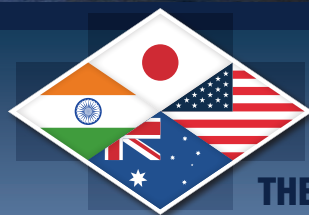


THE NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA



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THE FUTURE SUBMARINE PROGRAM

ASIA UNDER AEGIS: 'COMPLEX SALVO COMPETITION' WITHIN THE ISLAND CHAINS

AN ARMY FOR ALL REGIONS

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FOR NONE ARE SO FREE AS THOSE BORN OF THE SEA

The final edition of a momentous 2021, as the world emerges tentatively from COVID-19 and into a new more threatening and uncertain future, ends with four highly relevant papers. The first is by longstanding contributors Jonathan Hemlock and Roger Thornhill and deals with the political, industrial, and Defence fallout arising from the rejection of the French submarine and creation of AUKUS. In the face of withering, ungracious and gratuitous attacks – from France, and at home – it mounts a defence of the Prime Minister and the reasons behind the decision. Their conclusions are telling.

The second paper and first prize in the essay competition (non-professional entry) is by Jonathan Wilson. His paper deals with *Aegis* and the protective umbrella that it will be necessary, now, to establish over South East Asia and Australasia, to deter China. The third paper is by Dr Simon Reay Atkinson and considers Army's future navy. Entitled 'an Army for all Regions', it examines how Army may [re]build its littoral manoeuvre force and contribute to regional deterrence. Many of the lessons are applicable to Navy; including its recommended approaches to fleet class designs, builds, ownership, and crewing. These require serious consideration; noting the current long-lead builds – when Navy needs its ships and submarines in capacity, today. Not in 15 years. Simon ends recommending that Navy and Army enjoin "to agree logical areas of complementary burden sharing, across the maritime domains – including for shipbuilding, recruiting & retention of seagoing specialists, and areas of operation & application".

The final paper and first prize in the essay competition (professional entry) is by previous contributors John Rigby and Paul Sawtell. John and Paul consider the Battle of the Java Sea as being an ominous harbinger of our time. Their considerations echo strongly with the prescient warnings raised in *The NAVY* by Rear Admiral Andrew Robertson AO DSC RAN and conclude:

... it must be recognised how important the Navy is to our survival as a trading democracy and we need to examine ways to increase its ability to mount a viable defence now and within the next three years. Acquisition of highly technological equipment decades into the future is welcome but that doesn't help much in our immediate conflict environment.

The title of this editorial harkens back to the age of sail and "Heart of Oak", the official march of the Royal Navy, the Royal Canadian Navy, and the Royal New Zealand Navy. Written by William Boyce and David Garrick in 1760, Heart of Oak commemorates British victories in 1759 – including in Canada, Europe, and Africa. The traditional first verse and chorus is:

Come cheer up, my lads! 'tis to glory we steer,
To add something more to this wonderful year;
To honour we call you, not press you like slaves,
For who are so free as the sons of the waves?

*Heart of oak are our ships, heart of oak are our men;
We always are ready, steady, boys, steady!
We'll fight and we'll conquer again and again.*

Other lines include:

Our watchword is 'Justice' our password is 'Free',
So come cheer up my lads, with one heart let us sing,
Our soldiers, our sailors, our statesmen, our Queen.

The title nods to more modern times by considering those "born of the sea" – which includes the traditional maritime nations of Australia, Canada, the U.S., New Zealand, Japan, Oman, the Netherlands, Portugal, Indonesia, Singapore, the Philippines, India, Chile, Sri Lanka, and the UK. Significantly, all these nations are typified by rugged independence; including outward looking traditions, and concepts of commonwealth and common law – based upon notions of free trade.

Rousseau commented in his Social Contract (1762): "man is born free but everywhere is in chains". Notwithstanding that in the modern age, terms like "man" cannot be used, it would appear – through social rules and regimes applied during COVID – "everywhere is [subject to be] in lockdown". COVID has raised serious issues of freedom, upon which the higher values of democracies are based. Also raising questions about fundamental freedoms and democratic deficiencies. The silence of some statutory commissions and corporations tasked with upholding and championing democratic rights for all Australians, regardless, has been notable.

What has this to do with the sea, *The NAVY* and the NLA? They are all linked through fundamental concepts of freedom in terms of our politics, our security, and our economy. All of which are connected. One cannot be in chains in one domain, and free in another. As per Just War, one needs a just form of politics, to secure a just economy, and vice versa. One domain does not trump another, as in *jus ad bellum*; *jus bello*; and *just post bellum*. [1, 2] All need to be just, to be free.

Hemlock and Thornhill make a number of interesting observations; noting fundamental philosophical difference between French social democracy, and Australian, U.S. and UK (Indian, Japanese) understanding of liberal democracy – summarised in the



Battle of Quiberon Bay, 1759 (Richard Paton).



HMS ROYAL OAK (07) 1896-1911.



USS GERALD R FORD (CVN-78) Based primarily on 50 year old designs continues to suffer teething problems three years after launch.

differences between notions of fair versus free trade. Fair trade inevitably distorts markets in favour of one over another, for example renewables. Today in the U.S., the Top 10% of earners command more than 50 percent of income, c.f. the Gilded Age (1873-1917, ending on U.S. entry into WW1), when the top decile earned 45% of gross income. In the 19th century, it was the railroad barons; today it is the media-techs, their political elites, and mining magnates. Significantly in 2020, it was Australia that was amongst the first to take on Google, Facebook, and the Chinese Communist Party (over COVID-19).

The U.S., not the USN, USMC, USAF and US Army, suffered national strategic defeat in Afghanistan. Consequently, U.S. leadership is being questioned and undermined at home and abroad. *Pax Americana* is perceived no longer to apply – which is significantly increasing the potential of strategic miscalculation by Russia, China, and Iran-Hezbollah. It is the critical reason fuel prices will remain high for the foreseeable future. Since the U.S. is being punished by friends and foes alike – who no longer see it in their interests to prime U.S. pumps. At home, the U.S., like much of the West, is bitterly divided politically, socially, and economically. Exacerbated by growing inequities; increasingly divergent from universal freedoms enshrined through Common Law, Commonwealth, and *Magna Carta Libertatum* (1215). Applicable to all. Not handed out by non-labile commissions, quagos, corporations, media-techs, political elites, special advisers, consultants and accountants.

The explosion of national debt and *de facto* nationalisation of the banks during the GFC and COVID, means Western economies are behaving more like communist ones – where 60% or more of the economy is “owned” by the state. The Global West will not deter by engaging a nationalised economy with a communist one and not re-capitalising industry and markets through the inventive freewheeling-and-dealing of liable, private-public enterprise. [3, 4] Our strongest deterrence. This appears the bases of Dr Reay Atkinson's argument (paper 3) for Versatile Modular Systems.

Shipbuilding is core to our deterrence. The U.S. currently builds about 7.5 ships a year – meaning that it has a fleet replacement rate (FRR) of 40 years. Ten years beyond design life. Realistically, the FRR should be 15 years, meaning a ship build rate (SBR) of 20 ships a year. If the USN is to grow to 355 ships by 2035 at a 15-year FRR, it will need to increase its build rate to 28 ships a year. Similarly, if the USN is to grow to the Trump Fleet of 600 ships (including uncrewed vessels), it will need to increase its SBR to 60 ships a year until 2035, and forty a year thereafter. Or for the 455 Biden fleet, an SBR of 41 ships a year to 2035, and thirty a year thereafter.

All this within a budget of \$50-60B a year. [5] It is categorically untenable without fundamentally rethinking ship and shipyard designs. The same applies to the RN and RAN.

As maritime powers, our greatest deterrence is the sea (our moat), through maintenance of its freedoms – as enshrined through common convention, established by the UN Law of the Sea. Upheld by the U.S., who is not a signatory, and not by China, who is. The Global West can renew and design afresh – so ensuring our watchword remains justice and our passwords free. In the vanguard as always, Australia can do this, by repairing its damaged Federation and Commonwealth freely, through our shared common values. For none are as free, as those girt by sea. ■



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STATEMENT OF POLICY

For the maintenance of the Maritime wellbeing of the nation.

The Navy League is intent upon keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and capable maritime industry are elements of our national wellbeing and vital to the freedom of Australia. The League seeks to promote Defence self-reliance by actively supporting defence manufacturing, research, cyberspace, shipping, transport and other relevant industries.

Through geographical necessity Australia's prosperity, strength, and safety depend to a great extent upon the security of the surrounding seas and island areas, and on unrestricted seaborne trade.

The strategic background to Australia's security is changing and in many respects has become much less certain following increasing tensions, particularly in East Asia involving major powers, and in Europe and the Middle East. The League believes that Australia should rapidly increase the capability to defend itself, paying particular attention to maritime defence.

The Navy League:

- Believes Australia can be defended against attack by other than a major maritime power and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea and air communication with our allies.
 - Supports a continuing strong alliance with the US.
 - Supports close relationships with all nations in our general area particularly New Zealand, PNG and the South Pacific island States.
 - Advocates the acquisition of the most capable modern armaments, surveillance systems and sensors to ensure technological advantage over forces in our general area.
 - Advocates a strong deterrent element in the ADF enabling powerful retaliation at significant distances from our shores.
 - Believes the ADF must be capable of protecting commercial shipping both within Australian waters and beyond, in conjunction with allies.
 - Endorses the development of the capability for the patrol and surveillance of all of Australia's ocean areas, its island territories and the Southern Ocean.
 - Advocates Government initiatives for rebuilding an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia in times of conflict.
 - Notes the Government intention to increase maritime preparedness and gradually increase defence expenditure to 2% of GDP, while recommending that this target should be increased to 3%.
 - Urges the strength and capabilities of the Army (including particularly the Army Reserve) and Air Force be enhanced, and the weaponry, intelligence, surveillance, reconnaissance, cyberspace and electronic capabilities of the ADF be increased, including an expansion in its UAV capability.
 - Considers that the level of both the offensive and defensive capabilities of the RAN should be strengthened, in particular with a further increase in the number of new proposed replacement frigates and offshore patrol vessels, noting the need to ensure essential fuel and other supplies, and the many other essential maritime tasks.
 - Recommends bringing forward the start date of the replacement frigate program to both strengthen the RAN and mitigate the local industry capability gap.
 - Recommends the timely replacement and increase in numbers of the current mine-countermeasure force.
 - Strongly supports the early acquisition of large, long range and endurance, fast submarines and notes the deterrent value, reliability and huge operational advantages of nuclear powered submarines and their value in training anti-submarine forces.
 - The League is concerned at the very long time before the projected new nuclear-powered/replacement submarines can enter operational service, noting very serious tensions in the NW Pacific involving major maritime powers.
 - Recommends very early action to provide a submarine base on the Eastern seaboard.
 - Notes the potential combat effectiveness and flexibility of the STOVL version of the Joint Strike Fighter (F35 *Lightning II*) and supports further examination of its application within the ADF.
 - Supports the development of Australia's defence industry, including strong research and design organisations capable of the construction and maintenance of all warships, submarines and support vessels in the Navy's order of battle, and welcomes the Government decision to provide a stable and continuous shipbuilding program.
 - Advocates the retention in maintained reserve of operationally capable ships that are required to be paid off for resource or other economic reasons.
 - Supports a strong and identifiable Naval Reserve and Australian Navy Cadets organisation.
 - Advocates urgent Government research and action to remedy the reported serious naval recruiting and retention problem.
- The League:**
- Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in Australia's defence capability including the required industrial infrastructure.
 - Believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.

As to the RAN, the League, while noting vital national peacetime tasks conducted by Navy, including border protection, flag showing/diplomacy, disaster relief, maritime rescue, hydrography and aid to the civil power:

- Supports the maintenance of a Navy capable of effective action in hostilities and advocates a build-up of the fleet and its afloat support elements to ensure that, in conjunction with the RAAF, this can be sustained against any force which could be deployed in our area of strategic interest.

THE NAVY LEAGUE ANNUAL CONFERENCE

On Friday 22 October 2021 the Navy League conducted its Annual General Meeting via videoconferencing for the second year running, as well as a meeting of the Federal Council of the League. COVID-19 restrictions again meant that we were unable to meet in person, but our remote meeting was well attended by members of the Federal Council, State Division representatives and a number of general members also. Thanks to all who participated in a lively and fruitful meeting.

This year we also welcomed Lynda Gilbert as our new Federal Secretary. Lynda has proved a great asset to the Victoria / Tasmania Division over past years and we are very fortunate to have someone with her skills and dedication in this new role. We welcome you Lynda and thank you for all of your hard work to date.

While the League's AGM and Federal Council meeting were not as comprehensive as the usual longer format, the essentials were able to be addressed. We spent some considerable time reviewing the important events of the year behind us and discussing our plans for the year ahead. Next year's AGM is scheduled to be held in Canberra on Friday 21 October at 8.00pm, with business of the Federal Council extending into Saturday 22 October 2022. I hope to see many of you there next year.

THE NAVY LEAGUE OF AUSTRALIA ANNUAL MARITIME AFFAIRS ESSAY COMPETITION

One of the highlights of the Navy League annual conference is the opportunity to review and discuss the entries in the League's Annual Maritime Affairs essay competition. This year's entrants were no different, with some excellent reading and difficult judging decisions to be made. The competition offers prizes in the professional and non-professional categories and the opportunity to have the papers published in a future edition of *The NAVY* as well as the lure of the substantial prizes on offer. The professional category, includes journalists, Defence officials, academics, Navy personal and previous contributors to *The NAVY* with the balance of entrants being judged in the Non-Professional category.

The winners of the competition were announced to the meeting and the winning papers will be published in *The NAVY* in this and over the next few editions. Our congratulations go out to those who have been rewarded with a prize. Those who have had the opportunity to read the papers will join me, too, in congratulating all entrants for



Australian Industry to build Guided Missiles for ADF, seen here with Australian F35A.

the amount of research that has gone into the preparation of their papers and the high-quality standard that has resulted.

First Prize in the Professional category was awarded to John Rigby and Paul Sawtell for their paper *Déjà vu The Battle of the Java Sea, a harbinger for our time*. Congratulations John and Paul. Our readers will be grateful for your work, which appears in this edition.

Second Prize in the Professional category this year was awarded to George Galdorisi for his paper *A National Imperative to Protect Australia's Ports and Harbors*. Many of you will have read earlier works from our colleague, retired US Navy Captain Galdorisi, and his background will explain why we've opted for 'Harbor' and not 'Harbour'. Well done Captain. Another previous contributor to *The NAVY* has been awarded third prize, Kevin Curnow with his article *The Royal Navy's Carrier Strike Group 21*.

The Non-Professional category also saw some very compelling contributions to the competition. Jonathan Wilson has been successful in being awarded First Prize in the Non-Professional category this year for his paper, *Asia Under Aegis: 'Complex Salvo Competition' within the Island Chains*. You can also read Jonathan's article in this edition of *The NAVY* and I am sure you will be challenged by it. Well done Jonathan, congratulations on a fine contribution to the competition and *The NAVY*.

Second Prize in the Non-Professional Category was awarded to Robert McKeown, for his paper *Submarines in the Indo-Pacific: does everyone need them*. Our congratulations go to Robert, whose paper you will be able to read in a future edition of *The NAVY*. Third Prize this year goes to Murray Dear, our correspondent from New Zealand, for his article *Commander Ageta's Incursion*. Murray's article will also be included in a future edition of *The NAVY*.

HMAS SIRIUS

The RAN underway replenishment ship HMAS SIRIUS will decommission on 18 December 2021. On her recent return to Australia from her last deployment, and in advance of the decommissioning, I wrote to the Minister for Defence on behalf of the Navy League encouraging that consideration be given to the retention of SIRIUS. My letter noted the potential conflict in our region that many commentators predict, and proposed that SIRIUS should be kept, even if at a reduced state of readiness, in the immediate term.

Some of our considerations in making this suggestion included the rare likelihood of being able to be purchase 'off the shelf' capabilities at short notice when national emergencies or contingencies arise; the vast distances the ADF needs to travel; and the great amounts of fuel required to so travel as well as to support deployed forces ashore. We encouraged a rethink, with a view to Navy retaining



When will the bullet be bitten and LHDs enabled to operate F35B as from ITS CAVOUR (R550)



HMS SIRIUS (AO266) Strong consideration on decommissioning should be given to retaining as a mobile bowser crewed by Merchant Navy or Licensed Reserve similar to UK Royal Fleet Auxiliary crews (Image: LSIS Richard Cordell)

HMAS SIRIUS, proposing perhaps with skeleton maintenance crew for the next few years as an insurance policy, and with the potential of commercial service in the region to financially support such retention.

The response we received from the Department of Defence thanked our members for the zeal with which we support and encourage our Navy and I pass that onto you here along with my thanks for that also. The response noted also that SIRIUS has served our nation with pride, filled an important gap in Navy's ability to sustain deployed Task Groups and noted that the newly commissioned Auxiliary Oiler Replenishment ships SUPPLY and STALWART "are a significant step-change for the Navy, superior to their predecessors Success and Stalwart." In addition, it pointed to considerations taken account of in designing future capability needs, particularly in the 2020 Force Structure Plan, through SEA 2200 Joint Support Ships and Joint Project 8190 Deployable Bulk Fuel Distribution.

All that said, the response gave no indication that there was any intention for Navy to retain HMAS SIRIUS. We tried and I encourage you all to maintain that aforementioned zeal.

THE 2022 FEDERAL ELECTION

Those of you who are familiar with the Navy League will know that we advocate for a strong Navy and capable maritime industry as key elements of our national wellbeing vital to the freedom of Australia. In doing so the League calls for a bipartisan political approach to national defence with commitment to a steady long-term build-up in Australia's defence capability, including the required industrial

infrastructure. We believe that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and workforce parameters.

This bipartisan approach does not mean we ask you to be silent before your elected representatives and election candidates in the months ahead. On the contrary, we encourage you to remind the election candidates, including the incumbent, in your federal electorate, of the League's stance, and to seek from them a commitment to it in advance of the next Federal election. Reports suggest that there is every likelihood that the federal election will be held before our next edition goes to print, so go to it!

ENJOY THIS ISSUE

As well as the essays of the First Prize winners, *The NAVY* also has included in this edition an article from Jonathan Hemlock and Roger Thornhill on the future submarine project which reminds us that Australia's submarine project remains a key focus for so many of us. NLA member, Dr Simon Reay Atkinson, has also prepared a paper about the envisaged Army Littoral Manoeuvre Force, which will no doubt provide much food for your thought.

I trust you will enjoy reading these articles and, as always, encourage your feedback. Thank you also to those readers who have provided us with your thoughts in response to earlier articles and editions, much of which we are able to include in the letters section.

Keep up the great work and happy reading to you all. ■

THE FUTURE SUBMARINE PROGRAM – OBJECTION, DEFENCE, AND REBUKE

By Jonathan Hemlock and Roger Thornhill

Noting the recent Future Submarine imbroglio, and implications of lying – by one head of state of another – it is important to assess the facts against the accusations and hyperbola. This paper contends that the impugning of the Prime Minister Scott Morrison as a liar regarding the future submarine – supported by Malcom Turnbull, the French ambassador Jean-Pierre Thebault, defended by Christopher Pyne and seemingly left tendentiously standing by Senator Rex Patrick – is itself improper, misleading and inaccurate.

INTRODUCTION

We suggest, that those who have acted in ways (including industrialists, advisers, politicians and previous Prime Ministers) – that may seemingly have betrayed one's country, friends, cause, secrets, principles, or confidences, especially another's trust or is false or deceptive regarding an obligation or duty – may be on the edge of [t]reason morally, if not ethically. For example, the advice to sell off the Port of Darwin or Victorian Labor committing to join the CCP One Belt and Road (OBOR) political, security, economic regime.

France and Naval Group design, build, and make excellent submarines – Australia does not. If the decision was not by deceit, then what was at play? In this respect, one needs to go back to the decision by the Turnbull-Pyne government to select the French *Shortfin Barracuda* design in the first instance – against the prevailing advice from the previous Prime Minister (Tony Abbott), the current PM (Scott Morrison), Defence, Navy, and the U.S. This all raises perceptions of deceit and the betrayal of obligations, duties and national interests. Noting that Australia had then no alliances or treaties with France, but has longstanding arrangements with the U.S., through Five Eyes, ANZUS, and Japan and India, through the QUAD.

If not conspiracy or deceit, then the question may become one of cockup. This is probably the most serious charge to be laid against Australia, since the competence of the Government, Defence, the APS, DSTG, consultants, advisers, accountants, and industry can all be called into question. This paper will seek to identify which of these factors led up to the correct decision – in the opinion of the NLA and *The NAVY* – to terminate the contract with Naval Group; construct AUKUS; and put Australia on the path to acquiring a nuclear submarine. All of which are separable and distinguishable.

TREASON, DECEPTION, PERCEPTION, OR LYING?

As a long-time observer of the “Western condition”, President Putin commented (Oct 21):

It may come as a surprise to some people but Russia has been there already. After the 1917 Revolution, the Bolsheviks, relying on the dogmas of Marx and Engels on society and the economy – and looking at what is happening in a number of Western countries – we are amazed to see the domestic practices which we fortunately



President Macron on the deck of an RAN LHD in Sydney Harbour with a 'troublesome' French Tiger helicopter as a backdrop (unlucky thirteen (013)?). Somewhat ironic given the early withdrawal of this aircraft and the cancelled submarine contract.

have left, I hope, in the distant past. The fight for equality against discrimination has turned into aggressive dogmatism bordering on absurdity, where the words of the great authors of the past – such as Shakespeare – are no longer taught at schools or universities. [Exactly] because the ideas are thought to be backward. The classics are declared backward and ignorant of the importance of gender and race.

National interest, doctrinally, should influence and be influenced by national (or grand) strategy, and may be:

a reasoning and rationality of governing referring to a sovereign state's goals and ambitions, be they economic, military, cultural, or otherwise.

“Reasoning / rationality of state” was considered as *Ragion di Stato* by the Italian political thinker Giovanni Botero (c. 1580) and by Cardinal Richelieu within concepts of *raison d'État* as “a mean between what conscience permits and affairs require”. It is debateable, based on national interest and *raison d'État*, whether Australian political parties, industry, Defence officials, public servants and politicians acted consistently in the national interest. They may have been influenced by others in their actions and acted ethically within the rules permitting and contracts pertaining, if not necessarily morally in accordance with higher values and national interests. But this would not necessarily constitute deceit or treason.

A traitor may be considered historically and in law to be:

One who betrays one's country, friends, a cause, secrets, principles, or confidences, especially [to an enemy] another's trust or is false or deceptive regarding an obligation or duty.

A liar may be thought of as:

One who makes an untrue statement with intent to deceive, an assertion of something known or believed by the speaker or author to be untrue with the intent to deceive or mislead.

In the postmodern (post belief) world, based upon a rejection of single or even multiple truths and critical race theory (CRT), it may be increasingly difficult to imagine or even prosecute treason. In this new world order, critical race theorists – inadvertently applying colonial-era divisions – assert that race [and gender] is not a natural, biologically grounded feature but a socially constructed category. Meaning that, by maintaining political inequalities between whites [males] and non-whites, racism is inherent in the law and all its [legal] institutions. Notwithstanding, the Sheller Committee Report (2006) undertaken by Mr Simon Sheller AO QC, rejected the proposition that the offence of treason is not appropriate in a [post] modern democratic society.

Critical race theorists apply Gramscian-Marxist principles to undermine and suborn institutions and structures as a basis of asserting (seizing) control and eliminating all race-based and other unjust hierarchies. On this basis, they reject the notion of Common Law and Commonwealth applicable to all, since all these institutions are racist. In this Orwellian world order, the very people attempting to uphold the institutions, are traitors – particularly if they are white. Even more so if they are not. Moreover, despite the Racial Discrimination Act 1975 declaring:

“it...unlawful for a person to do any act involving a distinction, exclusion, restriction or preference based on race, colour, descent or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of any human right or fundamental freedom in the political, economic, social, cultural or any other field of public life”

CRT sees this to be racist, since:

“...these definitions focus solely on the belief and actions of the racist and do not consider the perspective, understanding or experience of those groups [of non-whites] who have endured racism throughout the centuries”.

The grey war of today, which can be hot and cold simultaneously, and the ongoing political economic warfare being waged against Australia (and the Global West), takes advantage of fixed definitions of treason, to situate political economic warfare under the conflict radar, maximising social division through education, the health sector (vaccine diplomacy), laws, rules (-based Global Order, such as the WTO), state, territory and federal institutions – for example, Victoria offering to sign up to the CCP Belt and Road initiative – all connected through cyber.

This paper mounts its objection, defence, and rebuke based upon four questions regarding the decisions to select France and Naval Group; then to discontinue the contract; to establish AUKUS; and to build a nuclear submarine:

*Was it conspiracy?; Was it competence?;
Was it cockup?; Was it all or none?*



France and Australia have a strong and unique bond of friendship. President Macron is using the current submarine issue as a call to nationalism to support his dwindling domestic political popularity.

ON CONSPIRACY – CONTRACTING THE FUTURE SUBMARINE

In criminal law, a conspiracy “is an agreement between two or more persons to commit a crime at some time in the future”. The Commonwealth Criminal Code 11.5 considers Conspiracy as:

a person who conspires with another person to commit an offence having entered into an agreement with one or more other persons; where at least one other party to the agreement must have intended that an offence would be committed pursuant to the agreement; and the person or at least one other party to the agreement must have committed an overt act pursuant to the agreement.

There is not one *scintilla* to suggest that what occurred to abort the future submarine build contract, between Naval Group and Commonwealth, could in any regard constitute a conspiracy. It was a contract, as seen from Australia, not an alliance or treaty arrangement between the two countries – as for Five Eyes, ANZUS, the QUAD and, now, AUKUS. A senior Naval Group official and retired Navy nuclear submarine captain correctly observed, early in the future submarine program: “vous ne pouvez pas construire un sous-marin par contrat”. [1]



Army had to buy more US made CH-47F Chinooks as the French MRH-90 was unable to meet its availability and reliability targets. (Defence)

There is a fundamental philosophical difference between French considerations of social democracy, and Australian, U.S. and UK understanding of a liberal democracy. It may be summarised in the differences between notions of fair versus free trade.

At a conference in 2016 that one of the authors attended, the then Minister for Defence Material, Dan Tehan, was being introduced by the host who made the astute observation that “if the minister wanted to succeed in this portfolio, he should avoid buying French”. Several weeks later the then Prime Minister Turnbull announced that France had been selected to build our *Collins* replacement – despite the fact that a brand-new example of Japanese submarine engineering skill was berthed at Sydney’s Garden Island. When details emerged that the design would be an existing (yet to be built) nuclear-powered submarine design, but with a Toyota Prius style propulsion system, many started scratching their heads asking why?

The level of modification required presented obvious risk. Which later proved to be insurmountable, yet the Turnbull Government vilified the conference host’s recommendation to a minister to not buy French.

The *Grandes écoles* of France connect between Defense (and state); the executive (Government and senior politicians); and industry. A significant proportion of graduates from these elite institutions occupy the highest levels of French society, including in Naval Group. For example, l’École Polytechnique, is one of these elite institutions, through which the majority of all French Navy nuclear engineers graduate. Naval Group, therefore, never will be a private company in the liberal sense. It will always be connected to the French state. Understanding this, in 2016 an informal visit to l’École Polytechnique was arranged to discuss the potential of enabling joint masters-level (and PhD) programmes to be developed between French and Australian APS, Defence, Scientists, and Engineers. [2] This was not taken forward.

Instead, negotiations between Commonwealth, Lockheed Martin Australia (LMA), and Naval Group completed in 2019, with the signing of the Strategic Partnering Agreement (SPA) contract:

The SPA might have worked if it had been based on some form of Joint Venture (JV) or Joint Partnering Agreement (JPA) between the three parties. [3] Such an agreement would be based on the shared competencies of JV partners and an assured and appropriate balancing of risks. [1]

Rather than developing a mutually cooperative programme and building up Australian expertise, Commonwealth relied almost exclusively on the ASDEFCON contract suite [4], and imported contractors acting as Australian Public Servants (at senior and functional levels):

The standard ASDEFCON (Australian Defence Contract) suite of contractual terms remains absurdly onerous on contractors, to the point where contractors are doomed to fail in almost all circumstances. To couch it in simplistic terms, the Commonwealth can default on its obligations and walk away blameless – yet Contractors must have the veritable Sword of Damocles hanging over their head for the duration of the program. This is despite numerous attempts to reform these contractual terms. [5]

The French may reasonably have concluded that the agreement between a state-based entity, Naval Group, and Commonwealth went beyond a contract. Australia should have known this and did, to an extent play upon it, for example the development of the sovereign Australian Program hub, Hughes House, in Cherbourg. Perhaps the choice of name was indicative – noting the French pronouncement of H’s, as in ‘O’oze O’use’? From a contractual basis, it was just that – a contract. No matter how incompetent and absurd attempting to build an existential complex artefact through the ASDEFCON suite might be.

The critical problem is the severe loss of face incurred by Japan following the disastrous, cack-handed, seemingly revengeful decision by the Turnbull-Pyne Government to reject Tony Abbott’s clear front-runner – and opt for the French designed *Attack-class*, to be built in South Australia. [6]

Before finally losing the leadership in 2018, once more by trying to be bipartisan with Labor on climate change, Turnbull achieved as one of the few landmarks in an undistinguished prime ministership the submarine deal with France – to take an existing nuclear design and spend 15-plus years redesigning it and building it in Adelaide, only as a less-capable conventional boat, with less speed and less armament to stand up to China. A charge may be laid against Turnbull that he *conspired* against party and national interests by rejecting the *Soryu-class* of submarines. His actions since and at COP26 may indirectly have given “aid or comfort to enemies” and may not have been morally in accordance with higher values, party and national interests – but does not constitute treason.

On the French, it is worth considering that in 1965, Israel contracted with the French naval shipbuilder CMN (now part of Naval Group) for the construction of six fast missile boats for the Israeli navy. This arms purchase was intended to counter the threat to Israel’s sea lanes posed by a fleet of Soviet missile boats supplied to Syria and Egypt. But then, just before the outbreak of Israel’s defensive Six-Day War in 1967, president Charles de Gaulle decided to realign French foreign policy toward the Arab world. He declared an arms embargo on Israel and cancelled the sale of those missile boats, despite the fact they were paid for and almost completed. So, the Israelis went and “stole” them. Or, more accurately, they took possession of what was rightfully theirs. On Christmas Eve 1969, Mossad orchestrated a snatch operation in which Israeli naval personnel sailed the missile boats out of Cherbourg Harbour under the inebriated noses of French authorities. Four years later, those missile boats played a major role in the Israeli navy’s decisive victory during the Yom Kippur War in which 10 Syrian and Egyptian naval vessels were destroyed for no Israeli loss. [7]



British Consul Kirsty Packer, Hannah Mary Beazley MLA, a Consultant, WA Governor, the Hon. Kim Beazley AC visit HMS ASTUTE (S119), image LSIS. Richard Cordell.

A similar example of French cupidity occurred a few years earlier when, without warning, de Gaulle decided to withdraw from NATO. The US ambassador to France was James Gavin, who commanded the storied 82nd Airborne Division during the liberation of France in 1944. Summoned to the Elysee Palace, Gavin was told by de Gaulle that all US troops must leave French territory within the space of a few months. Gavin responded by asking:

Does that include our dead from the military cemeteries of Normandy?

Writing in *The Australian* (3 Nov), Greg Sheridan, noted:

On balance, I think I can reassure the ambassador [Jean-Pierre Thebault] that it was monumental political incompetence – especially when either Marise Payne or Linda Reynolds was Defence minister – rather than some Machiavellian calculation.

On the French Ambassador (who looks and sounds increasingly like the disingenuously wonderful, “retired” Chinese (CCP) Ambassador, Jingye Cheng), while showing gross strategic incompetence – in failing to represent France; understand Commonwealth (with respect to the Submarine contract); and acting beyond the remits of diplomacy – did not conspire. More’s the pity. Probably, like Cheng, he will shortly be summoned back to Paris and sent to French Guiana (*Île du Diable?*), or wherever France now sends its alleged failed *hauts fonctionnaires de la bourgeoisie sous le sous-marin?*

As outlined in Neil Baird’s two papers on “the state of Australian Government and Defence”, whereas both LMA, and specifically Naval Group, brought highly competent engineers, designers and

naval architects to bear (all leaning significantly upon the Prime Integrator, LMA), Commonwealth did not. [4, 5] Dr Baird [1] went on to identify:

- The dilettante “we are all managers now” structure of the APS and ADF (and DSTG) [meaning]...Naval Group engineers did not want to waste their time talking to managers on engineering problems and, as far as they could tell, all the Australian workforce were [contracted] managers; not specialists.
- Of the contractors that made up the bulk of the Commonwealth workforce, many of the more senior APS positions were filled by U.S. citizens. Of these Directors, working from Canberra and Adelaide (and Cherbourg):
 - 1/3 were highly competent and would have won their position in the U.S. or Europe;
 - 1/3 were average and would have had to run hard, and;
 - 1/3 were of neither standing.
- Biases exhibited by some U.S. Directors were not simply philosophical... but connected through informal U.S. lines and previous service – just as the French did not know “who they were talking too”, so it was for many of the functionally contracted Australian Commonwealth employees, for example:
 - some U.S. Directors made it clear that “if X occurred, the programme would be shut down” – exactly by whom was never made clear.



An MU90 torpedo under test by the RAN. Navy was able to fix many of the issues with the MU90 without the assistance of the French and turn it into a very effective anti-submarine torpedo. (Defence)

On balance, and considering the competency of Australian APS, Defence, and Government individuals and institutions – with respect to the political security economy, industry and building submarines – it may be concluded that no conspiracies occurred. The same applies to France, Naval Group, LMA, and other entities involved. Perhaps it would have been good if they had been competent enough to conspire!?

ON COMPETENCE – MANAGING THE FUTURE SUBMARINE CONTRACT

The French do make good military equipment, but:

- French products tend to be suited to French conditions and environments.
- The French Government squanders much of its development budget on items that:
 - have deficient battlefield innovation or real world experience applied.
 - tends to be somewhat unique and not readily available from other suppliers (probably intentional).
- Spare parts support, in fact support of any kind, is usually prioritised for the French.
- If you buy French you are stuck with the French.

French Defence industries are protected by their government and the EU, who knowingly pay more than they should, tolerate poor support and still allow the 'back slapping, long lunch business standards' to apply. This does not work for a country and military like Australia. Whose Defence force is exceptionally professional and exacting.

It was the independent audit office, not the Morrison government, that wrote the scathing report last year (2020) revealing the growing problems with the French project, including the fact that France had already missed two key milestones in the development of the subs.

It was the independent shipbuilding advisory board, not the government, that again in 2020, urged Defence to consider jettisoning its deal with France and find a new submarine builder because negotiations had turned so toxic.

Despite M Thebault's portrayal of the Naval Group as the jilted bride, France did much to trigger the bitter divorce that we are now witnessing:

- It was only after a protracted argument that Canberra won a concession from France that Australian industry would win 60 per cent of the project.

- In the short six-year life of the program, France missed three key deadlines:
 - the concept studies;
 - the systems requirements review, and;
 - the preliminary design review.

Defence correctly (as it now appears) identified that France was trying to gouge Australia by asking for an excessive price to produce a detailed design for the subs – an impasse (conspiracy?) that still had not been resolved at the time the contract was terminated. Quoted in the title of Neil Baird's submarine paper [6], George S. Patton Jr, also commented that he:

...would rather have a German division in front of me than a French one behind me!

By contrast, Australia working with the U.S. and the UK, under longstanding alliance arrangements, concluded the ground-breaking strategic alignment AUKUS, which is not simply about nuclear-powered submarines. This showed exceptional strategic competence by Navy, Admiral Jonathan Mead, the Ministers of Defence, the Prime Minister and Minister Marise Payne, that simply has not been exhibited in recent years by any Government. In particular, it took the leadership and conviction of the Ministers of Defence, Peter Dutton and Andrew Hastie, to deliver – in great secrecy. Something none of their predecessors could have done – through lack of competency – and Labor probably could not, through lack of conviction.

Did the Prime Minister conspire on AUKUS, of course not. The indications and warning to any who chose to look – such as the French Ambassador – were clear.

A French Paris-Sorbonne educated sociologist apparently argued elliptically to a Fleet Air Arm audience in 2017:

France must change. France will change. If France cannot change in the EU, it will leave the EU (in the next 10 years).

The sophist point being made, was that France is itself going through a revolution and the end of its Fifth Republic – under an apparently much-disliked President, Macron. Considered a Petain-like technocrat (due to his U.S. banking experience) – more a liberal than social democrat – he is seen as antithetical to la République. At the same time, he is facing re-election at a moment of gilets jaunes jacquerie. Hence, in part, his reported insolence towards Australia at the G20 and COP26.

AUKUS could not have occurred without Brexit freeing up the British to re-engage on the international scene. Of which, it is clear, the French are increasingly jealous – as the UK re-emerges as a political and economic power-house. *Ipso facto*, AUKUS is Australia's Brexit moment, as will be the next federal election.

In sum, Australia (the U.S. and UK) showed significant strategic competence in delivering AUKUS in terms of their own sovereign national interest. They did not conspire against France or the contract in doing so. France, on the other hand – not Naval Group – was shown to be incompetent in its handling of the contract (and Commonwealth) and its behavior subsequently. In actual fact and more damningly, France failed to conspire when it had the opportunity to do so.

ON COCKUP – IF NOT BY CONSPIRACY AND COMPETENCE

The last three French military products purchased bear much of this out.

1. The Tiger Armed Reconnaissance Helicopter purchased by the Army has been a disaster from day one. It has been on many Minister's project of concern lists longer than any other capability. It has been the subject of unfavourable Australian National Audit Office reports and its reporting in the Defence Annual Report to Parliament is always disappointing. In fact, the only way Army was able to accept it into service was to move the goal posts by reducing the number of contracted hours it required the fleet to fly each year. It has had numerous mechanical issues, groundings and is now thankfully being replaced early with the Boeing AH-64E Apache Guardian attack helicopter.

Hot and humid weather in Australia and the Pacific meant that its engines struggled and load outs of weapons were at time limited in order to achieve range or time on station. This was shown even more so in Afghanistan when French Tigers were deployed to the hot and high region. In order to get the aircraft to the fight, forward fuelling stops had to be pre-arranged and the number of rounds for the gun were painstakingly counted to within one to two rounds to reach the optimal weight to achieve the mission. The aircraft deployed chewed up so much of the spare parts inventory that nearly all Tigers back in France were grounded.

When Australia bought Tiger it was on the proviso from the French that the aircraft had been fully developed and 'off the shelf'. Once on Australian shores this was proven to be a deceit. Australia had to fix an unguided rocket firing issue which was damaging the aircraft every time a rocket was fired, Australia fixed the inherent inaccuracy in the main gun and integrated US Hellfire Missiles onto the platform. And what did the French do to help this development effort? Nothing. In fact, they suspended their entire Tiger introduction into service program and essentially made Australia become the lead customer for all development and air worthiness. Once that was achieved France resumed its Tiger program, with the benefit of Australia's efforts.

2. The Mu90 lightweight torpedo introduction into service was tortuous. It was sold to Defence as being 'off the shelf', when it wasn't. Initially the weapon didn't work as advertised when first tested by the RAN. Defence could not get the 'support' to understand the weapon enough to identify the issues. Eventually, the French reluctantly supplied the testing data on the torpedo to the RAN in order to help to baseline results. However, this was supplied in French and needed translation and interpretation before any progress could be made.

Australia then became the lead customer and fixed most to the issues with the weapon. It is today quite the capable torpedo it was hoped. However, due to the cost of trying to fit and integrate a French solution to a French problem into a Australian / US military based system, funds ran out and rather than being integrated on the AP-3C Orion, S-70B-2 Seahawk, FFG & Anzac frigates, only the Anzac class was fitted with it. Since then, the Hobart class destroyer is also fitted with it but Navy and RAAF also use the US Mk-54 torpedo on its new Seahawk Romeos and P-8 Poseidon aircraft (respectively).



USS JACKSONVILLE (SSN-699) visits HMAS STIRLING. (2015)

Meaning we have two different types of torpedoes, not only in the national ammunition system but onboard ships in their magazines.

While the ANAO recognised it was Defence that failed a number of due diligence aspects of tender selection for the Mu90, it confirmed that buying French is always problematic.

3. The Last French product that Defence is still struggling with is the MRH-90 helicopter. Like Army decommissioning Tiger early, Navy has done the same thing with its 808 Squadron Maritime Utility Helicopter fleet of MRH-90 through the purchase of an extra 12 Seahawk Romeo helicopters and transferring its MRH-90 Fleet to Army as spares (Dec 2021). Army is also having significant availability issues with MRH-90. In fact, it was this issue that forced Army to buy more CH-47F Chinook helicopters, whose reliability and availability are significantly better than the smaller MRH-90.

The charge of cockup probably stands. The cockup of replacing Prime Minister Tony Abbott with Malcolm Turnbull. The cockup of Malcolm Turnbull in rejecting philosophy, kinship, culture, loyalty to head of state, and existing treaties and obligations (ANZUS, Five Eyes, QUAD) to pursue an (seemingly vengeful) alien, incompatible relationship with a non-Allied country. And the multiple monumental cockups exhibited by Defence (particularly when procuring from the French), regarding its ability to deliver, research, and build complex programs – such as required by the submarine replacement program.

Notwithstanding, probably the biggest cockup of all is that owned by Malcolm Turnbull.

ALL OR NONE (OF THE ABOVE)

The Prime Minister did not lie or conspire; nor was he deceitful. Nevertheless, actions taken made the Commonwealth appear naïve to strategic matters of state and and *raison d'État*, of which they should have known:

- The main culprits were the twin contributors of competence and cockup.
- None of the sides invested enough in understanding the underlying *raison d'être* of the other.
- Significant unfounded/ungrounded assumptions and accusations were made.

The Authors are divided on the issue of the *Collins-LOTE*. They concur that the LOTE could offer some very interesting technologies and opportunities, if done right, and provide an enhanced under sea capability *par excellence*. They also believe that Admiral Mead should be given the benefit of the doubt. He may come up with a great plan – and there might already be one we are not meant to know about yet. However, the risks are existential and it would still mean doing more in Australia, when we have not got the time or capacity. Particularly if we want to boot strap Navy and Australia into the nuclear age.

In sum, the question of competence rests more with France and in Australia's Government and Defence court than it does with the primes, LMA and Naval Group. This paper, therefore, concludes "all and none of the above". while concurring with Dr Baird [1], that:

1. Australia wears the contractual penalties and cancel the *Attack-class*. Completed;
2. Close permanently, not sell or transfer, the reportedly over-hyped and tragically under-performing welfare experiment that is the ASC. [1, 4]
3. *Pour encourager les autres* – close permanently, disperse, and dis-establish (not privatise or transfer), CASG's (and probably CASG itself) unhappy, incompetently led, contracted-APS \$150M per year Future Submarine Program, along with all its offices in Cherbourg, Adelaide and Canberra. Indications are that this is not occurring – and positions are being kept on / transferred, including DSTG; while contracted APS "nationalised".
4. Think short term and purchase COTS boats:
 - a. Extended to 3,500 tonnes, from Korea, only;
 - b. As designed at close to 3,500 tonnes, from Korea or [at an extreme] Spain (possibly Japan), only;
 - c. As at COTS design, from Korea or Japan, only.
5. Buy not just twelve, but at least 25 such (Korean or Japanese) boats, remembering always that we should be aiming to have more eggs in more baskets. They will be a fraction of the cost of the *Attack-class*.
6. Match crewed craft with a similar number of un-crewed submarines such as Boeing Orcas to be used like the Air Force's *Loyal Wingmen*. Combined with the COTS boats mentioned above, the total cost will still only be a small fraction of that of the *Attack-class*.
7. Develop new, up-to-date submarine repair and maintenance yards at Henderson and Garden Island, Sydney – revitalising Cockatoo Island dockyard facilities, as available and allowed for within the Commonwealth lease.
8. Learn from the Germans and Americans in World War II and recruit and train, very intensively, elite...seagoing crews to operate the above craft whether on-board or remotely.

On replacing CASG [4]:

- Hire the right people, starting with an emphasis on candidates with experience from working in industry. Specifically, people who viscerally understand how industry works, and how fair and reasonable profits are made;

- Develop a proper programme (including the recruiting, education, and training of a new generation of ADF, APS, DSTG personnel) and deploy our best people to the positions held by dedicated APS and ADF;
- Understand that the ASDEFCON terms are totally unacceptable, but are only tolerated by industry on account of CASG being a "monopoly client". In almost any other industry, the client would be greatly challenged to get contractors to sign-up to such terms; and
- From that understanding, the ASDEFCON terms must be discarded once and for all, and replaced by terms more along the lines of FIDIC or Australian Standard (AS) terms. It's worked in the U.S. and UK, and the Australian market is primed for such a reform. However, such a reform will never succeed unless and until there is root & branch attitudinal change in CASG.

Concurring with the previous editorial of *The NAVY* (Oct-Dec 2021 issue) ... to exist and interoperate politically and economically over time, requires a secretariat not staffed by on-loan special advisers (SPAD) from the accountancy consultancy companies. [4, 5, 8] . To restore accountable leadership suggests:

- A. Appointing new Chiefs of Defence Force (including reinstating the Chief Defence Scientist in position, status and rank), and political Secretaries of Navy, Army and Air Force – to give ADF vital political freedom of manoeuvre space. [4, 5]
- B. Creating [boards and secretariats] staffed by public servants, ADF, ASD, ASIO, and co-opted subject matter experts, loyal to the Governor General and Commander in Chief. Nationalise all contracted Public Servants [4];
- C. Rooting out and removing the PM&C and like commissions, corporations, and quagos to restore political, ministerial and public service accountability – and reduce the democratic deficit; [4, 8]
- D. Working with Allies establish AUKUS, QUAD [and nuclear-power and ship / submarine engineering and science] secretariats in Australia – support and fund the building and staffing of these secretariats in either Sydney or (as during WW2) in Melbourne (for reasons also of strategic dispersal). ■



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FORMERLY KNOWN ONLY UNTO GOD – NOW KNOWN TO ALL.

By Greg Swinden

An 80-year-old naval mystery was solved on 19 November 2021 when the Royal Australian Navy announced the name of the Unknown Sailor from HMAS SYDNEY (II).

SYDNEY was sunk in an action with the German raider *Kormoran* on 19 November 1941 some 200 kilometres off the coast of Western Australia. All 645 men from Sydney were killed. *Kormoran* was also sunk but ¾ of her crew survived to become prisoners of war.

No trace of SYDNEY's Crew was found except for a single battle damaged Carley Float found a week later. Then on 6 February 1942 another Carley Float was washed up at Christmas Island with a deceased naval rating on-board.

He was buried in the local cemetery and remained there until exhumed by the Navy in 2006 and later re-buried in the Commonwealth War Graves Cemetery in Geraldton on 19 November 2008; the closest war cemetery to where the battle was fought in 1941.

From 2008 a dedicated volunteer team led by Commander Greg Swinden, RAN has sought to identify the unknown sailor. Mitochondrial DNA obtained from the remains in 2006 (by the Centre for Ancient DNA at Adelaide University) was tested against samples provided by Sydney families and in late 2019 a match was found. Nuclear, or Y Chromosome, DNA was extracted in 2021, from a piece of bone

retained by Navy, using new scientific techniques by staff at the Australian Federal Police Laboratory in Canberra. These two DNA sources were compared with DNA from living maternal and paternal relatives and found to be a match.

In August 2021 an ADF Casualty Board was held in Canberra and analysed the DNA results along with anthropological, dental and genealogical data and concluded that without doubt the unknown Sydney Sailor was 21 years old Able Seaman Thomas Welsby Clark of Brisbane, Queensland.

Toms long journey home is now over. Formerly known only unto God – now he is known to all.

Greg Swinden is a long-standing prize winning contributor to *The NAVY*. He was personally asked by Chief of Navy to work with the team tasked to identify our unknown sailor, and bring him home, to rest. We are eternally grateful to Able Seaman Thomas Welsby Clark for completing his long watch. And to Greg for helping bring Tom home to rest. Stand Easy Tom.

VADM MEAD ON SSN TASK FORCE

As chief of the Nuclear-Powered Submarine Task Force my role is to advise government on the optimal pathway to acquiring a fleet of nuclear-powered submarines for Australia. Nuclear-powered submarines will fundamentally change Australia's strategic personality in the maritime domain.

They will allow us to hold potential adversaries at risk from a greater distance and influence their calculus of the costs involved in threatening Australia's interests. Nuclear-powered submarines have superior characteristics of stealth, speed, manoeuvrability, survivability, and almost limitless endurance compared to conventional submarines.

The 2020 Defence Strategic Update highlighted a rapid deterioration of the strategic environment of the Indo-Pacific region – Australia's region.

Military modernisation is occurring at an unprecedented rate. Capabilities are rapidly advancing, and their reach is expanding. As a result, our technological edge is narrowing.

In response, the government has outlined a commitment to develop a more capable military force that will allow us to continue to help shape the region's future trajectory in ways that support security and prosperity for all – Australians, our neighbours and partners.

This includes a fleet of nuclear-powered submarines, the most technologically

advanced underwater capability to ever be operated by the Royal Australian Navy.

Managing the delivery of this capability is a vital task – one that has my absolute commitment and that I consider of the deepest importance in its contribution to the defence of Australia. The delivery of a project of this scale is a national endeavour. We must get this right – and to do so, we must have the right people, with the right skillsets, in the right places.

Since the announcement of the AUKUS-enhanced trilateral security partnership, the Task Force has grown in size, capacity and expertise. The multi-agency Task Force now comprises seven divisions: Capability, Executive, International Policy and Agreements, Program Delivery and Industry, Security, Technology, and Stewardship. We have recruited – and continue to recruit – the best and brightest minds in Australia to contribute to the delivery of this historic capability.

Our people will be the key enablers of success for the nuclear-powered submarine program.

There has been much speculation about the nuclear-powered submarine program since its announcement on September 16 – which boat design will be selected? How much it will cost? When will construction commence? How long it will take?

It is important to understand that acquiring a fleet of nuclear-powered submarines is a multifaceted task and requires significant input from a wide range of stakeholders. It is not an overnight task. Australia has never undertaken a capability acquisition of this scale.

The 18-month period of intensive consultation, which has already commenced, is imperative. It is a defined period that will allow us to work through the key questions with experts in industry, academia and Australian nuclear organisations to inform the government's decision on the future nuclear-powered submarine program.

What I can assure you is that this nuclear-powered propulsion technology is safe. The nuclear propulsion system used by the UK and the US has an enviable track record of safety and security. Their respective nuclear-powered submarines have never experienced any reactor accident or release of radioactivity that has harmed humans or marine life.

Our AUKUS partners have set and maintained an exemplary safety record operating their submarine nuclear reactors. Australia will ensure it replicates this safety record by leveraging both countries' decades of experience as responsible stewards of this technology. Safety is our absolute priority.

Further, the "nuclear" in nuclear-powered



Able Seaman Thomas Welsby Clark.

submarines refers only to the propulsion power source of the boat. Australia will not seek to develop or acquire nuclear weapons. We remain committed to our obligation under the Non-Proliferation Treaty not to acquire nuclear weapons.

Looking ahead at the next 18 months, the Task Force will work with our counterparts in the UK and US to deliver key outcomes. We will establish a framework around nuclear stewardship and safety, and further policy requirements. We will define the nuclear-powered submarine workforce, including domestic and international training and education opportunities, and identify industry, security and infrastructure requirements.

We will determine time frames, costs and supply needs – and we will select a submarine design.

The government has outlined its intention to build these submarines in Adelaide. This is with the backing of a strong sovereign defence industry. We can only move forward and contribute more to our region's stability, security and prosperity if we commit to build a robust, resilient and internationally competitive Australian defence industrial base.

This will advance Australia's economy and create and sustain thousands of Australian jobs.

I am focused on expeditiously delivering to government an optimal pathway to acquire these nuclear-powered submarines. We must remain focused. We must deliver. We must remain committed to our mission to defend Australia and its national interests in order to advance Australia's security and prosperity for decades to come. That is mission success.

Vice Admiral Jonathan Mead is chief of the Nuclear-Powered Submarine Task Force.

TAIWAN AND AUKUS

U.S. Secretary of State Antony Blinken, responding to a question about the extent of U.S. commitments to Taiwan – following comments by President Joe Biden indicating the U.S. was prepared to defend Taiwan in the event of an attack – commented: Allied nations would be prepared to “take action” if China uses force against Taiwan; while refusing to say whether the Biden administration would be prepared to use the U.S. military in such a conflict. He went on to say:

There are many countries both in the region and beyond that would see any unilateral action to use force to disrupt the status quo as a significant threat to

peace and security.

Kurt Campbell the Former NSC Assistant Secretary of State for East Asian and Pacific Affairs during the Obama administration and current Indo-Pacific adviser to the Biden administration, commented to the Lowy Institute that China's campaign of [political] “economic warfare” (PEW) will fail to bring Australia “to its knees” and Beijing will eventually be forced to re-engage on Australia's terms. He considered that the AUKUS partnership will help Australia build nuclear submarines; while paving the way for a new “strategic intimacy” between the three Allies. He noted President Biden raised China's PEW coercion in his recent meeting with President Xi Jinping – and that its \$20bn trade strikes targeting Australian exports were “backfiring” due to Australia's resolve.

He went on to say that “China's preference would have been to break Australia, to drive Australia to its knees, and then find a way forward,” but that “I don't believe that is going to be the way that it plays out. I believe that China will engage because it is in its own interests to have a good relationship with Australia. I believe that will happen naturally”:

I think China is a country that deep down fundamentally respects strength, fortitude and resilience, and I can't imagine a country that has demonstrated that more clearly than Australia.

On AUKUS, Mr Campbell recognised that building nuclear submarines would be an “enormous challenge” considering the nation's lack of a domestic nuclear industry, and declined to rule out the emergence of “insurmountable” roadblocks. However, “If we run into roadblocks that were insurmountable, those would be identified. But I think the expectation and the belief is that our three countries will work together towards this objective”:

I think in 20 years it will be taken as a given that our sailors sail together, our submarines port in Australia, and people will say, ‘well gee, hasn't it always been that way?’ No, it was started with the vision of Australia, of Great Britain and the United States to drive this forward. We were able to do this 70 years ago with Great Britain, and the expectation is we will be able to do it again. I don't think our leaders would have gotten behind it if we didn't think it was a more achievable goal.”

Mr Campbell went on to say that the U.S., together with Australia and the UK, were determined to “stand up” to Chinese coercion and assertiveness, but that the U.S. policy of “strategic ambiguity” in Taiwan had not changed, nor its congressionally mandated responsibility to support peace across the Taiwan Strait.

The Indo-Pacific we seek has Australia as a strong and reliable partner a nation that more than lifts its weight.

RAMIFICATIONS OF CANCELLATION

The U.S. Vice President, Kamala Harris, apparently to mollify France following the cancellation of the *Attack-class* submarine and announcements of AUKUS, was despatched on a five-day visit to Paris following the COP26 summit. It remains unclear if France's gain is Australia's loss?

THANK YOU FROM TAIWAN FOREIGN MINISTER

In an interview with *The Australian* (Will Glasgow, 1 Dec 21) Foreign Minister Joseph Wu thanked Australia for bluntly telling Chinese President Xi Jinping not to invade; declaring that “the Morrison government's strong comments are helping avoid conflict in the region”. Noting that “while it was Taiwan's responsibility to defend itself, Australia and other allies were helping to preserve stability through their support for Taiwan”:





As I say all the time, I have a kangaroo in my heart.

After visiting Canberra and the Australian War Memorial in 2013, he said it had “changed my whole perspective on Australia”: I admire Australia’s “natural passion” and its history of speaking out and fighting to safeguard freedom and democracy.

Australia is so far away from the rest of the world, but look at Australia’s record,

Participating in battles, or wars, in terms of safeguarding freedom and democracy. Also, in terms of fighting together with allies. It’s very touching.

There’s a natural passion of the Australians ... When other fellow democracies are threatened, they will like to speak out, Australia is not alone in supporting Taiwan in that way.

While asking for closer relations with Canberra, Mr Wu made it clear that “defending Taiwan is our own responsibility: we are not asking Australia to participate in a war that Taiwan is involved in.”

Nonetheless, during this period of time, before anything happens, the Australian support for the Taiwanese people – either international participation or urging for peace and stability in the region – are all very good encouraging. Noting that we are not alone in dealing with that big authoritarian neighbour.

Mr Wu went on to say that “it is probably about time to upgrade relationships and contacts between Australia and Taiwan... in order to engage in substantive discussions”. He concluded by supporting deterrence and the measures being put in place, notably by the RAN, RAAF and Allied navies, to assure peace:

War should be avoided. And that is what we are trying to do.

NEW ZEALAND SEEKS A NEW NET?

New Zealand’s Foreign Minister Nanaia Mahuta apparently bases her Foreign policy on an old Maori proverb: *Ka pu te ruha, ka hao te rangatahi*: as the old net is cast aside a new net goes fishing

Having first mocked and now, apparently, attempting to join AUKUS, New Zealand appears set on an appeasement path and a new net. Nowhere was this more obvious than the recent deployment of HMNZS TE KAHA (F77) and the RNZN’s newest warship, the replenishment tanker HMNZS AOTEAROA (A11), to exercise with the HMS QUEEN ELIZABETH Carrier Strike Group (21) and U.S., Japanese, and Dutch navies in the South China Sea. Apparently unwilling, politically, to be seen working with the RAN and RAAF. With the diplomatic intent, presumably, being for New Zealand to be



HMNZS AOTEAROA (A11) and HMS QUEEN ELIZABETH (R08).

seen as identifiably separate from Australia? The ships subsequently took part in the Five Power Defence Agreement exercises, with the UK, Australia, Malaysia and Singapore.

More recently, questions have been raised as to NZ’s slow support in committing Pacific Security forces for the Solomon Islands crisis. Perhaps due to Chinese support for the current PM, against whom protests were directed? Including reported wide-scale bribery of politicians to secure the recent vote of confidence. And alleged cyber-operations aimed at doing the same. Begging the question as to whether Beijing was consulted before or after the polite request for NZ assistance from Scott Morrison and Marise Payne and forces committed? At least NZ has joined the diplomatic boycott of the CCP Winter Olympics. Presumably once others had got on board. Including initial reluctant support, apparently, from the UK.

This all comes at a time when New Zealand is advocating for Chinese entry to the TPP (possibly ahead of Taiwan and the UK); while distancing itself politically from Australia – ahead of the Federal election? Potentially looking towards rapprochement with a more compliant partner (to both China and New Zealand?), should Labor win the election. In other guises, this could appear as interference.

GREENWHICH STATION

The last British RN Chief of Defence Staff (CDS) was Admiral Sir Michael Boyce, who retired in 2003. His accurate advice on Phase 4 stability operations following the Iraq invasion – along with that of Chief of US Army General Eric K Shinseki – was discarded in favour of Shock and Awe. Tactics that ended

up losing both the Iraq and Afghanistan wars. Following a plethora of mediocre Army and RAF Chiefs of Staff, it has been 18 years, 6 months, and 18 days between RN CDS – perhaps by way of punishment for being right? The new Chief of Defence Staff is Admiral Sir Tony Radakin RN. There may be lessons here for Australia. It will be twenty years next year since there was a RAN Chief of Defence Force (CDF), Admiral Chris Barrie AC. Given the regrettable cloud hanging over the current CDF and Chief of Army that has, reportedly hamstrung them during the COVID crisis, and the emerging RAN and Army Littoral Manoeuvre Fleets – so fundamental to our deterrence – it is to be hoped that the next Chief of Defence Force will be RAN. For which there are some exceptionally strong contenders this time round. ■





ILLEGAL FISHING

There has been a significant rise in illegal fishing in Australia's northern waters; coming at a time both of heightened security threats to our north; changing political alliances to meet the threat – highlighted by Australia's decision to form AUKUS and develop nuclear-powered submarines more suited to blue water than archipelagic operations – exacerbated by the economic impacts of COVID. Impacting remote fishing communities, such as from the East Nusa Tenggara region in eastern Indonesia.

There are also other pressures growing – including probing from criminal elements looking to resecure the profitable people trafficking, and related drug smuggling trade. All this occurring when local polities are under financial, social, and economic strain brought about by the collapse in tourism, and the changing nature of post-COVID trade. Additionally, with Australia's forthcoming federal election, there is likely to be an upswing in all three associated activities (illegal fishing, people trafficking and drug smuggling). All set to test Australia's resolve (specifically if a Labor government was to win the next election, as per the Biden administration regarding the U.S. southern border) – but also the Governments of Indonesia and Papua New Guinea. Both countries facing economic tests and local insurrections that provide opportunity for illegal fishing and associated drug and people smuggling activities.

Despite being tested and an upswing in the burning and destruction of unseaworthy fishing boats by Australian authorities, the Indonesian Government remains engaged and supportive. Probably more so, given the encroaches and hostility it is facing in the South China Sea – as China probes further from its illegally occupied islands. This cooperation is essential, noting that over the past 20 years, Australia has destroyed nearly 1,500 boats engaged in illegal fishing in its waters and prosecuted more than 2,000 foreign nationals involved – mostly from Indonesia.

ABF & MBC NOT UNDER COMMAND?

The Australian Border Force is a paramilitary organisation that wears militarised uniforms and adopts military ranks and postures. Many of its HQ members were Canberra public servants recruited into the ranks and provided uniforms and equivalencies – without military commission and training to support their roles. Yet, through equivalency, placing themselves above commissioned Army and Navy officers of significantly more experience and standing than themselves. It is a dysfunctional and unhappy organisation, since it was established in 2015.

Nowhere may its dysfunctionality be clearer than in its Maritime Border Command patrol vessels. At any one time – particularly closer to leave periods many of its vessels are, apparently, unavailable. Invariably, this means that RAN Patrol Vessels need to take up the slack to compensate for ABF ship availability. Much of the lack of availability appears due to crewing issues – impacted by low morale and poor leadership. Despite being paid significantly more than their RAN counterparts – with far more conducive conditions of service. To provide the ever-essential PR, ABF vessels are often featured in any media coverage. And the arresting/prosecuting vessel (generally RAN) allegedly withdrawn from the picture.

DEFENCE OF AUSTRALIA

The *Arafura-class* will not replace the need for the RAN to build and crew its effective *Armidale-class* patrol boats. Replacements for these boats are urgently needed, in similar numbers and larger – 20-25. Not simply to support illegal-fishing patrols to our north, but also to act as warships in the event of incursions by spying and other military vessels now more frequently entering Australia's EEZ.

Defence of Australia will increasingly focus on our north and supporting forces deployed across the region – including USMC, USN, USAF and critical allies, such as Singapore, South Korea, Japan and potentially Taiwan. The testing currently going on is likely to form part of future grey war tactics, particularly if China succeeds in occupying the South China Sea.

Australia's Defence is vested in the Australian Border Force. Which is why a strong hard look needs to be taken of the current force structure. For reasons of coherence, effectiveness, and command, ABF vessels should be placed back under

the Australian White Ensign, crewed, engineered and commanded by Navy. As they would be in the event of conflict.

WHARFIES RETURN

The MUA is seeking a 24% pay increase for the first year and 10% in each of the next two years which would increase Patrick's general stevedoring wage bill by around 194%. Making Australia uncompetitive internationally and threatening future viability of the company as a whole.

In response to criticism, the MUA attacked Scott Morrison's timing "to cause maximum anxiety and fear within the community":

The Maritime Union will continue to negotiate in good faith with employers on the waterfront and advocate for good pay, job security and safety in the workplace for our members, but what we don't need is Scott Morrison sticking his head in and trying to create conflict on the waterfront in the lead up to Christmas as a distraction from his failure and lies.

UREA – PEW WARNING?

Coming at a time of heightened tension in Ukraine and over Taiwan, there is a potential Political Economic Warfare warning over Urea. Urea, makes up a third of Diesel Exhaust Fluid (DEF), a green fluid injected into the exhaust system to reduce the amount of pollution entering the atmosphere. The supply, mainly from China has been slashed, leading to global shortages. The Australian Trucking Association has warned stakeholders the issue will become "much worse by February". Leading to the grounding of many trucking fleets. Urea is a simple product to produce and another example where risks have been taken; offshoring manufacturing to an increasingly unreliable country. An interesting use of grey-war tactics, that is likely to backfire at some stage. ■



ABF Byron Bay Cape-Class Patrol Boat.

AN ARMY FOR ALL REGIONS

By Dr Simon Reay Atkinson

An examination is provided by this paper of how “new fleets of Australian-built amphibious and littoral vehicles and craft that will be able to transport land forces with enhanced speed and protection” [1] may be capitalised, designed and crewed in the best interests of Commonwealth, so as to improve sovereign capability across industry, crewing, and the maritime domains.

INTRODUCTION

This paper is divided into three sections:

- The first section examines Army’s recent demand signal, to design, develop, build and crew an upscaled Army Littoral Manoeuvre Force, fit for the 21st Century.
- The second section considers system identification and classification with relation to Knowledge (Information, Technical Data and IP) Transfer and Defence Cost Inflation (DCI) and affordably sustaining and maintaining fleets in class, over their full capability lifecycles.
- The final section examines how Army might choose to design, adapt, and build and crew its future Army Littoral Manoeuvre Force in a way that would maximise Australia’s Sovereign Industry Capability and contribute to the Investment in Infrastructure Program (IIP) announced by the Government in November 2020.



BMT CAIMEN 200 Littoral Manoeuvre Vessel Heavy Contender.

SECTION 1: DEMAND SIGNAL

In February 2021, Commonwealth announced that it is “to invest up to \$800 million to acquire new fleets of Australian-built amphibious vehicles and landing craft that will be able to transport land forces with enhanced speed and protection”. [1] Then Minister for Defence, Senator the Hon Linda Reynolds CSC said the Army Littoral Manoeuvre – Light project, LAND 8710 Phase 1 will strengthen the ADF’s amphibious capabilities:

“Today’s announcement delivers on this Government’s objectives, set out in the 2020 Force Structure Plan [2], to enhance the ADF’s amphibious capabilities, especially in Australia’s territorial waters and the near region,”

“These new vessels, introduced from 2026, will be larger, faster, and better protected to support ADF operations.

“They will allow Defence to quickly and effectively deploy both domestically and to our near region, as well as remain engaged with regional security partners and support humanitarian assistance to our neighbours in the Indo-Pacific.

“We have also seen the importance of the Army water transport capability most recently on Operation Bushfire Assist 19-20, evacuating Australians to safety off beaches and delivering much needed supplies.”

Minister for Defence Industry Melissa Price said the Morrison Government’s investment in these fleets demonstrates its commitment to Australia’s defence industry:

“Australian industry involvement will be maximised throughout the design, construction and sustainment phases of this project,” Minister Price said.

“The new and enhanced platforms will use Australian industry’s expertise both during the detailed design and build phases to support the delivery of the Morrison Government’s, [Australian] Naval Shipbuilding Plan.”

“By taking this approach, the Morrison Government is also encouraging potential export opportunities for Australian industry through the design and build of this new capability.”

With two separate fleets to be acquired, the watercraft will provide independent shore-to-shore, ship-to-shore, and over-the-shore capabilities to better manoeuvre and sustain the ADF in littoral and riverine environments. [1]

Through the project, a Littoral Manoeuvre Vessel Heavy (LMV-H) and a Littoral Manoeuvre Vessel Medium (LMV-M) will be delivered to augment and replace the Army’s existing LCM-8 vessels. This will present opportunities for Australian industry in the detailed design, build, maintenance and support elements of the project. [1]

A Littoral Manoeuvre Vessel Amphibious (LMV-A) will also be built to replace Army’s current LARC-V, which will offer significant opportunities for Australian industry in the vehicle’s design, build, maintenance and through-life support phases. [1]

Close support will be provided through the acquisition of Littoral Manoeuvre Vessel Patrol (LMV-P) craft, through LAND 8702. Additionally, Army’s multiple small water craft – including small unit riverine craft, zodiacs and RHIBS – will be upgraded and formally integrated into the Army Littoral Manoeuvre Force, Order of Battle. [1]



US Maneuver Support Vessel Light.

While the emphasis is on building and supporting two separate fleets, Army will be operating the fleets (all sizes) as one force. Under current planning, the Army Littoral Manoeuvre – Heavy project, LAND 8710 Phase 2, will include Inter-Theatre Projection and Sustainment vessels (LMV-H). These larger vessels (up to 1200 tonnes) will provide a supporting role, integrating with Navy Sea Lift (e.g., HMAS CHOULES) and the Amphibious Forces, comprising LHDs (HMA Ships CANBERRA and ADELAIDE); supported by and integrating with, LAND 8710 Phase 1, Littoral Manoeuvre Vessels.

SECTION 2: BY CLASS AND STANDARD

Army, like Navy, traditionally holds equipment and class engineering standards. Core to sustaining and maintaining fleets efficiently and effectively over time, is classification. This involves system identification, standardising (and pattenising) a system so that it can be retained and sustained in its own unique class. [3]

In 2013, the author was in conversation with Richard Johnson AO MBE who worked as one of Sir Jack Zunz's Arup engineering team tasked with interpreting and, ultimately, implementing Jørn Utzon's Sydney Opera House (SOH):

The author asked “what was the design life of the Sydney Opera House?”, to be told (he recalls) by Richard Johnson, “two hundred and twenty-five years”, 1973-2198.

At the time, the Sydney Opera House (SOH) was estimated to be about 30% in class – with an extensive laser survey then being undertaken to create the blueprints and drawings necessary to bring it into class. Each door, for example, is a different shape – so every time an Air Conditioning Plant (ACP) had to be replaced, a new project plan and set of drawings was required. Adding considerably to maintenance and sustainment costs. The same applies to the tiles affixed to SOH sails. At some point – perhaps at its half-life in 2085, the tiles will need to be replaced. If there is no record of their constituency and how the tiles were manufactured, no amount of 3D printing will bring the sails back to life. Today, Sydney Opera House is estimated to be 60-70% in class, which may be “as good as it gets”.

Cost and Class

The driving factor behind system identification and classification is sustaining and maintaining a capability over its lifecycle (CLC) – which, for some capabilities, may be decades. For example, the *M1A1 Abrams* Tank was designed in the early 1970s, and entered service in 1980. Following a number of upgrades, a new version – the *M1A2 SEP v4* – is due to begin testing in 2021. Of the more than 10,000 tanks built, many remain in service. With, potentially its last upgrade in 2021, the tank could be in service for seventy-five years (1973-2048). Far exceeding the design life of 25 years.

Each tank in 2016 dollars cost about \$11.25M AUD. (i) Considering Australia's fleet of fifty-nine *M1A1 Abrams*, and Defence Cost Inflation, running at about 6.7% above historic inflation during the period 2016-2021 [4-7], replacement costs in 2021 would be in the region of \$785M. (ii) Representing about one third of the through-life ownership costs of up to \$2.5 Billion across the CLC, not including future upgrades.

Considering fleet costs, of the \$785M build costs approximately \$170M is the cost of actually building the (fifty-nine) tanks; \$190M in fitting, training and maintaining them (on delivery), and \$425M the value (and costs) of the IP held by the Design Authority and engineering team behind the tanks. All necessary to hold the

system in class. The real value of the tank is not in the tank itself but in the maintenance, fitting and spares support behind the tank plus, most significantly, the sovereign knowledge contained by the Design Authority.

Impact of Defence Cost Inflation

Considering the *Leopard* and *M1A1* tanks and the decision to replace 90 *Leopards* with 59 *M1A1s* in the early 2000s.

The cost of a *Leopard* Tank in the early 1970s was in the region of \$1.0M a tank, or \$90M for ninety. By 2000, the budget for tanks had potentially grown to about \$450M but the cost per tank (allowing for Defence Cost Inflation at 8%) was now about \$9.8M a tank (c.f. \$11.25M per *Abram M1A1* tank in 2016). The probable tank budget, allowing for historical inflation, stretched to only forty-six replacement (*M1A1*) tanks – compared to the 90 *Leopard* Tanks purchased in the 1970s. The budget would have needed to grow to \$880M (or by almost 100%) to allow for the purchase of ninety *M1A1s* in the early 2000s. Ultimately, after significant staffing and negotiation, the budget was increased by just under 30% to \$575M, to allow for the purchase of fifty-nine *M1A1* tanks, in early 2000 dollars.

A rule of thumb, as identified by Pugh [5, 8] and Augustine [9] is that:

Allowing for DCI, a fleet – any fleet – halves in size every twenty-five years.

There are things that can be done about DCI, which will be examined later. Notwithstanding, the rule of thumb applies equally to navies. For example, six RAN FFGs replaced by 3 DDGs, and 12 British Royal Navy Type 42 Destroyers replaced by six Type 45s. Examined across the U.S. and Royal Navies, over the last fifty years, the same rule of thumb has applied. [10]

The Army successfully fought for an increase in budget to allow for the purchase of its 59 *M1A1s*. Therein lies the paradox. Success was judged in dollars won, not capacity delivered against capability. If the answer in 1970 was that Australia required 90 Main Battle Tanks, then what had changed physically (the world got smaller, the capability increased and, or, the threat removed – combined by a third) to allow fifty-nine MBTs to cover the same ground, 90 had in the 1970s? Or was every *M1A1* almost twice as capable than its *Leopard* predecessor? Even if it was, a single tank – connected or otherwise – can only occupy one place at any one time. The overall physical presence, e.g., for Force Protection, and ability to occupy space is reduced. Notwithstanding increased capability. This gets both at the Stalinism, so vital in war, that “Quantity has a Quality all of its own”, and Major General (UKA) John Drewienkiewicz's “Rule of Five Cs”

Capacity, Capability, Coherence, Consistency and Continuity have a Quality and Quantity all of their Own [11]

Capacity also relates to scale. For example, when Australia procured its 90 *Leopard* Tanks in the early 1970s this represented a significant order to the Original Equipment Manufacturer (OEM), at an early stage of manufacture – and 2.5% of the class ultimately built. When Australia purchased its *M1A1* tanks in the early 2000s, production had already been running for two decades and the numbers purchased represented only 0.6% of those built. In terms of scale, design, and timing, Australia had potentially four-times the influence over the purchase of its *Leopard* tanks than it did over the *Abram M1A1* tanks. Moreover, because Australia was not buying into the Design Authority – by supporting R&D for future indigenous / U.S. tank development (or its own, as per Israel's 2,500 indigenous *Merkava* tanks) – it relinquished influence at the design and build table. Placing Australia alongside other Foreign Military Sales (and Defence Cost Sales) customers of the U.S. – many of whom (like Egypt with 1360 *M1A1* tanks) having much more significant orders.

Sovereign Capability and IP

In terms of sovereign capability, Australia can fit and maintain its *Abram* tanks, which might represent up to 30% sovereign capability. If the obverse of sovereign capability is considered as sovereign risk (iii), because Australia does not build or hold its tanks in class – through a Design Authority – spares, changes, upgrades, and modifications all have to be sourced through the OEM, in the United States. Consequently, the *Abrams* fleet may represent up to 70% sovereign risk to Australia – if logistic lines were cut or if, for whatever reason, the parent company stopped technology transfer.

Consideration of IP gives rise to notions of background and foreground IP. In answering a degree or HSC level question, the candidate gets about 25% of the score for providing the right answer; the rest for the reasoning, logic, and math behind it. (iv) So it is for foreground and background IP – with background IP representing the 75% of the knowledge necessary to answer the question, or build, support, and sustain the capability “in class”, over time. It is the sovereign capability behind the product where the actual value lies. To paraphrase President Eisenhower: “the lasting value is in designing, planning and classifying; not producing, building or the plan”.

PROCUREMENT & ACQUISITION

Relating to Sovereign Risk are the different types of procurement and sustainment policies available to Australia. [12] Although relating specifically to the U.S., similar regimes apply to other military sales from, for example, the EU:

Foreign Military Sales (FMS) system is a U.S. Government program for transferring defence materiel, services, and training to its international partners. The FMS program is funded by administrative charges to foreign government purchasers, and is operated at no cost to US taxpayers. [13]

Direct Commercial Sales (DCS) is a more conventional method of procurement, whereby the purchasing government enters into a commercial contract with the vendor or Original Equipment Manufacturer (OEM).

International Traffic of Arms Regulations (ITAR) (iv) The US government, like most sovereign governments, is highly protective of its military technology. As such, it applies the ITAR as a means

of mitigating the risk of sensitive technology or equipment being exported to its adversaries.

Export Administration Regulations (EAR) operating beneath ITAR (and FMS and DCS) these regulations provide for the procurement of: end items; equipment; accessories; attachments; parts; components and [non-ITAR specific] sub-systems.

Note: The FMS system does not operate in a “competitive” manner. The Defence Security Cooperation Agency (DSCA) (vi) will typically require a declaration to the effect that all DCS options have ceased on a particular procurement prior to initiating administrative action on any given FMS case.

All Defence purchases need to consider the most appropriate means of purchase and sustainment. Important factors to be considered in making recommendations will include, without limitation:

1. Timeframe for acquisition (“purchase to pay”);
2. Commercial terms;
3. Restrictions on sale (and method of sale);
4. Availability of specific equipment for purchase;
5. Likely cost (including administrative overhead);
6. Political considerations, including international relations, treaties and agreements (e.g., MoU, SOFA etc) and
7. Long term sustainability of a particular platform.

Knowledge, Information, Technical Data and IP Transfer

Working separately and combining the work of Law and Callon [14] and Mario Bunge [15] the author [16] concluded that:

Knowledge is social & human and the infotechnological also.

The fact that Knowledge is social and human will remain the case until such time as Artificial Intelligence matures to that level it might displace human knowledge. A crisis that may not be that far away. [17].

For 100% Sovereign Capability, Australia would require to own and sustain all of the Capability Life Cycle. From retaining a Design Authority (to hold the capability in class); through to Research and Development; Design (as distinct but associated with the Design Authority (DA)); through to building, engineering, fitting, and maintaining / sustaining a capability through its life cycle.

In broad terms, fifty-five percent of a sovereign capability may be vested in its Design Authority, R&D, Design and Adaptation capability; and 45% in its Engineering build, fit & maintain and sustain capability. [16, 18] Critical to this understanding, is that infotechnological knowledge is contained within the human capital; insipissating investment within the workforce, at all levels. Consequently, 70% of a Sovereign Capability may be represented within the workforce and the organisations and institutions necessary to sustain that knowledge over time: the background IP. This is what Australia and many other developed countries have put at risk – often unknowingly – since the 1980s, see [19, 20].

If Australia maintains an engineering build, fit, and maintenance capability in-country – and outsources the workforce – then it may retain about 15% sovereign capability over that product. This often has been the hidden cost of outsourcing, since the knowledge retained in the workforce is no longer ‘Sovereign’. In other words, it has to be bought in from an external – usually private – company or

organisation. This is particularly the case for long CLC items such as ships, tanks, and some weapons – where industry may not wish to retain the knowledge, unless paid to do so.

If Australia outsourced the workforce and its access and knowledge of background IP – by relying on foreground IP only – then Australia may retain 25% Sovereign Capability over a product.

Returning to the observation that “the obverse of Sovereign Capability, is Sovereign Risk”, then the sovereign risk in the above examples is between 75% and 85%. This may be acceptable in European nations, or between say Europe and the U.S., where logistic supply lines are relatively short distances, largely homogenous, integrated and well supported. It becomes of significant concern to Indo-Pacific nations such as Australia, where this is specifically not the case.

Considering the Design Authority, R&D, Design and Adaptation Knowledge Base (at 55% of Sovereign Capability), the same applies. By retaining the workforce and its essential admixture of both foreground and background IP, about a suitably funded research and design base, theoretically up to 55% Sovereign Capability may be retained over a capability.

Given reductions in Design Authority, R&D, Design and Adaptation and shipbuilding capabilities in the UK, the overall Sovereign Capability for shipbuilding (including commercial, e.g., auxiliaries and oilers) has probably reduced to less than fifty-percent – indicating a UK shipbuilding Sovereign Risk in 2017 of more than 50%. [7, 10, 21, 22] In contrast, while the UK no longer has a volume car manufacturer, it has never produced as many vehicles. The reason for this is that the Design Authority, R&D, Design and Adaptation base in the UK has remained strong, supported by highly integrated spares and parts manufacturing. This allowed international manufacturers to invest in the UK and, reportedly, to achieve the same levels of production (quantity), at improved levels of quality – thereby, reduced cost. (vii)

Spares and parts – for example actuators – offer the opportunity for manufacturing at the sub-ITAR level through Export Administration Regulations (EAR). Either through licenced in-country manufacture, or quicker turnarounds by OEMs. For many capabilities, up to 70% of their components may be sub-ITAR, for which such sourcing (and local build including by 3D Printing) may apply. This has significant implications for reducing sovereign risk and stock holding; so improving sovereign capability – by working, for example, with companies such MOOG. (viii)



Antasena-class Tank boat built by North Sea Boats designed by LOM Ocean Design for the Indonesian armed forces.

ALM BY DESIGN

LAND 8710 Phase 1 and Phase 2 establishes a demand signal to build a sustainable Army Littoral Manoeuvre Force, comprising ships and crews – supported by a viable national shipbuilding base [23]. Current indicative Army Watercraft allocation is shown in Table 1. The scope is quite significant, from small watercraft of 4.5m or less, through to a replacement for the LCM8 (LMV-M) and the introduction of 1200 tonne (or more) Littoral Manoeuvre Vessel Heavy (LMV-H) – the size of a WW2 Destroyer.

Table 1: Indicative Army Watercraft allocation, 2021

Type	Number
LMV-H	8
LMV-M	15
LMV-A	15
LMV-P	16
Small Boats (for example RHIBS)	60
Small Watercraft	190

Delivering and sustaining the whole build effectively and efficiently will necessitate classifying the ALM system and sub-systems – synthesising crews, designs, builds and support systems across multiple capability life cycles. This lends itself to the Army’s traditional approach of “fitting the crew; rather than crewing the fit”. Given the numbers involved, it also lends itself to working with Navy to ensure ADF Maritime as a whole is more than the sum of its parts; avoiding destructive hyper-competitions and agreeing complementary areas for co-adaptation.

The Doenitz Cycle applied during WW2 remains relevant to maritime force management. Doenitz recognised for every one submarine on task, he required one boat on station; one deploying; one returning; and one alongside undergoing maintenance. Noting also sea: shore requirements for crews and short maintenance periods alongside, this cycle remains relevant even for single-vessel tasking. Not often included, is the build rate behind the figures. In peace time, if the class is to be replaced every 16 years, say, this requires a build rate of 0.0625 ships a year. For a class of 8, a ship (delivering every other year) would be in build at any one time.

If vessels are to be sustained over their design-life, then there will generally be a need for the ship to go through a mid-life upgrade and refit, every 16 years. Inevitably, this means that overtime a class of eight, will only have seven running ships at any one time. The laws of averaging impact at class sizes under nine. Considering the Doenitz cycle, a class of 8 has one ship in refit a year. Of the remaining seven, one standing patrol can be sustained (comprising four ships), and the other ships may provide a surge capacity. To maintain sea-shore ratios (for professional advancement, training, leave etc.) the 60% sea: 40% shore ratio generally applies. Critically, assessments need to be taken of deploying units – reducing opportunity and numbers of ships available. From seven warships, only 4 may be available for assessment. Additionally, assessments cannot be made concurrently – as warships workup and deploy.

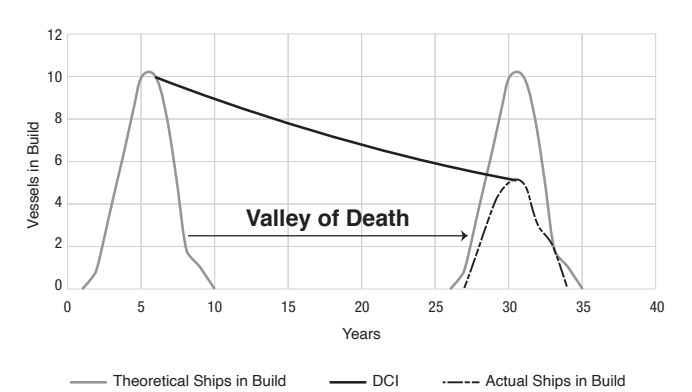
Table 2: Indicative Army Watercraft allocation to support Doenitz Cycle and Minimum Class Sizes

Type	Number	Doenitz plus Half-Design Life Build Rate	Min Class Sustainment over Design Life Size
LMV-H	8	8.5	9
LMV-M	15	15.9375	16
LMV-A	15	15.9375	16
LMV-P	16	17	17
Small Boats (for example RHIBS)	60	67.5	68
Small Watercraft	190	213.75	214

In any one year – for about 8% of the time ships (of a class of eight) may contribute to non-concurrent operational assessments. Time also competing against training and other operational demands. This creates problems both with establishing a class “true mean” – in order to distinguish between aberrant, good and average; while exacerbating the impact of Regression to the Mean. RTM is a statistical phenomenon that can make natural variation in repeated data look like real change. It happens when unusually large or small measurements tend to be followed by measurements that are closer to the “true mean”.

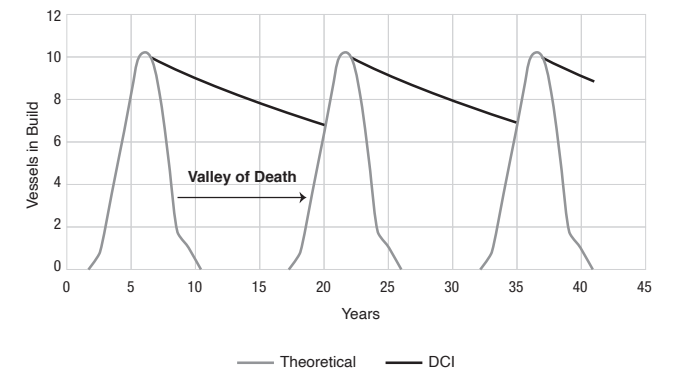
A class of nine ships increases the opportunity for concurrent assessments, of one or more ships, and the time available for operational assessments (across the class) – to 20% of the time available. So, increasing opportunity and reducing single-unit loading. For this and reactor class-sustainment reasons, the Royal Navy will not go below 9 SSNs / SSBNs. A minimum class size of nine, e.g. the decision to build 9 RAN *Hunter-class* frigates, also buys out sustainment CLC risks – by reducing front-end-risk; including providing a first-of-class trials vessel and cannibalisation in later years.

Figure 1: Impact of DCI on a Ship Building Programme, over time – showing the Valley of Death



Applying the Doenitz Cycle (about the different design lives for larger vessels (25-30 years) verse smaller boats (15-16 years)), minimum class sizes, and replacing at end of life, a sustainable Army watercraft allocation is shown at Table 2.

Figure 2: Impact of DCI on a Ship Building Programme, Replacement at Half Design Life



The impact of DCI on a theoretical ship building programme of three classes of vessels and 42 builds, is shown at figure 1. As for MBTs (*Leopard* to *MIAI*) or FFGs to DDGs, the result of DCI is to halve the size of build every 25 years. Inevitably, this leads to featurism, and more and more sophistication (capability) being added to fewer and fewer hulls. In all cases adding complication (by removing simplicity) – occasionally leading to instability. For example, the German *Baden-Württemberg* frigate was delivered with several problems; including a persistent 1.3° list to starboard; being dramatically overweight – all adversely affecting the German Navy's ability to upgrade, so causing the ship to be returned it to its builder.

The obverse of the frigate and destroyer build programmes has occurred for submarines. In this case, prolonged investment in R&D meant that by 2015 Submarines per Basic Mass Empty (BME) were costing the same per tonne as Frigates and Destroyers. [5, 24, 25] Given the sophistication of submarines and the existential nature of their life-systems, submarines should cost more than frigates and destroyers. Empirically, a submarine BME is four-to five times that a Frigate or Destroyer. Meaning in a balanced fleet, there are typically 5 surface ships for every submarine.

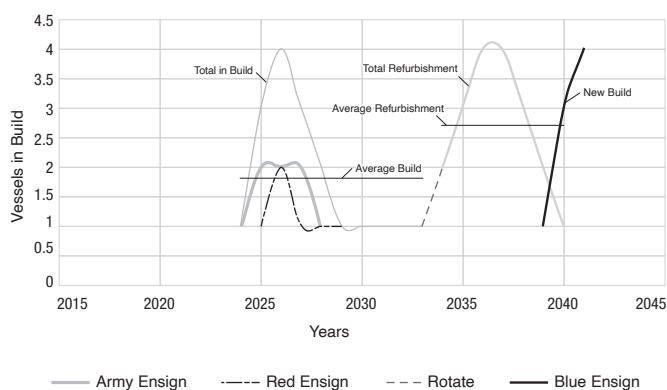
In recent years, central banks have recognised that some inflation in the economy is good – a vital sign of life! [20, 26] Ergo, working with DCI becomes key. Removing DCI entirely can only be achieved by stopping altogether. DCI can be thought of as a force – only applying when the capability is in existence / on inventory. Remove from existence or inventory, and DCI no longer applies. Or applies to someone else. There are three recognised ways of working with DCI [27]:

1. Spend significantly more on R&D and sustain through life – typically 15% or more of a capability's budget, over time. For example, submarine R&D since the 1990s;
2. Applying 1, identify the system capability life cycle [28]; build in class; sell-on at half-design-life (where there is value in owning a sustainable asset) – while supporting a build tempo about the half-design-life
3. Spend much, much more. For example, in the early 2000s spending \$880M (as opposed to \$540M) to replace ninety *Leopards* with 90 *Abrams MIAIs* – on a like-for-like basis.

SECTION 3: PRICE OF ADMIRALTY

By replacing at Half-Design-Life, the impact of the valley of death on shipbuilding is reduced from seventeen years to 8 years. Nevertheless, a gap remains and DCI still pertains. To truly work with DCI and avoid the Valley of Death requires a different approach. An approach adopted in 1694 with the bringing together of The Bank of England, the City of London, and Admiralty that underwrote not just what would become Nelson's Navy – but also the British Industrial Revolution (1760-1820). Private finance was raised to fund the rebuilding of the Royal Navy following a catastrophic financial crisis and a lost war. Sound familiar? In sixty days, \$2Billion in today's funding was raised to start building dual-use hulls – that could be employed as Merchantmen (for example, ships of the East India Company), or warships.

Figure 3: Ship Build Profile Based on Dual-Use VMS



Dual-use remains viable today, including for warships. Moreover, the designs and purposes of ALM vessels suit themselves both to the Merchant Navy – in support of our island friends and allies. Resourced privately, through for example a Limited Liability Partnering agreement or Joint Venture, [29] Commonwealth, Army and Industry might sustain a viable, potentially cost neutral (investment generating), build programme. A Fleet of 18 ships could be built: 8 for Army (Ensign); 4 as Blue Ensign; and 6 as Red Ensign. The Blue and Red Ensign ships refer also to their crewing – where Blue Ensign may represent an auxiliary service (ix), crewed by merchant navy sailors but attached to ADF. Red Ensign, the Merchant Navy but which might also be seconded / used / chartered by allied maritime forces. The ships are all modularised-to-task – for example additional accommodation; fuel bunkering, ammunition magazines, C4ISR; UAVs; and Offensive / Defensive Weapons.

The Versatile Modular System (VMS) is based on applying commercial hulls at scale (size and numbers) with modularised (for example ISO containerised) capabilities, including C4ISR, bunkering; hotel accommodation (for HQ staff); aviation, and weapon systems. [30] The process retains capability in the hulls, by transferring sophistication into the modules. From a class perspective, the ships are retained in class against Lloyd's register, and modules similarly against their own classification standards. Integrated on fit.

To maintain shipbuilding skill sets (including Design and R&D), the class is rotated through the shipbuilder at quarter-design-life. At which time, modules are replaced or modified against current standards / change of use. Moving from an Army fit, to potentially a Merchant Navy or Allied navy fit. In this way, shipbuilding and

maintenance is maintained. For a class of eighteen, this would retain on average 1.8 ships in build and 2.7 ships undergoing conversion and maintenance. The Blue Ensign crews would provide up to two ships spare / surge capacity for both Fleets – responsible also for collecting and delivering vessels to the parent fleets.

Significantly, retention in class of ALM vessels (or seaworthiness) is vested in the shipbuilders; supported by Army / ADF expertise within the integrated Design Offices. As also for VMS capabilities fitted to ALM vessels.

Other financial mechanisms such as PFIs and PPPs (x) have not worked as forecast, frequently transferring profits to financiers; while risk has (unknowingly) remained with Government [10]. Knowledge and assets have often been stripped from public entities, such as health services. [19, 20] The price of Admiralty is vested in being a Parent or Prime fleet – costed by building, keeping and sustaining ships and crews in class. [31] Core to Admiralty is the synthesis of High Finance (and Treasury); with Industry; with the Army Board – comprising ADF, APS and DSTG. The Design Authority is supported by the whole – incorporating crewing, building, sustaining and maintenance of the entire capitalised system. In which, the inventive-tension between the three entities is critical.

Crewing

Experience suggests that in many cases the cost of ownership (the 70% of the iceberg) can be glossed over in the capability-cost play off. The result is that “we” spend years getting the crewing right, all the while over-loading our people and seeing retention rates decrease. Thereby building structural weakness and unhappiness into ships, crews and establishment. A retention rate impacts all front-end (with limited sideways entry) crewing models. For example, to generate three Submariner Maritime Warfare Officer (MWO) OF4/5s to attend the annual Netherland Royal Navy Perisher School, in Den Helder, 20 MWO submariners need to join HMAS CRESWELL every year. Similar empirical retention rates apply across the services, for all ranks and rates.

Significant advantage is likely to accrue to Army by taking forward a VMS approach and vesting class and registration requirements for ALM vessels within industry and shipbuilding, at the shipyard gate. So also significantly reducing centralised seaworthiness (registration and safety bureau) functions, remote from the sea, ships, crews, and builders.

The Three Flag (Army; Blue; Red ensign) crewing model connects to both VMS and the shipbuilding programme. ALM vessels could be optionally crewed as USVs – which requires designing in. Current employment of UAVs, suggests that the footprint (in terms of support personnel and “pilots”) may be as large, if not larger, than those required by crewed variants.

Based on the Build Profile, ALM vessels are likely to require crewing from 2022; as the first of class are commissioned and commence trials. This suggests the creation of a dedicated ALM Branch comprising Officers, Seniors, and Other Ranks. Supported by the provision of other branch / corps / specialists, from: logisticians; signallers; armourers (weaponers); medics; RAEME; and caterers.

Adoption of a Three Flags, VMS approach could potentially allow for:

- Capitalisation of the hull – removing cost of build and ownership from Army;

- Modularisation of Capabilities, including Weapons and Hotel Services;
- Crewing Models – applying White (Army), Blue (Auxiliary) and Red (Merchant) marine constructs;
- Production of a larger number of affordable vessels, at least half of which would be under separate crewing arrangements (Blue/Red), including for Allies / Civil use;
- Crewing of ALM vessels potentially by Auxiliary personnel assumed into Army as Specialist Licenced Reserve (SLR)
- Crewing of ALM Vessels applying VMS; so enabling the recruiting and retention of crews during the build programme;
- Reduce loading and establishment requirements on Army personnel;
- Provide specialists in areas other than ALM – for example as engineers, and caterers.

CONCLUSION

A non-capitalised systems approach, investing in shipbuilding and uplifting crewing capacity, may not align smoothly with RAN and be antithetical to Defence [32] and the Commonwealth Infrastructure Investment Program (IIP) (xii) – including mobilising and regenerating skills and industry. There are no easy answers. There is a likelihood, in the short term, of using existing Army crews; recruiting by lateral transfer; and “on loan”, sufficient to crew ALM vessels in the early years. There is also the likelihood of being able to recruit from the Merchant Marine (Red Flag), small though it is. Without generating future indigenous capacity – through apprenticeships and other educating and training opportunities (TAFEs) etc., and uplifting Army recruiting / establishment for crewing ALM vessels – it may not be possible to avoid robbing Peter to pay Paul.

Based on best practice and existing bigdata analytics, there is no one-approach fits all. A systematic approach is suggested that includes:

- Identification of an ALM Branch in Army;
- Capitalisation through the Infrastructure Investment Program (including raising private capital) of a Versatile Modular Systems Approach;
- An associated Three Flags crewing model (White/Red/Blue Flag Crews), incorporating potentially auxiliary and reserve service applications;
- A programmatic approach with Navy to recruiting and retaining crew;

The Capitalised VMS, Three Flags crewing model offers significant opportunities for defence diplomacy across our region with allied defence forces – including providing affordable, common platforms fully integrated with Army. Acting also as a key deterrence factor in uncertain times.

Finally, this paper suggests a real opportunity to create a negotiation space for Chief of Army and Chief of Navy to agree logical areas of complementary burden sharing, across the maritime domains – including for shipbuilding, recruiting & retention of seagoing specialists, and areas of operation & application. ■

About the Author: Dr Simon Reay Atkinson is an associate professor at the University of Sydney Centre for International Security Studies, with a PhD from Cambridge University Engineering Department, where he studied complexity and quantum with application in Cyber. He has pioneered and implemented a number of maritime designs as a senior naval engineering officer; including pioneering Versatile Modular Systems, and leading on Guided Weapons, Cyber, Bigdata and Telemetrics.

ENDNOTES

- i. All costing taken from open-source media, including wiki. Modelling undertaken by the author based on available statistics.
- ii. Estimated cost based on modelling – not from Defence sources. No figures apply Defence cost estimates.
- iii. Attributed Commander Mark W Linden CSC RAN, 2019. Winner of NLA *The NAVY* essay competition professional entry, 2020.
- iv. Attributed to Richard Manning, Sergeant Army (Ret).
- v. International Traffic in Arms Regulations (“ITAR,” 22 CFR 120-130)
- vi. See: Defense Security Cooperation Agency | Defense Security Cooperation Agency (dscsa.mil)
- vii. As reported to the first author’s Father William Reay Atkinson CB (Regional Director, NE England, 1986-1991) by Nissan, based then in Sunderland, NE England.
- viii. See <https://www.moog.com.au>
- ix. In the UK, the Royal Fleet Auxiliary (RFA) is crewed by British (and Commonwealth) Merchant Seamen, contracted as specialist Public Servant, who serve with the Fleet in conflict zones.
- x. Private Finance Initiatives and Public Private Partnerships.
- xi. See: <https://investment.infrastructure.gov.au/>



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CONVOY ESCORT COMMANDER

A memoir of the Battle of the Atlantic

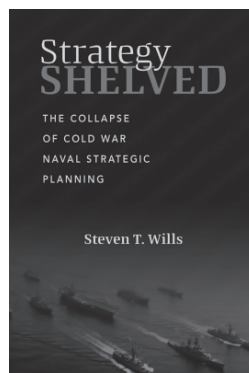
Vice-Admiral Sir Peter Gretton
KCB, DSO*, OBE, DSC

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STRATEGY SHELVED

The Collapse of Cold War Naval Strategic Planning

By Steven T. Wills

USNI (15 Aug, 2021)

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On taking up his command as Chief of Navy, Vice Admiral Michael Noonan AO, recognised that in the next decade Navy would need to generate the resilience to face up to ships being sunk or lost in service to country. And that our sailors would need the mental toughness to keep on sailing and fighting. This grim reminder appears even truer today.

The fulcrum year of the Battle of the Atlantic was 1942, when the UK almost lost the Battle of the Atlantic, along with defeats in the Far East and narrow victories in north Africa (Nov 1942). On 22 April 1943, Peter Gretton was in charge of Convoy ONS 5 during its crossing of the Atlantic. Fifty U-Boats attacked the convoy. The convoy lost 13 ships and six U-boats. As recognised by the historian Samuel Eliot Morison, the battle fought by then Commodore P.W. Gretton RN, represented a turning point in the struggle of the North Atlantic. To have won, the Germans would have had to sink 13 for no losses, or 65 for the loss of six-submarines (12% of the force deployed). The arithmetic of the North Atlantic was clear – the bitter maths has not changed.

Britain and the Commonwealth then had the strength and depth of officers and sailors – even taken up from three years on the beach, like Peter Gretton – to fight the U-Boat war. They had a toughness born out of long years at sea, with experience gained during WW1. When convoys had first proved themselves (and had to be relearned in WW2). It takes mental toughness to keep on fighting and sailing-on – something only the Royal Navy has had to do in the last 40 years, during the Falklands War. By contrast, lack of toughness – so fundamental to deterrence – was exhibited in the appalling defeat suffered by the Royal Navy in 2007 when HMS CORNWALL surrendered its RHIBs to the IRGC, without a fight. Or, more recently, in 2018 the HMNMS HELME INGSTAAD (F313) collision and sinking, seemingly given up without much of a fight. In both instances, questions of gender were raised – only to be dismissed by Admirals and politicians. The admixture of current crews and crewing should raise serious concerns as to Allied navy's ability to fight on in such circumstances.

As a Vice-Admiral, when writing this book in the early 1960s, Gretton recalls Field Marshal Montgomery noting the “increased importance of seapower in a nuclear war”, when the requirements for convoy protection have not necessarily gone away. The mathematics of the seas has not changed – however the memory has been lost. Through the pursuit of gender equity over professional knowledge and resilience, we may have lost our bearing. In all respects. An essential read as we contemplate a return to strategic competition, and what it looks like.



Steven T. Wills is a lead U.S. Navy strategy and policy adviser at the Center for Naval Analyses (CNA), Arlington, VA. He served for twenty years as a U.S. Navy surface warfare officer. He has a PhD and MA in history from Ohio University, an MA from the United States Naval War College, and a BA in history from Miami University, Oxford, OH.

This should be essential reading for all those wishing to understand how Western Navies have arrived at the impasse they have today, with half-century old designs, rapidly dwindling fleets – without the capacity or contemporary designs necessary to sustain and rebuild them. In the previous book review, Chief of Navy spoke of having the mental toughness and resilience to keep going, when things get tough. In *Plan Pelorus 2022*, Chief of Navy outlines his intent to be: *A Thinking Navy, A Fighting Navy, An Australian Navy*. The critical emphasis is on thinking and moving from fought to thought.

“The USN’s concept of strategy, the products its concepts engendered, and the staff organization that created them in the Office of the Chief of Naval Operations (OPNAV)” were fundamentally done away with by the accountancy driven – cost of everything; value of nothing – approach adopted at the end of the Cold War, by the 1986 Goldwater-Nichols Act, and the results of the 1991 Gulf War. Exacerbated by the Iraq and Afghanistan Wars, where Navies were further robbed of their thinking capacity to design and build afresh. In order to pay for both failed wars, ships were run on and on, and crews similarly not refreshed. The first casualty was the thinking, strategy, R&D capacity in western navies. Prior to the end of the Cold War, 15% of the Naval (and USMC) budget was set aside for thinking, including R&D. Today it is less than 5% in the UK, and similar levels in the US Armed Forces. “The end of the Cold War eliminated the primary opponent around which the Navy had organized its strategic concepts since the late 1940s. This event alone would have caused a major alternation in Navy strategy and spawned products very different from the 1980s Maritime Strategy”. In that “end of history,” some also saw the possibility for systemic organisational disruption. Destructive change that, over the past 30 years, has robbed western navies of their capacity to design, invent and think – strategise – for themselves. Resulting in the burnt-out navies and crews we see today. Just as we see that our enemies have not stopped thinking – indeed they have been preparing for exactly the Thucydides trap (on multiple fronts) that we now face. Precisely because the Global West stopped thinking.

This is an essential read for understanding the collapse of the Global West, instigated through the policies of avaricious privatisation. [1] That set the West on the road to [gilded] serfdom, [2] as certainly as Marxism did for the Soviet command economy of the 1920s.

A vital summer read – taken in conjunction with other recent publications and *The NAVY* papers.

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HATCH:

China Commissioned its Fourth Type 055 Destroyer December 2021: three Type 055s in one Year.



MATCH:

HMAS STALWART (A304) Commissions Fleet Base West (Image LSIS Richard Cordell).



DESPATCH:

HMS SIRIUS (A0266) Pays Off Sydney Port Jackson (Image CPOIS Cameron Martin). Strong operational consideration is recommended by the Navy League of Australia to sustain SIRIUS under a Blue Ensign, crewed by the Merchant Navy or Specialist Licensed Reserve sailors.