine War, where India provides humanitarian support to Ukraine while avoiding criticising Russia's actions. India's present 'Special and Privileged Strategic Partnership' with Russia has deep historical roots in Cold War military weapon sales and a particular understanding of Soviet naval manoeuvres in the Indian Ocean during the 1971 India–Pakistan War that created Bangladesh (Ministry of

External Affairs, 2021b). Today, India relies on substantial Russian support to sustain its armed forces, while the warm military-to-military relationship continues to deepen, as India's recent leasing of another Russian nuclear-powered submarine highlights (Roy, 2022).

Although India may seek strategic autonomy, its need for continuing deep military linkages with Russia, combined with a belief that Russia would help India in a major disagreement with China, means that India considers its freedom of manoeuvre with Russia constrained. India believes that it needs Russia as a reliable partner in the foreseeable future. In the context of the Russia–Ukraine War, this means maintaining a friendly partnership with Russia despite the risk of offending India's Quad partners.

Australia has some definite differences. Australia is a middle power whose ambition is mostly limited to remaining a prosperous, secure country rather than influencing the international system; it is generally a rule taker, not a rule maker. Australia commonly sees a sharp distinction between prosperity and security.

Concerning prosperity, Australia, in its relationship with India, often places much weight on trade and economic issues. In contrast, for India, security engagements with both Australia and the wider Indo-Pacific have taken precedence over the last several years (Jaishankar, 2020, pp25–26). Indeed, unlike Australia, India is not part of any multilateral regional economic architecture in the Asia Pacific. India's recent rejection of the ASEAN-led Regional Comprehensive Economic Partnership (RCEP) was 'disappointing' to Australia and other Indo-Pacific nations (Armstrong & Shannon, 2021; Prasad & Dixit, 2020).

Regarding security, Australia has long placed great store on its close alliance with the US and built this around a strong expectation of reciprocity (Howard, 2003, p63). Australia assiduously promotes the concept of mutual obligation; each party should support the other because they have previously. The latest Defence White Paper sees Australia developing its relationship with NATO similarly: it will 'grow on the basis of reciprocity' (Department of Defence, 2016, p136, para5.77). This notion of building locked-in, reliable support over time is inherently different to India's desired pragmatic approach of nimble diplomatic shifts and strategic agility to achieve *atmanirbhar*. However, this contrast should not be overemphasised as India's actions to maintain a reliable relationship with Russia over the long-term underscore.

Australia's strategic approach to security translates down to the military operational level. Australians over the 70 years of the alliance have internalised the high level of integration of the ADF with the US, extending to integrated signals intelligence, embedded personnel in command structures, operational intelligence sharing and US officers serving in ADF units, ships and squad-

rons, and vice versa. India's very different approach means there is, at times, little appreciation of the habits of cooperation developed within longstanding alliance structures. Australians can accordingly be surprised by both the inability and unwillingness of Indian Armed Forces to seamlessly integrate with US alliance-led operational protocols and procedures as they can and instinctively wish to (Jaishankar, 2020, p26). In a similar manner, the ADF is likely to perceive the 'lessons learned' from the Russia–Ukraine War from a US viewpoint, and the Indian Armed Forces more from a Russian understanding.

There are two important implications of these differences between Australia and India. First, Australia needs to accept India's pragmatic approach to its international relationships and similarly embrace pragmatism in its relationship with India, notwithstanding any lingering nostalgia for Commonwealth, cricket and curry. India's use of strategic flexibility to achieve its sought-after leading power status can be expected to drive it towards making particular strategic decisions that may occasionally disappoint Australia. Constancy is not a characteristic of the relationship that Australia should seek or feel aggrieved by if it is not met. Influential international relations scholar Michael Wesley (2021) wrote, "Great powers, whatever their politics, are selfish, solipsistic and capricious. Other states must learn to live with them on these terms."

Australia needs to be careful in building its relationship with India in a manner independent from the US or the Quad. US perspectives will change over time, just as the Quad will evolve. Care should be taken in designing the future Australia–India relationship such that certain changes will not upend it. Neither should Australia expect that India being a democracy automatically means perpetual alignment with other democracies, such as Australia.

The second implication is that the relationship between Australia and India is not evenly balanced. It has been deliberately deepened in recent years but driven forward more by Australia than India, despite the Modi Government's energy and pledges of commitment (Hall, 2021).

In some respects, this reflects that outside the security domain, the Indian Government has only a limited bureaucratic capacity, which restricts its ability to engage diplomatically, particularly with middle and smaller powers (Jaishankar, 2020, p25). Other Indian writers are much more critical, complaining that the institutional capacity problem is actually a combination of confusion, non-responsiveness and lack of delivery. They warn that 'the lack of tangible engagement, steady institutional capacity, and slow delivery together create a perception of Indian deficiency in actualising the Act East Policy' (Nagda, 2020, p8).

The result is that Australia needs to put effort into ad-

vancing the relationship. Left untended, like any relationship, it may wither. Australia cannot rely on India, the US, the Quad or both nations being democracies to drive the relationship further.

In this regard, Australia is like India due to its limited resources. Both countries thus need to prioritise areas for cooperation. Not all things can be done at once; specific collaborative areas need to be sought out and given precedence. Although the Australia–India CSP adopts a broad approach, perhaps the actions taken under it need to be prudently focused on particular areas.

8 Conclusion

The Australia–India relationship has deepened considerably in recent years. This paper suggests there are numerous further enhancements possible. In terms of building prosperity, possible cooperative areas include cyber norms and security, hydrogen energy, and creating trusted critical mineral and rare earth supply chains. In addition, critical and emerging technology is an area of specific long-term future importance, particularly 5G wireless networks, open-RAN and seabed communication cables.

Regarding security, both nations' strategic interests most closely overlap in the eastern Indian Ocean and in maritime South-East Asia. Defence force interaction could be enhanced through reciprocal maritime patrol aircraft patrols from each other's airfields, OPV interactions, Australia joining with India and the US in Exercise Cope India, joint warfare exercise participation, exchange of information on joint warfare processes and doctrine, and forming a secure communications agreement.

There also appear further possibilities in cooperating on defence technology if this is initially focused on small-scale innovation rather than major equipment acquisitions. Embracing the prototype warfare concept and using the Jericho processes could allow Australia and India to readily collaborate in the near term to create innovative capabilities.

Although the Australia–India relationship may, in some respects, be unevenly balanced, this does not mean it should be unproductive. With both nations taking a pragmatic approach informed by their individual national goals and shared strategic interests, much can be accomplished. Their relationship now has the momentum to keep accelerating towards improving security and prosperity in Australia, India and the wider Indo-Pacific region. Australia and India have the necessary agency; it is up to them to cooperate to achieve these goals.

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