

THE

NAVY

THE MAGAZINE OF THE NAVY LEAGUE OF AUSTRALIA


**QUO VADIS
AUSTRALIA?****MUSINGS OF AN
ANCIENT MARINER****THE CREATION AND
ESTABLISHMENT OF THE
JAPANESE NAVY - PART 2****KIDO BUTAI:
THE FIRST SIX MONTHS****MARK 6: THE ROYAL NAVY'S FIRST TRUE
DUAL-PURPOSE NAVAL ARTILLERY****\$5.95 INC.GST**

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Front cover: HMAS CANBERRA (L02) Australia Day Flagship with STS Young Endeavour inspecting. Photo courtesy Mr John Jeremy.

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CARRY ON MINDING THE GAP

In this issue of *The NAVY Magazine*, there is a leader by Rear Admiral Andrew Robertson DSC AO RAN (Retd.) that argues (from an ancient mariner's perspective) for lifting maritime Defence to a new level. Paper 1, *Quo Vadis Australia?* by Reay Atkinson and Bogais, examines the emerging strategic context. Paper 2 is by Commander Masashi Kuratani JMSDF and is Part II of the series examining the History of the Japanese Naval Service, 1946-1955. Paper 3 by Geoff Crowhurst continues the Japanese theme and examines *Kido Butai*; the final paper is by Jamie McIntyre and considers the development and deployment of the 4.5inch Mark 6 Naval Gun.

Travellers to the UK will recall the popularity of the motivational, pre-World War 2 poster campaign (and contemporary product-ads) on the London Underground *Keep Calm and Carry On*, and the famous 'pipe' on the Tube "To Mind the Gap", twist train and platform. Aficionados may also recall the infamous Ten Year Rule, instigated by Winston Churchill in 1919 when Secretary of State for War and Air (perhaps still a useful separation?) and which required the Armed Forces to draft their estimates 'on the assumption that the British Empire would not be engaged in any great war during the next ten years'. Maybe Churchill had assumed that in 1919; looking out to 1929 this was a fair assumption – and that planning for another great war might begin again in 1929. The problem with the rule was that each year that went by pushed the estimate out... yet further – and so planning and thinking were prevented. The rule was not abandoned until 23 March 1932, but with a rejoinder that 'this must not be taken to justify an expanding expenditure by the Defence Services without regard to the very serious financial and economic situation' which the world was facing due to the Great Depression, 1929-1939.

Germany, it would appear, was also aware of the UK's Ten Year Rule and was similarly planning for maximum productivity and war in 1942; rather than 1939. It was in many regards fortunate – if war can ever be described in such a way – that Germany went to war early and that by 1942 Britain and the Allies were beginning to overhaul Germany, particularly in the areas of aircraft, ASW frigates, and submarine production. Churchill knew how badly prepared Britain and the Empire was in 1939 and that Britain's only hope after the Fall of France was to remain standing until strategic error and, or, the U.S. and the Soviet Union (until 1941, in the Molotov–Ribbentrop Pact with Nazi Germany) entered the war. It was a close run thing. The gross strategic error was potentially two fold – overestimation and lack of prosecution at Pearl Harbour (see *Kido Butai*, Paper 3) and Hitler's decision to declare war on the U.S. after Pearl Harbour, thus bringing the U.S. into the European War.

The NAVY Magazine may be considered as an irritant, and by the professional political elites as being 'not one of theirs', something to be seen and not heard. Yet it is also the case that the grit produces the pearl. This may be the case of the previous issue, when it would appear certain sensitivities may have been ruffled. The mandate of *The NAVY Magazine* and the NLA remains clearly set out in the Statement of Policy, page 32. The Editorial Board, for example, as reported by the then President, came under some pressure regarding the Foreman papers. There are other times when questions have been asked. The advice of a previous editor was two-fold: 'steer for the sound of the guns'; while remembering that 'the Navy League' is about 'sailors, salt, and steel'. This sound advice remains relevant and has allowed a range of academic authors to contribute, including Lindley-French; Foreman; Hemlock; Dean; Hobbs;



HMAS VENDETTA (D69-I69) Ships Company 1937 5 ex-RN Destroyers were transferred from the RN in 1933 and became known as the Scrap Iron Flotilla.

Wesley, Blake; Friedman; Thornhill; and Kanazawa – for which *The NAVY Magazine* is entirely indebted. In this issue, Reay Atkinson and Bogais address the question Quo Vadis Australia? with respect specifically to China and its potential emerging Foreign Policy. Clearly they are steering towards some very big guns indeed but the paper does also combine the trifecta of salt, steel and sailors. And whereas Admiral Robertson's musings, including commentary on being 'beyond the Ten Year Rule', may be considered as half empty; Reay Atkinson and Bogais thinking may be optimistically half full! Are they right? Their analysis identifies what they describe as the Equatorial Belt of Instability (EBI) and makes five claims:

1. China is possibly following a strategic foreign policy suggested as *Let a Hundred Rules of World Order Contend*; comprising three component-strategies:
 - a. The well-known One Belt and One Road or OBOR strategy.
 - b. The String of Pearls strategy, and;
 - c. The Dragon's Spear strategy.
2. That Australia may not have a *Knowledge Sovereignty* it can call its own;
3. Consequently Australia may be facing two significant and conjoined contests: a Westphalian sovereign contest over territorial and maritime claims; and a more serious one over Knowledge Sovereignty.
4. so potentially leaving Australia in an ambiguous and dangerous status-quo space; maybe more isolated than ever, and that:
5. without a clear understanding of Knowledge Sovereignty, Australia's lack of self-awareness might become a danger to existing and potential allies alike.



Designed to Fail? HMS HOOD (51) commissioned in 1920 and Sunk by the BISMARCK 24 May 1941.

What if Robertson, Reay Atkinson and Bogaise are all right – that we are walking a very narrow tightrope and that the Global West has to change, exactly because there is simply no other option? For example, designs and builds of ships that will cost 60% less than today, and be supplied at three times the rate and numbers – which is the challenge the U.S. has set its Navy if it is to build and sustain a 355 ship-fleet in a realistic timeframe and 'fill the gap'.

It is immaterial if the authors are right or wrong – provided that the critical thinking is being done and the arguments can be appropriately contested, rather than simply being shut down. Which appears to be the default-response the Global West is currently seeing on any issue that does not comply with the professional political elites and their global rule based orders – for example on climate change, identity, submarines; Australia Day, history, gender, energy, Higher Education, health, etc. This begs a question. Why is it that the debate is being had in supposedly atavistic publications, such as *The NAVY Magazine*, and, more recently, in specialist magazines such as *The Economist* – and not seemingly in academe, industry, politics, or in the social-media spaces? Yet when these ideas are tested on the 'Common Australian' (and apparently on students and sailors), they appear to resonate. They want to know more and why - to understand; to get beyond and behind the wall. Indeed an historian commented recently 'that *The Navy Magazine* should be obligatory reading for all HSC students, since it deals with history, science, society and strategy'. In other words, it 'steers for

the sound of the guns and the trifecta of sailors, salt, and steel'. Let us say that there is a Gap – the Emperor has no clothes – and that we are out of time. Then let us start thinking critically; designing and building afresh. In our dreamtime nation, let us be T.E. Lawrence's 'dreamers of the day...for they may act on their dreams with open eyes, to make them possible'. And these are truly dangerous folk (like Churchill and Monash) who can lead change...



USS GERALD R. FORD (CVN-78) - Future U.S. Carrier designs will need to be 60% less costly and delivered at three times the rate and numbers.

Depressing stuff – why half-full? Because Reay Atkinson and Bogais would appear to, old-fashionably, believe in the idea of Australia and, 'given [its] great strengths within its new and old migrant communities...[that it] can start thinking critically and strategically [again] in its own sovereign interests'. So why may Andrew Robertson's leader be half-empty? Perhaps because this old Sailor loyally knows and fears that his beloved Country and Navy are out of time. That waiting thirty years is too long and that fitting our crews to ships designed by their grandparents and built by their parents is too late. He fears that our crews are not sufficiently enveloped in steel and numbers to think, fight and survive the tumult he and *The Economist* [1] fear is approaching our seas.

1. Editorial Leader. (2018) The growing danger of great-power conflict - The Next War. *The Economist*, Jan 25.

OUR PRIME MINISTER IN WASHINGTON

Prime Minister Malcolm Turnbull and U.S. President Donald Trump recently met in Washington. Much was on the agenda but of great interest to the Navy League was the issue of China and its aggressive posturing in the South China Sea. Clearly the Australian relationship with China, our largest trade partner, requires deft handling, but as Mr Turnbull later stated Australia defends the right of freedom of navigation and overflight throughout the world.

Speculation followed that Australia was considering independent freedom of navigation exercises in the region. Such exercises are not new and act to reinforce the principle of freedom of navigation and to maintain the international law principle that the high seas shall be open to all states, and that every State has the right to sail ships flying its flag on the high seas. We have an international obligation to uphold this principle and these RAN exercises should continue.

U.S. AMBASSADOR TO AUSTRALIA

The announcement of Admiral Harry Harris to be U.S. Ambassador to Australia has been roundly welcomed by the Navy League. This is an appointment that reinforces the U.S. commitment to Asia and our region and of the importance of Australia and our Alliance with the U.S. to the U.S. administration and Admiral Harris will provide a direct link between the PM and POTUS.

Harris, whose own naval career over 39 years is stellar, is also the son of a USS LEXINGTON survivor from that most pivotal 1942 Coral Sea battle against the Japanese. He was born in Japan (his mother is Japanese) and has commented that the Battle of the Coral Sea was so present in his life as it was all his father spoke about.



USS LEXINGTON (CV-2) "Lady Lex" Sunk at the Battle of the Coral Sea – whose wreck was recently located by an expedition led by Microsoft Founder Paul Allen - Image US Navy.

Admiral Harris, has played his own major role in maintaining an unbroken chain in the links between Australia and the US. In his most recent role, as Commander of the US Pacific Command, he took the view that the world expects no less of Australia and the US to stand together against tyranny and oppression now, than it did in 1942. His geopolitical expertise in the Indo-Pacific region and his view that we must be willing to take tough decisions regarding rules-based freedom of navigation in the region is a display of the determination that the US has in dealing with Chinese militarisation and island building in the disputed seas around the Spratly Islands, Philippines, Taiwan, China, Hong Kong, Vietnam, Malaysia and Brunei.

I am delighted to announce that the Navy League of Australia has welcomed Admiral Harris as our most recent new member.



Fleet Commander Rear Admiral Jonathan Mead and Peter Jarvis President of the Navy League of Australia (Western Australia Division), present the Perpetual Trophy to HMAS STIRLING accepted by Chief Petty Officer Toni Ralph.

COMMANDER OF THE AUSTRALIAN FLEET

This edition is also a timely opportunity to acknowledge the appointment of the Commander of the Australian Fleet (the Fleet Commander) Rear Admiral Dr Jonathan Mead RAN AM.

Admiral Mead is a fine combination of all the best attributes embodied by contemporary RAN senior officers.

Admiral Mead brings the practicality of a Mine Clearance Diving Officer; the specialisation in which he began his career; the operational experience of a Anti-Submarine Warfare specialist Principal Warfare Officer; together with operational ship and task force Command in the Arabian Gulf and Middle East.

These attributes, combined with international study and postings (to the Indian National Defence College and as Australia's Defence Adviser to India) and Masters and PhD qualifications, remind us that the best of the best are at the helm of our Navy and that we are in safe hands.

NAVY LEAGUE PERPETUAL TROPHY

We are very fortunate to have a Fleet Commander who has been engaged with the League early and often from the beginning of his appointment. On the first occasion with our Western Australian President Peter Jarvis, who did us all proud in representing the League at the presentation of Navy League of Australia Perpetual Trophy to HMAS STIRLING. The Navy League Perpetual Trophy is awarded each year to the ship or establishment that has made the best contribution to the community. Nominations are reviewed by the Fleet Commander before a shortlist is considered by the Federal Council.

HMAS STIRLING, under the command of Captain Brian Delamont RAN, was awarded the trophy in recognition of the assistance given to the civilian community at an award presentation ceremony in HMAS STIRLING. Admiral Mead joined Mr Jarvis in presenting the League's Perpetual Trophy to the HMAS STIRLING Community Engagement Regional Coordinator Chief Petty Officer Toni Ralph. Well done HMAS STIRLING and well done to the WA Division.

THE CRESWELL ORATION

At the time of writing, the Victorian Division of the League was also preparing to host the Fleet Commander, Rear Admiral Mead, for his presentation of the Creswell Oration on the 'State of

the Fleet' on behalf of the Navy League and its Australian Navy Foundation Day Organising Committee. The Creswell Oration is held in honour of the vital role Vice Admiral Sir William Rooke Creswell served in our nation's, and our Navy's, history. We look forward to bringing you more details regarding the Creswell Oration in a future edition.

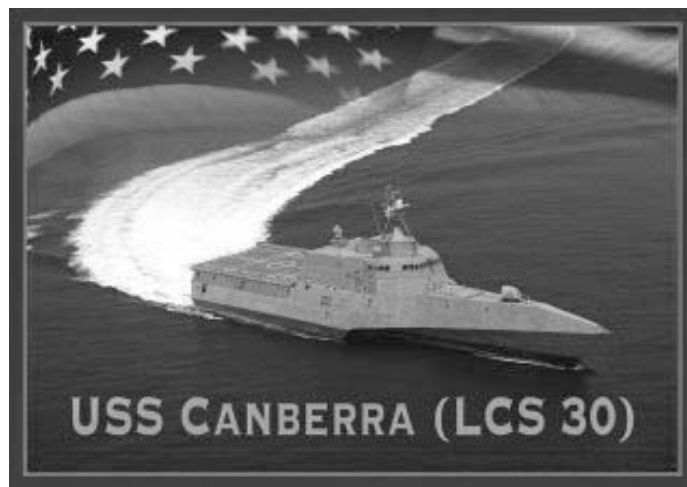
Further details and Creswell Orations from years past are also available at the Navy League website: <http://navyleague.org.au/victorian-tasmanian-division/creswell-oration/>

USS (LCS-30) CANBERRA

In a further move that reinforced the presence of Australia in the decision making of the United States, President Donald Trump stood beside Australian Prime Minister Malcolm Turnbull to announce that the next US littoral combat ship (LCS 30) will be named USS Canberra. The LCS will be built by Australian shipbuilder Austal at its US shipyard in Alabama. She will be the second U.S. Navy ship to be named USS CANBERRA. The first USS CANBERRA was a cruiser named after the Australian County Class heavy cruiser HMAS CANBERRA which was lost in 1942 during the Battle of Savo Island – after supporting the American landings at Guadalcanal and Tulagi.

In announcing the name of the ship, President Trump remarked that “as she sails the open sea, the new USS CANBERRA will symbolise to all who cross her path the enduring friendship between the United States and Australia. There is no closer friendship.”

Huzzah!



US Navy Names LCS-30 USS CANBERRA - Image Austal.

IN THE NEWS

This edition again showcases the exemplary work of our Editor Aeneas, the editorial team and our contributing authors. The second in the series on the Japanese Naval Service (JNS), “rebirth 1946-1955” is by Commander Masashi Kuratani JMSDF. This is part of a four-part series (two in 2018 and two in 2019) on the history of the JNS and makes for fascinating reading; anyone who missed the first instalment should revisit our last edition.

Happy reading and, please, be critical. We also draw your attention to our Statement of Policy, p. 32, inside the back cover of *The Navy* which is our guiding principle. We encourage disciplined, intellectually rigorous thought and the feedback it generates.

Let us have any feedback at editor@hotmail.com or by post to the addresses inside the front cover.

LETTERS

Dear Editor,

Your reference to the book *Australia's Secret War: How unionists sabotaged our troops in World War II* was appropriate. However, unfortunately, you erred with the author's name. That very brave and erudite man, Hal G. P. Colebatch, deserves better.

Having heard what really happened “direct from the horse's mouth”, in my case from my father and a number of other WW II warriors, I think Colebatch's story should be sung from the rooftops. He eloquently and very courageously exposed the treasonous perfidious greed of the predecessors of what is now known as the Maritime Union of Australia.

That union's more recent behaviour makes the NLA's advocacy of “...Government initiatives for rebuilding an Australian commercial fleet...” seem naive and quaint.

Perhaps, based on the information re-exposed in Mr Colebatch's book combined with the evidence of the MUA now having very effectively made Australian merchant shipping an investment “no go” zone [see Red Duster, this issue] the NLA should be advocating for strong and effective controls on the MUA in the interests of both national defence and the economy?

Mare Liberum,

Otherwise, I like the [Jan-Mar 18] issue, particularly the Jon Stanford submarine feature.

Best wishes,

Neil Baird

By Editor

Correction gladly accepted and published in full with apologies to Hal Colebatch and Mr Baird senior, who served in Kokoda. There are damned few like them...

Thought: is it time for a Truth and Reconciliation Royal Commission into Unions before and during WW2, to the present day? As occurred in South Africa and Germany (for different reasons on re-unification and the end of apartheid) and as exposed by a number of Obits for ennobled British Unionists – showing how deeply penetrated the British union movement had become during the 1970s and 1980s...

Aeneas

MUSINGS OF AN ANCIENT MARINER

By Rear Admiral Andrew Robertson DSC AO RAN (Retd.).

The British Marquess of Halifax in 1694 responded to the question “What shall we do to be saved in this world?”: “There is no answer but this, look to your moat”.

Australia is so far from the international danger areas of East Asia, the Middle East, and Eastern Europe so why should we worry? Here the sun shines, the economy is reasonable, the beaches delightful and sport reigns supreme. But technology, including huge changes in communications both in air transport and all forms of electronic communications, has shrunk our world. These musings consider the current warnings and indicators and suggest girding Australia’s moat.

INTRODUCTION

The formation of the League of Nations after WW1 and the United Nations after WW2 brought hope that major wars were things of the past and that all problems between nations could be resolved peacefully. These hopes have not been fulfilled and major wars, even possibly including nuclear weapons, can no longer be ruled out, despite the utmost efforts of many nations to avoid such catastrophes.

The situation now in East Asia, the Middle East and Eastern Europe is one of high tension involving major world powers. This is no time for complacency, for in the event of a major war, Australia could easily be dragged in.

ANCIENT HISTORY?

As occurred in the lead up to WW1 and WW2 the military dominance of the major democratic powers of the West is under challenge, particularly on the oceans. Huge resources world-wide are being devoted to maritime power, especially in submarines, aircraft (including aircraft carriers), amphibious forces, and all elements of sea control. This is particularly concerning to many western-orientated nations due to their dependence on sea and air communications and on ocean trade.

The seizure of much of the South China Sea by China in abrogation of the International Law of the Sea, together with tension between China and Japan over certain islands, and the bellicose attitude of nuclear-armed North Korea towards the USA, South Korea and Japan should be particularly concerning to Australia. But have the dangers been reflected in our decisions on our own defence?

Clearly much has been done in recent years to improve our defence



Iranian Ships exercise in Straits of Hormuz (2012) led by IRNS JAMARAN (F76) an Iranian Moudge-class frigates launched in early 2010 in Bandar-e-Abbas.

capability both internally against terrorism and subversion and for some elements of external defence not to mention providing vital support to help with natural disasters both here and overseas, seemingly all too common these days. However the maritime teeth elements of the ADF in particular have to a degree been neglected by successive Governments.

Have we forgotten the devastation to our shipping in WW2 by the attacks of German merchant raider ships, minefields, Japanese (and one German) submarines and Japanese Aircraft-carriers (Darwin and the Coral Sea)?

True the Howard Government to its credit ordered two large landing ships (LHDs) and three guided-missile destroyers (AWDs) all now entering service or building.

BEYOND THE 10 YEAR RULE

The Rudd Government also initially addressed part of the maritime problem in 2009 by announcing a plan to build 12 conventionally-powered submarines, 8 frigates, and 20 offshore Patrol Vessels. This



Virginia attack class submarine - Beyond the Fiscal Year 2017 Shipbuilding Plan, the U.S plans increasing the number of submarines.

plan, with an increase of one frigate, has again been announced by the present Government, along with a most sensible decision to revert to the long-suspended policy of continuous naval construction. But 8 years have passed since 2009 and no orders for combatant ships have yet been placed! One wonders why designs were not developed and ship types selected in those 8 years, and at the huge waste of endless studies, without orders.

The first of the conventionally-powered new submarines is unlikely to be operational in less than maybe 14 years after the order has been placed. Clearly this decision is almost irrelevant to our defence for at least the next 14 years or so! Do we really think that our country couldn't face a major threat in that time scale?

Most Australians, if the problem was placed before them, would surely agree that we must not send our men and women submariners under the sea in anything less than the most efficient, effective, proven, reliable and survivable submarines we can get. That means obtaining nuclear powered boats from the U.S., Britain, or France, as soon as possible.

They would, of course, give us arguably the most effective deterrent to an attack in any serious war involving us that we could have.

The current Defence programme calls for 9 frigates to replace our present 8 ANZAC class in many years' time. But we now have 5 largely unarmed huge ships (3 Landing Ships and 2 support tankers/store vessels) which could often be operating independently. In any serious war involving Australia, our tiny force of frigates/destroyers would be hard-pressed to provide a reasonable level of defence (together with the RAAF) for all these ships as well as dealing with the myriad of other tasks; including defending other vital convoys, our 70 odd port areas, offshore oil and gas installations, vital merchant shipping, etc.

FORCE MAJEURE ET CAS FORTUIT?

The Naval force must be increased, and soon. At least two assembly ship-yards will be needed for timely construction. And should we not be equipping at least one of our Landing Ships with the short take off/vertical landing version the RAAF's new F35 fighter, for which these ships were designed? Out of effective 24 hour cover of RAAF bases this would provide an extra measure of defence for the fleet and embarked ADF as well as some modest air support for troops in remote areas.

There are of course deficiencies in other areas in our small ADF and its support organisations which must be addressed. Not least would seem to be the need to increase greatly the size of our reserve army, which would have many tasks in a threat situation.

Expensive? Of course, but there will be spin-offs for industry, employment, national development, workforce skills, taxation etc. And Australia will have a much more effective international voice and be a more valuable friend and ally.

The most fundamental welfare is the security of our people. A wealthy, advanced, but exposed island nation which expends some 35% of its annual budget on health and social security, but only approaching 2% of its GDP on Defence would seem to be running an unacceptable risk in this rapidly changing unstable world.

The time has come for our nation to lift its defence to a new level, particularly in all areas of maritime defence. This will need strong leadership, explanation to our people, bi-partisan support, resources and drive at all levels involved.

One would expect that no Government (or indeed opposition) would wish to be remembered in history as the Government or opposition that, having seen the warning signs, did little to prepare for a dangerous future. And we have a huge wide moat. ■

QUO VADIS AUSTRALIA?

By Simon Reay Atkinson and Jean Bogais

The world is currently at a critical juncture marking a rupture between the past; the stasism of the moment; a potential step change (to an alternative ‘parallel’ existence); or descent into, possibly, existential-nihilism. This paper looks at the world from a maritime, Indo-Pacific standing and examines Australia’s position within the region from the perspective of Knowledge Sovereignty, or the lack thereof, and how this is impacting the region and Australian relationships and influence within it. It tells the story through charts and network-models showing alternative physical, infotechnological and socio-ethical existences.

INTRODUCTION

Reay Atkinson, Bogais and MacLeod define Knowledge Sovereignty to be:

The independent authority of a state without interference from outside sources or bodies to abduce, conceive, deduce, design, induce, devise new ontologies and transfer infotechnological skills, understanding, comprehension, expertise, proficiency, capacity, capability, learning, science and wisdom for its own socio-ethical purposes. [1]

The traditional world map, Figure 1, is actually centred on Rome and so reflects a terrestrial, Euro-centric, classical perception of reality when all roads did lead to Rome. From a visual perspective, this type of projection conveys more land than sea.



Figure 1: Conventional Chart of the World – Centred on Europe and Rome! (N-S)

If instead, the chart of the world is centred on a point in the Pacific Ocean (Fig. 2), approximately at the mid-point between Midway Atoll and Adak in the US Andreanof Island, a very different impression is created of the same projection – more reflective of the fact that 71% of the world’s surface is sea; and only 29% Land!

Finally, if the seventh continent is added back (Fig. 3) the picture again changes with a centre-point now closer to north of Midway Atoll; with Antarctica running across the base of the picture.

A VIEW FROM CHINA

Not surprisingly, China’s view of the world has not historically been based upon that of Rome’s, Fig. 4.

The *Wanguo Quantu* (萬國全圖) or *Complete Map of the Myriad* [quantum of] Countries is a chart developed in the early 1600s by the Jesuit Priest Giulio Aleni, following the work of Matteo Ricci (the first Jesuit to speak Chinese), who published maps of the world in Chinese between 1574 and 1603. Aleni modified Ricci’s maps to accommodate Chinese demands for a Sinocentric projection, placing the Middle Kingdom at the centre of the visual field. The chart can also be translated as *A Map of Ten Thousand Countries in the World*

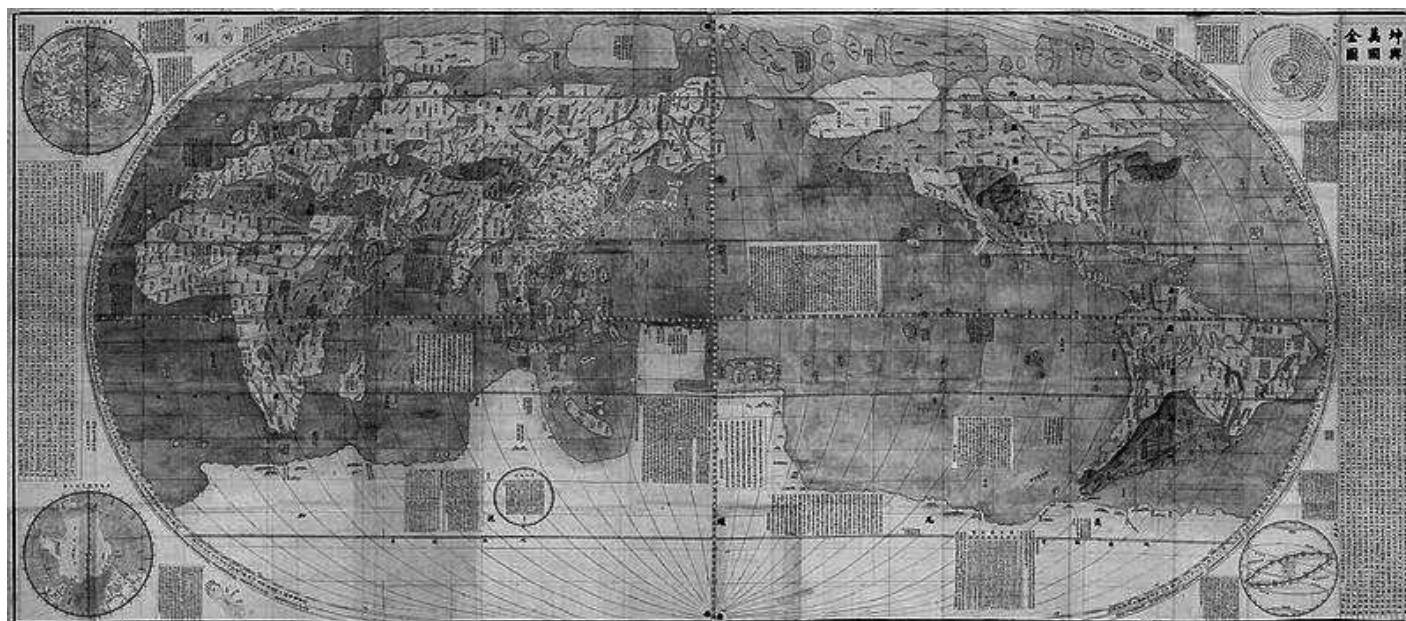


Figure 4: The Kunyu Wanguo Quantu, or Map of the Ten Thousand Countries of the Earth – an unattributed (c. 1602) Japanese copy of the original – showing Antarctica as joined to Australia.



Figure 2: Chart of the World Centred on the Pacific, approximately at the centre point between Midway Atoll and Adak in the Andreanof Islands (N-S)



Figure 3: Chart of the World with the 7th Continent of Antarctica 'Added Back' (N-S)

(世界上万一个国家的地图), and has been traced back to the Chinese cartographer Li Zhizao (1565-1630) of Hangzhou (the capital of Zhejiang Province in east China at the head of Hangzhou Bay – the 'cross-road' between Shanghai and Ningbo). The chart is apparently the first Chinese map to show the Americas, and also shows Antarctica, incorporating (in this 16th Century vision of the world) Australia. A more contemporary view of a networked China is suggested at Figure 5, with the Networked Middle Kingdom represented by the Chinese Communist Party. The network incorporates three emerging Chinese political sûreté economic (PSE) strategies:

- The New Silk Road comprising an Economic Belt and Maritime Silk Road, also known as 'the One Belt and One Road (一带一路), or OBOR Strategy'.
- 'The String of Pearls (珍珠串) Strategy' incorporating China's First (essentially the Nine-Dashed Line) and Second Island Chains (the Second Dashed Lines), see Hemlock (2016) [2], and;
- 'The Dragon's Spear (龙的) Strategy' incorporating the Chinese Motte, Keep, Bailey, Mote (reclaimed islands), and Moat (the SCS and ECS) [3].

Figure 5 shows also those countries within the network that belong to the Commonwealth, and the emerging formation of Global Network City States (GNCS) – a global network of Alpha ++/+ City States, comprising: London(A++); New York(A++); Chicago (A+); Dubai (A+); Paris (A+); Hong Kong (A+); Shanghai (A+); Singapore(A+); Sydney (A+); and Tokyo (A+) [4]. Global Network City States have more in common with each other in terms of their populations; their PSEs; their infrastructure needs; the jobs they provide; the languages they speak; and their ontology – than they have with their hinterlands. [2] They are in many ways a modern day interpretation of the classical city states; augmenting and even replacing the pre-existing Westphalian Nation States. For example, Britain may increasingly need to be understood as a network system, with the Network City State (NCS) of London at its centre [5, 6]. Five of the ten top GNCS's exist within the Indo-Pacific region: Singapore; Hong Kong; Shanghai; Tokyo and

Sydney (all within two Times Zones (+/- 2 hours) of each other). As Hemlock (2016) noted: 'the basic unit of PSE currency has become the network and its associated Network City States. Core to the network and its City States is the maritime – as it was in times of antiquity and in the 17th Century'. Core to the *Networked Middle Kingdom* is The Chinese Communist Party (CCP). The Belt provides terrestrial lines of communication (TLOCs) and the Roads sea lines of communication (SLOCs). Both policies are joined 'by belt, and by road' by the First and Second Island Chains – so providing China with its Dragon's Spear Strategy', which can be both defensive and offensive. As R.C. Blake (2016) argues:

The shape of the multi-pronged 'spier point' – 'the Dragon's Spear' – aims south through South Eastern Asia towards Australia and eastwards, towards South Korea and Japan...If Australia, the U.S. and other like-minded countries fail to persistently uphold UNCLOS and the rights of freedom of navigation (by sea and by air)...then they will provide *de facto* sovereignty to China's claims. If they take on China, then they will need the will, capability, capacity and determination to see the campaign through to a

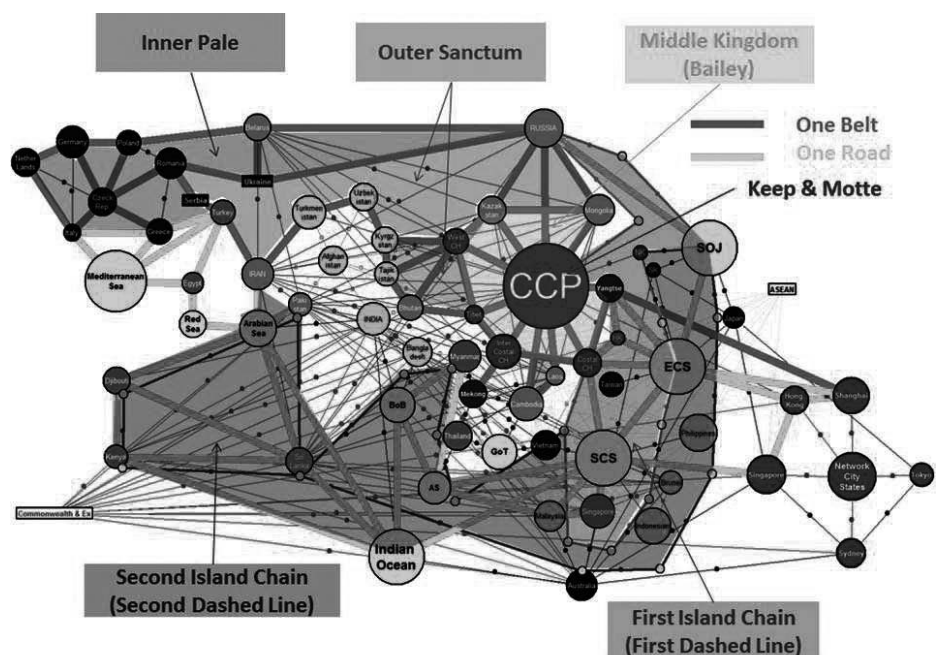


Figure 5: A Networked Middle Kingdom with the Chinese Communist Party at its centre – reflecting the New Silk Road of China's Belt and Road with important hubs. To right the Network City States of Hong Kong; Shanghai; Tokyo; Singapore and Sydney.

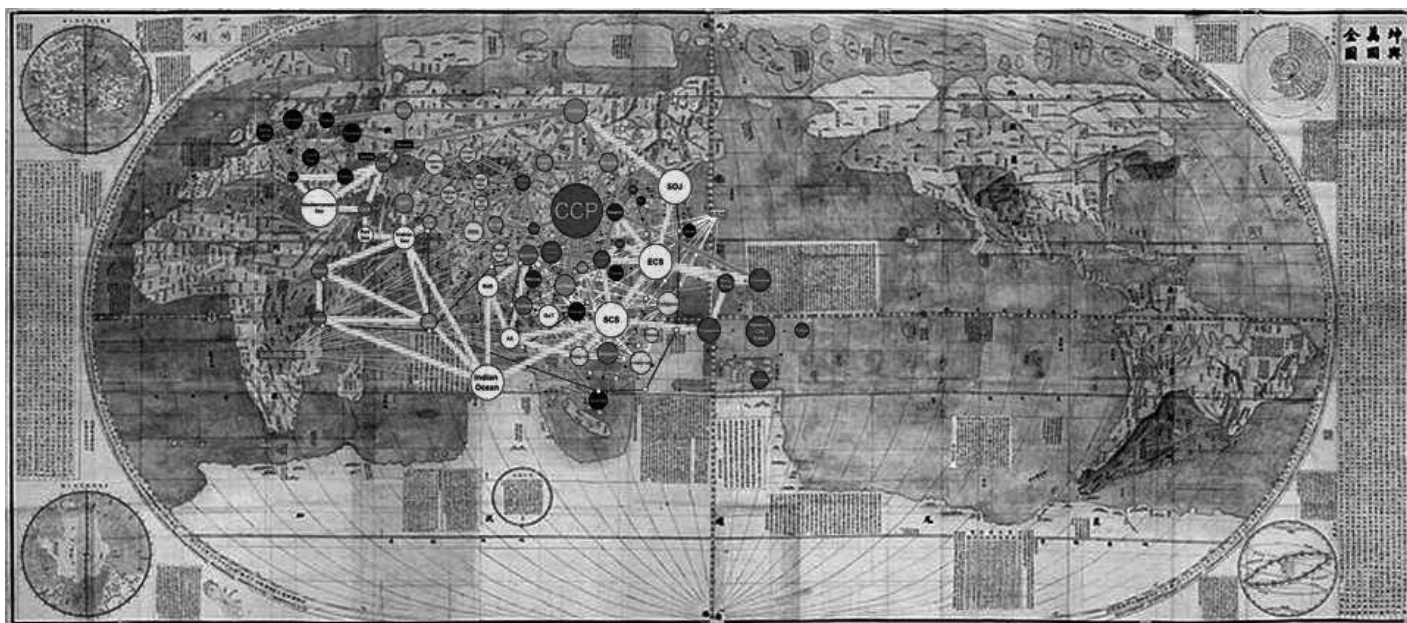


Figure 6: A View from the Middle Kingdom – Old Meets Modern. A 'Perfect Fit' [7]

successful conclusion. And this may well mean putting soldiers, sailors and pilot's lives on the line. China (and Russia's) view is that the West – and the U.S. in particular – does not have the will and determination to see the matter through...Deterrence may well already have failed. If it has failed, then this will be seen in countries in the region making their own accommodations with China; so providing *de facto* and potentially even supporting *de jure* recognition of China's claims. [3].

CHINA'S EXISTENTIAL AXIS

Examination of Figs 5 and 6 shows a historical vulnerability to the Old and Networked Middle Kingdoms, running from the Korean Peninsula south across the Yangtze and to Hong Kong. In 1949 when Mao ended the Civil War, he did so first by seizing the forts along the Yangtze and then using this success to encourage the defection of the Republic of China (ROC) Navy over to the PLA [8] – essentially a land-to-maritime objective manoeuvre (LMOM) strategy. Previously, the Japanese 1930s invasion of China (the Second Sino-Japanese War) had been mounted through Korea. And the 'Century of Humiliation' (1839-1949) was orchestrated through the settlements of Macao and Hong Kong, along with the exploration of the Yangtze River and the identification of Shanghai as a trading centre for tea, silk, and opium by the British East India Company in the 1830s. All resulting in the First Opium War and the humiliating Treaty of Nanjing (1842) – that

opened Shanghai to British, American, French and subsequently Japanese merchants. [6]

The Korean War (1950-1953), coming only a year after Mao seized power (on driving Chiang Kai-shek and the Nationalists to Taiwan), represented an existential war of survival for both Mao and the Chinese Communist Party. If China (and North Korea) had lost the war, all would have been swept aside. Korea remains an existential issue to the CCP to this day. Hence the sensitivity regarding North Korea and the limited political freedom of manoeuvre (PFOM) that Xi Jinping and the CCP can exercise over the peninsular and North Korea. There is nothing that Xi would like better than demilitarising the whole peninsular, and thereby removing the U.S. and its Allies from China's doorstep.

China inherited the 'Nine-Dash Line' originally claimed by the ROC in 1946, following the defeat of Japan. [3] In this light, the development of the First Island Chain (of the String of Pearls Strategy) needs to be seen as an extension of Land to Maritime Objective Manoeuvre, as applied on the Yangtze between 1948 and 1949 to end the Civil War. It is essentially what any Terrestrial power would do and is entirely asymmetric to and in conflict with the policies of Maritime-to-Land Objective Manoeuvre (MLOM) as applied by naval powers.

A VIEW FROM AUSTRALIA OF AUSTRALIA

If one inverts Figure 2, an alternative view of the world is presented – providing a focus on the Pacific and Indian Oceans, Australia and Antarctica, Fig. 7.

The view of Australia 'Up Over' and based upon approximate distances from Fleet Base East (Sydney); Fleet Base West (Perth) and Darwin paints an alternative picture of Australia's global position, Fig. 8. In this chart, Australia is as close to Antarctica as it is to The Mainland of Asia (Singapore, Malaysia and Vietnam).

Considered in terms of Great Circle routes from the Global NCS of Sydney, Table 1, Australia is more proximate to the Philippines; Indonesia; Singapore; Beijing; Tokyo; Shanghai; India and South America (via the South Pole) than it is to the U.S., and its European Allies. Other than with their Antarctic Bases, Hawaii and Diego Garcia, Australia's closest connection to its major Allies is with France in the Pacific, and with the UK to The Falkland Islands (Islas Malvinas).



Figure 7: Up Over Chart of the World – No Longer 'Down Under' (S-N)

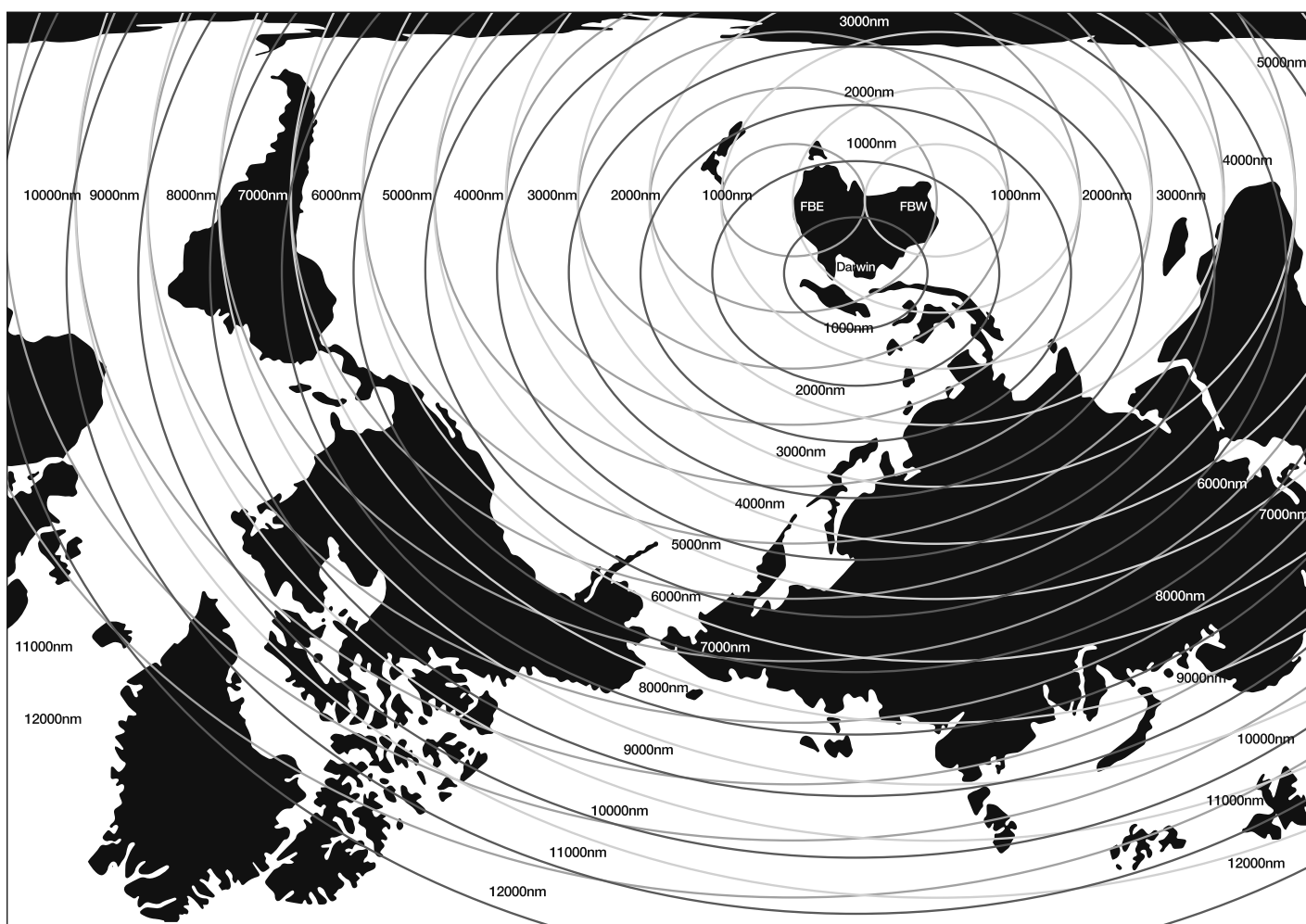


Figure 8: The view from Down Under, Up Over (S-N) – Distances Approximate based on Fleet Base East; Fleet Base West and Darwin

On Antarctica, the Antarctic Treaty and related agreements, collectively known as the Antarctic Treaty System (ATS), was opened for signature on 1 December, 1959, and officially entered into force on 23 June, 1961. The original signatories were the 12 countries active in Antarctica during the International Geophysical Year (IGY) of 1957–58. The twelve countries that then had significant interests and claims in Antarctica were: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the Soviet Union, the United Kingdom and the United States. Since 1959, 41 other countries have acceded to the Treaty, including China and the Russian Federation on the dissolution of the Soviet Union. Seventeen of the acceding countries have had their activities in Antarctica recognized and there are now twenty-nine Consultative Parties in all. The Madrid Protocol (ATS 6) was adopted in 1991 and entered into force in January 1998. The Madrid Protocol is due for re-negotiation in 2048 and there are growing signs that the Treaty is going to be disputed. For the moment Australia's Antarctic Territory (AAT) claims, Fig. 9, are on hold – yet, as Anne-Marie Brady observes:

Australia is at a crossroads in its foreign policy, looking north to Asia for its economic prosperity at the same time as identifying that its primary security threats come from Asia. The 'looking north' strategy of Australia's foreign and defence policies assumes that Australia's south, its 42% territorial claim there and its broader interests in Antarctica and the Southern Ocean are secure and protected by the Antarctic Treaty. [9]

A HUNDRED RULES OF WORLD ORDER

(世界秩序的一百条规则)

An emerging theory of Chinese World Politics, as suggested by Yaqing Qin's (2016) Relational Theory of World Politics [10], is likely to find expression within Xi Jinping's political thoughts (to be written into the Chinese Constitution). It may be considered as the theory of a 'Let a Hundred Rules of World Order Contend (世界秩序的百条规则抗衡)'. Based on the Maoism, 'Let a thousand flowers bloom; let a hundred schools of thought contend', the emerging theory seemingly rejects the notion of a single, static Western Rule-Based Global Order (RBGO), which fixes all nations and political economies as at their 1945 state – essentially a policy of stasism fixed upon a status quo ante – and looks to create a dynamic 'world order from a hundred competing rules': or 'Let a Hundred Rules of World Order Contend (让世界秩序的百条规则抗衡)'.

If this *real-politick* approach is being adopted, then it may explain China's approach to the South China Sea and to Antarctica. In other words, the current rules of global order of which China is a party as far as UNCLOS goes (but the U.S. is not a signatory) and on Antarctica (of which China was not an original signatory and had no prior claims before the Treaty – but the U.S. and Australia both are) are contestable within the school of a 'hundred rules of world order'. It is not simply that China is rejecting the existing World Order. Rather that China is putting the existing world orders 'to the test' 考, in order to claim its own standing in the world and within the emerging (non-static and so dynamic) global order. It is more than *Weltpolitik*, which was a rejection of the Imperial World Order by Germany in 1897, when

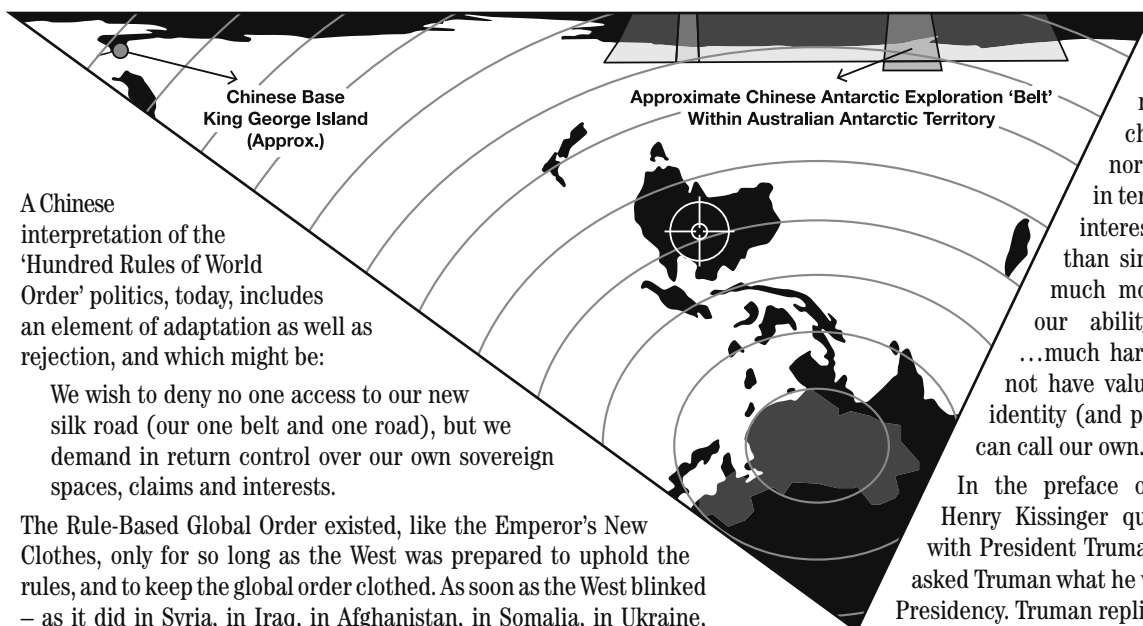


Figure 9: The View Going South – Terra Nullius, Terra Pax Iuris, or Conflictus de Terra? (Nobodies Land; Land under Treaty, or Land in Conflict)

its architect Bernhard von Bülow, the German Foreign Secretary, stated at the Reichstag debate of 6 December:

In one word (*Weltpolitik*): We wish to throw no one into the shade, but we demand our own place in the sun. (*Mit einem Worte: wir wollen niemand in den Schatten stellen, aber wir verlangen auch unseren Platz an der Sonne*).

Figure 10: 'In the Crosshairs' – The 'Incontestable' view to the South from China – Showing approximate position of China (mainland) and Antarctic Bases and corridor (or belt) of Exploration Mare Nullius, Oceanum Pax Iuris, or Conflictus de Oceanum? (Nobodies Sea; Ocean under Treaty, or Ocean in Conflict?)



A Chinese interpretation of the 'Hundred Rules of World Order' politics, today, includes an element of adaptation as well as rejection, and which might be:

We wish to deny no one access to our new silk road (our one belt and one road), but we demand in return control over our own sovereign spaces, claims and interests.

The Rule-Based Global Order existed, like the Emperor's New Clothes, only for so long as the West was prepared to uphold the rules, and to keep the global order clothed. As soon as the West blinked – as it did in Syria, in Iraq, in Afghanistan, in Somalia, in Ukraine,

on Iran and North Korea (and Israel, India and Pakistan), and has done now in the South China Sea, and seemingly in Antarctica, there could no longer be 'one RBGO', or for that matter one global power, as in the U.S. The more pressing reason for the re-emergence of multi-poles was the Global Financial Crisis, from which the U.S. has not yet recovered and which put the U.S. (and the West) in hock to China. As long as that remains the case, China will see no reason why it should adhere to a set of antiquated rules, or be intimidated into compliance.

From Australia's perspective, as China looks to its south across the Equatorial Belt of Instability (EBI) to the less contestable and so more competable regions of the Indo-Pacific and Antarctica, then the more it will find itself in China's crosshairs, Fig. 10. China is seemingly building a belt through the Australian Antarctic Territory claims, potentially as part of a trans-Antarctic Highway (TAH) through to its King George Island Base – coherent with its OBOR strategy. Brady makes the point that: 'some of China's interests and activities in the AAT, which include undeclared military activities and mineral exploration, may be at odds with Australian strategic interests and potentially breach international law'. [9]

NEVER TOO LATE?

There are two significant and conjoined contests apparently in play. The first is a Westphalian sovereign contest over territorial and maritime claims, seemingly settled in 1945 and under UNCLOS but again being contested, for example in Ukraine and in the South China Sea. The second and more serious contest is one over Knowledge Sovereignty, which has specific socio-ethical implications:

When we are talking about ethics, we are talking about the philosophy of the social and values. This is not about good versus harm; or right versus good; this becomes the essence of the indivisibility between the infotechnology and the socio that is ethics, hence SIT – and so socio-ethics. Noting that Knowledge is the Socio-Infotechnological, then it is also the Socio-Ethical. This needs to be understood in any understanding of Data, Information, Communications and Knowledge and their interactions and biases. [11]

The critical issue is to do with Australia's Knowledge Sovereignty:

...seemingly not assumed twice over: in 1917 ...and [in] 1942. [The second author] maintains, 'since our knowledge is not sovereign

– our un-assumed Sovereignty prevents both critical strategic thinking and effective Knowledge Transfer'. It makes thinking through the challenges we face to our north with our ASEAN friends, in terms of our national sovereign interests – and so being more than simply a 'sum of bilaterals' – much more difficult. It also makes our ability to transfer knowledge ...much harder. Exactly because we do not have values within a meta-sovereign identity (and political *sûreté* economy) we can call our own. [12]

In the preface of his book, *World Order*, Henry Kissinger quoted a discussion he had with President Truman during a visit in 1961. He asked Truman what he was most proud of during his Presidency. Truman replied:

Table 1: A Long Way to Come and Go!

		Great Circle Distances from Sydney nm
Major Capital Cities	Jakarta	2971
	Manila	3373
	Beijing	4816
	New Delhi	5623
	Moscow	7820
	Ankara	7881
	Washington	8482
	Ottawa	8564
Global Network City States & Capitals	Johannesburg	5972
	Singapore	3396
	Hong Kong	3970
	Tokyo	4208
	Shanghai	4239
	Dubai	6504
	Chicago	8030
	New York	8633
South American Capitals and Navigation Hubs	Paris	9156
	London	9173
	Ushuaia (Argentina)	5119
	Falkland Islands	5460
	Buenos Aires	6669
	Concepcion	6797
	Lima	6920
	Brasília	7641
African Navigation Hubs	Panama	7649
	Cape Town	5958
Pacific Network Cities	Suez	7718
	Honolulu	4400
	Seoul	4480
	Vladivostok	4724
	Los Angeles	6613
	Vancouver	6741

We have completely defeated our enemies and then returned them to the community of nations, and I think it is only the United States that will do that. [13]

This is no longer the case and has not been since before the end of the Cold War. The U.S. cannot do this anymore and has demonstrated it in most theatres of operations it has been involved in recent years. The turmoil left by U.S. (and U.S.-led coalition) interventions of most kinds has created a breeding

ground for recruitment and growing parallel spaces of instability, which are now reaching into the Indo-Pacific and rapidly building momentum close to us. Hence the rise of China in the world of geopolitics, or rather a return, without much opposition (and at times support) in our region. It is a vacuum. In Singapore and Bangkok, ASEAN (& Bangladeshi) leaders, military and civilian, know this only too well – and are already factoring these new dynamics into their thinking. China is putting the existing world order to test. Singapore, Myanmar, Philippines, Thailand, Cambodia, Indonesia, Bangladesh and Malaysia are all contesting the existing world order, already looking into a future in which the West will no longer be the reference. This leaves Australia in an ambiguous and dangerous status-quo space at the risk of losing relevancy; potentially more isolated than ever.

The 'conflict' in the South China Sea may already be over – as witnessed by key allies of Australia, potentially including Singapore, the Philippines and Vietnam, walking away from the Rule Based Global Order and towards other compacts, exactly because the RBGO prevents thinking through shared common values. If this is the case, then Australia may be precisely where it does not want to be: facing a stark choice between being either the stopper (in the bottle) of China's ambitions, or a gateway to realise its ambitions, see Figure 10. Ultimately and in all probability, Australia cannot be both. Yet without a clear understanding of our own Knowledge Sovereignty and therefore being able to pursue Australian interests within the new emerging world order, Australia's lack of self-awareness becomes a danger to existing and potential allies alike. Australia also becomes vulnerable to those wishing to get at America by attacking its 'little-infant'. As the UK found in Iraq and Afghanistan; leading to the context in which Brexit occurred and potentially the permanent damaging of the so called *U.S.-UK Special Relationship*. It is never too late to start – given Australia's great strengths within its new and old migrant communities. There is something uniquely Australian that may yet emerge but only if Australia starts thinking critically and strategically in its own sovereign interests. ■

About the Authors: *Dr Simon Reay Atkinson* is a Cambridge educated, Australian-Anglo systems engineer, and *Dr Jean Bogais* a Sorbonne educated, French-Australian psycho-sociologist. Both have considerable practical experience in socio-ethics, strategic assessment, conflict, negotiations and modelling / applying complexity for example their research into the 'pivotal' Equatorial Belt of Instability, Quantum, Artificial Intelligence and nanotechnology. They are Associate Professors at the University of Sydney and founding Principal Negotiators of the *Strategic Assessment Research Network* (SARN).

NOTES

† Sûreté is considered as the trusts, assurances and safety encompassing a new critical approach to security including the abstract and the physical.

‡ The original Latin was the 'exception that tests the rule' (*Exceptio probat regulam*); rather 'than proves the rule', which means that the rule or norm should be put to its proof rather than simply confirmed by it. Essentially the basis of complex adaptation!

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THE CREATION AND ESTABLISHMENT OF THE JAPANESE NAVY, PART 2

THE HISTORY OF THE JAPANESE MARITIME SELF-DEFENSE FORCE 1946-1955

By Masashi Kuratani

Following the first paper in this series, this paper aims to provide an overview of the chronology and historical facts surrounding the birth of the JMSDF, 1946-1955 and addresses two questions:

- **How, after the Imperial Japanese Navy (IJN) was disestablished, did the Japanese Maritime Self Defence Force (JMSDF) develop into a newly established maritime power?**
- **What were the challenges and issues it faced?**

INTRODUCTION

In the aftermath of World War II, Japan's military forces were disarmed and its munitions industry was dissolved. On 30 November 1945, the Japanese Navy Ministry was disestablished which saw the end of the IJN's 75 year history. A new constitution was approved; coming into effect in May 1947 and comprising the following key statement:

'The Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as a means of settling international disputes'.

Following WW2, maritime order and the prevalence of piracy became a matter of concern and on 1 May 1948, the Maritime Safety Agency (MSA) was launched. It was tasked with the maintenance of maritime order and navigational safety at sea. A Japanese navy was not envisaged or considered desirable until the Korean War broke out in 1950. The ensuing law and order vacuum that resulted from the mobilization of U.S. military forces in Japan for the war in Korea saw the launch of Japan's National Police Reserve on 10 August 1950. This organisation subsequently became known as the Japanese Ground Self Defence Force (JGSDF). Shortly afterwards, on 26 May 1952, a Coastal Guard Force was established within the MSA; later becoming the JMSDF.

By 1954, a large proportion of Japan's annual defence budget was allocated to the foundation of these forces. A Defence Buildup Program had been revised through four iterations and the Japan-U.S. alliance had been strengthened and security cooperation with the U.S. had also been advanced. As a consequence of these efforts, the JMSDF's capability had been steadily increasing, whilst further proactive programs were being tabled. The background of this period from 1945 and the foundation of the JMSDF will be scrutinised in this paper.

UNUSED MINE DISPOSAL

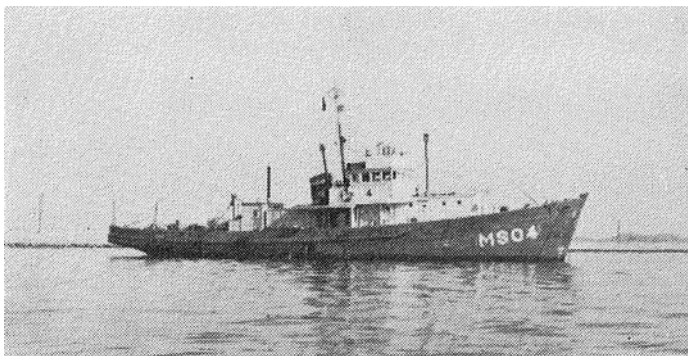
In 1945, IJN vessels were either dismantled, scrapped or transferred to the navies of the Allied Forces with the majority commissioned into the U.S. Navy. A total of seven aircraft carriers, three battle ships and twelve cruisers were dismantled whilst almost all of the IJN's submarines and aircraft were either sunk or destroyed. At the time of the surrender, more than six million Japanese soldiers remained overseas; away from their homeland throughout the



Prime Minister Shigeru Yoshida PM 1946-1947 and 1948-1954.

Western Pacific and the Asian continent. By 1 January 1947, 5.1 million of these forces had been repatriated; however, almost 1.6 million remained overseas, many of them under confinement in Soviet-governed areas.

The Supreme Commander of Allied Powers (SCAP), General Douglas MacArthur, demanded strongly during the Manila Conference that the Government of Japan (GOJ) remove a variety of different types



Minesweeping Vessel MS04 Transferred to Japan Maritime Safety Agency and renamed KJJI (PB-20) on 1 May 1948.

of mines from its coastal waters. Following the dissolution of the Japanese Navy Ministry, the Japanese Minesweeping Force (JMF), under the control of the Second Demobilization Ministry, was the only unit capable of performing this duty. Because all U.S. Navy minesweepers had been withdrawn (to Korea), it assumed all minesweeping responsibilities for the 55,347 moored mines that had been laid down by Japan and the 10,703 influence mines that had been sewn by the U.S. B29 bombers and submarines. Between 1945 and 1952, 937 influence mines were disposed of at a grim cost of 19 ships and 77 lives. This minesweeping operation, originally estimated to be completed by 1946, continued until 1971. Even now, approximately 2000 influence mines remain in Japanese littoral waters. The JMF played a significant role towards realising the wish among former IJN personnel to re-establish a maritime force in 1950.

CHOLERA EPIDEMIC AND THE ESTABLISHMENT OF THE JAPANESE COAST GUARD

During the early months of the summer of 1946, a cholera epidemic broke out on the Korean peninsula when over 200,000 Koreans were estimated to have immigrated to Japan. This raised fears that migrants entering illegally on ships could bring cholera into the country. Meanwhile, the areas surrounding the Sea of Japan experienced an increasing spate of attacks and lawlessness. Poaching, smuggling and illegal migration (via secret routes) was widespread and became a serious threat to the maintenance of maritime security. Japan's 16,470 mile long coastline presented challenges for the small vessels employed in maintaining security; rather like looking for a needle in a haystack. Consequently, poachers and smugglers enjoyed an almost complete freedom of movement.

Concerns about the threat of cholera to soldiers (stationed in Japan) leading to social unrest were raised by General Headquarters (GHQ). To avoid negatively influencing the occupation policy, on 12 June 1946 the GOJ ordered a crackdown on illegal immigration. In accordance with this directive, the GOJ initiated 'reinforced patrol operations'. On 28 August 1947, the GOJ transferred 28 ex-IJN vessels (auxiliary subchasers) from the Demobilization Board's 2nd Bureau to the Ministry of Transportation to be used as coastal patrol ships. On 1 May 1948, a centralized management organisation – the Maritime Safety Agency (MSA) with the approval of GHQ and Japan's Diet, was launched as an agency subordinated to the Ministry of Transportation. Its mission to:

1. Protect Japan's coastline,
2. Enforce regulations concerning the safety of ships,
3. Establish maritime safety standards,
4. Rescue operations,
5. Patrol coastal and adjacent waters,
6. Prevent and suppress smuggling, and
7. Clear obstacles at sea including mines.

The MSA and its 28 ships was modelled on the U.S. Coast Guard and it employed former IJN personnel. It differed significantly from the IJN as a 'non-military' organisation and had a wide range of tasks under the following limitations:

1. Total number of personnel shall not exceed 10,000,
2. Total number of vessels shall not exceed 125 and total tonnage of vessels shall not exceed 50,000 gross tons,
3. Speed of vessels shall not exceed 15 knots,
4. Armament for maritime safety officials shall be limited to small arms, and
5. Operating area of vessels shall be limited to the high seas adjacent to Japan.

When it was founded, the MSA possessed a main body comprising patrol boats (ex-IJN subchasers of 135 and 80 tons), light patrol boats (ex-IJN 20 ton ships) and route-clearing minesweepers. Additionally it had several tug boats and dozens of small vessels that carried out observation operations and a small number among its 8000 staff had IJN experience.

THE OUTBREAK OF THE KOREAN WAR AND THE FOUNDING OF THE MSA

On 25 June 1950, North Korean units suddenly invaded the Republic of Korea (ROK); advancing across the 38th parallel. This event prompted the U.S. to review its handling of Japan's MSA-related problems. General Douglas MacArthur (SCAP) was appointed as Commander of the United Nations Forces for the Korean theatre of conflict. He immediately despatched U.S. forces stationed in Japan to the Korean Peninsula, and wrote to the then Japanese Prime Minister, Yoshida, directing him to establish a 75,000-strong National Police Reserve (NPR) and to increase the MSA's 8000-strong force in order to help 'maintain domestic law and order'. The establishment of the NPR was, in effect, a virtual rearmament. Whereas, the MSA's staff augmentation was mostly an extension of its existing policing force. In light of this, MacArthur ordered the Department of the U.S. Army to send 40 U.S. Coast Guard (USCG) vessels to Japan.



Member of Y Committee - US Army Major, former CAPT Nagai, former CAPT Nagasawa, former RADM Yamamoto, USN CAPT Abraham, Former CMDR Terai, a USCG CAPT; a USN CMDR.

During this period, the U.S.' Far East strategy recognised Japan as a useful ally against the USSR's expansionism and the U.S. government agitated strongly for Japan to reinforce its ground force power. Japan's maritime power, was supposed to be guaranteed by the U.S. in accordance with MacArthur's instructions. Thus, during late August, the U.S. government decided to supply the Commander of U.S. Army Forces Far East (USAFCE) 10 patrol boats (PF) and 50 submerged tank landing ships (LSST).



Patrol Frigate JDS KAEDE (PF-295) (1953-1976) ex USS NEWPORT (PF-27).

JAPANESE MINESWEEPER ACTIVITIES IN THE KOREAN PENINSULA

Then Rear Admiral '31-knot' Arleigh Burke USN (after whom the Arleigh-Burke (DDG) class of warships is named) recognized that the U.S. Navy lacked sufficient minesweeping capability and that operations in North Korea would entail the possibility of encounters with sophisticated Soviet-made influence mines. The MSA's units, already engaging in minesweeping operations around Japan's coastal and inland waters, were the only specialist-trained and equipped large-scale minesweeping force in the world at that time.

Admiral Burke requested Okubo, the Director of the MSA, to assemble all Japanese minesweepers in the Tsushima Straits and to assist sweeping operations in Wonsan and mine disposal at Inchon. This task was beyond the MSA's capacity and Okubo asked Prime Minister Yoshida for a decision. From a legal point of view, minesweeping operations could have been considered a combat role in potential violation of Article 25 of the Maritime Agency Safety Law. The request to support the U.S. operations posed a potentially unacceptable risk to life (for MSA personnel) and a logically incoherent argument to place before the Japanese public.

To avoid a damaging rift, Yoshida secretly authorised Okubo to send MSA minesweepers to support the U.S. Navy. Between 2 October and 12 December 1950, 46 Japanese minesweepers, one large 'guinea pig' vessel and 1,200 former IJN personnel were employed on operations sweeping channels and anchorages in the Korean ports of Wonsan, Kunsan, Inchon, Haiju and Chinampo. Two minesweeping vessels were sunk and one sailor was killed with eight others injured.

NAVAL REARMAMENT PLANNING

The theme of reconstruction of a Japanese navy / maritime force was often tabled in the post-war Maritime Safety Agency but the restrictions at the time prevented open discussion of this topic. There was tacit consensus that, whilst the matter should be studied to allow for any sudden changes in strategic context, the presence of a generation of ex-IJN personnel meant that no re-construction plan could be tabled for the next 30 years. Nonetheless, Japan's future national security remained a matter of interest and discussions on whether to build a new Navy was occasionally and informally held at the Demobilization Ministry during morning meetings. Opinions were divided with one side arguing that the creation of a new navy would not be accepted by SCAP and GOJ. While the other opined that the end of occupation by U.S. Forces in Japan would leave Japan undefended – which necessitated responsible preparation and planning.

In early 1946, the two sides reached a reconciliatory position: in order to maintain flexible options, staff at the 2nd Bureau would continue the 'Navy study', without setting any definitive target year. Concerns among a number of people within GHQ and the UN

Forces of a revival of the IJN meant the prospect of a maritime organisation remained unacceptable for the foreseeable future. Nevertheless, former IJN officers in the Demobilization Ministry out of office hours continued to informally draw up a rearmament plan. These former IJN officers (comprising a group of O-4 to O-6 ranks), compiled 'study materials' (see Table 1). Their main focus was upon developing a minimum military capability that could resist and endure a potential invasion of Japan's territory by opponents such as China and the Soviet Union for at least three months. While also, with U.S. military support, having an ability to conduct a counter attack. This capability was envisaged to have the following missions:

1. Defence of the Japanese mainland and its coastal area,
2. Control of water channel patrols in Japan's main straits and ports,
3. Guard Japanese shipping on the high seas, and
4. Other support.

Type	Number	Displacement
Cruisers	4	
Destroyers	13	
Destroyer Escorts	100	
Sub chasers	60	
Local Patrol Boats	30	
Landing Ships(LST)	14	
Minesweeping Boats	24	
Minelayers	4	
Total	249	210,000

Table 1, 'Study Materials'

From its creation, the rearmament plan was deliberated over many times – but the plan's content differed little from its original inception.

A STUDY OF THE RE-MOBILIZATION OF FORMER JAPANESE NAVY SERVICE PERSONNEL

By March 1951, the issue of rearmament had become more and more important both in Japan and in the U.S. For the first time, SCAP officially requested the 2nd Demobilization Bureau to report on the number of former IJN personnel still available and the number required for the reconstruction of a new navy. The report was titled and summarized as follows:

The Status of Former Navy Personnel at the End of the War

1. An examination of the number, specialty and potential of ex-IJN technical experts,

2. A modified plan for Air-Sea Forces based on ex-IJN personnel resources,
3. The time necessary for the formed forces to exert its full powers after a military build-up, and
4. Requirements to be considered to realize the military build-up (two options were offered):
 - a. A mission that focused on coastal defence and the concept of escorting commercial vessels in the outer sea by destroyer escorts;
 - b. Not allocating these forces to coastal defence and the organisation of escort carrier units for escorting commercial vessels in the outer sea.

Type	Number
Escort carriers	0
Cruisers	4
Destroyers	13
Destroyer Escorts	150
Subchasers	60
Local Patrol Boats	60
Landing Ships(LST)	14
Minesweepers	24
Minelayers	4
Submarines	0
Boats	A few
Sum	329 (26,000)

Table 2, Plan A

Type	Number
Escort carriers	4
Cruisers	2
Destroyers	13
Destroyer Escorts	100
Subchasers	60
Local Patrol Boats	0
Landing Ships(LST)	6
Minesweepers	24
Minelayers	4
Submarines	6
Boats	A few
Sum	329 (26,000)

Table 3, Plan B

THE PRESENTATION OF SECONDARY SPECIAL RESEARCH MATERIALS (10 APRIL 1951)

On 18 April 1951, the IJN Pro-Reconstruction Group, under the command of Admiral Kichisaburo Nomura (Japanese Ambassador to the US at the time of Pearl Harbour) presented the plan (entitled the '2nd Special Study Materials') to SCAP and Admiral Burke. The plan detailed a request by Japan to lay the foundation of core units for future Sea-Air forces by temporarily loaning vessels, aircraft, weapons and munitions from the U.S. and for it to bear the costs of

supplies, along with personnel and salaries. The organisation and systems of these core units were recommended as follows:

- A. Establish a new organisation with a militaristic character;
- B. Reinforce the capability and function of the Japanese Coast Guard (JCG) and provide it with a commission, and;
- C. Place a new organization under the command of the U.S. Navy.

The U.S. believed Plan A to be ideal but upon later consideration of the issue's many aspects, it judged Plan B to be, within the political context, the most feasible within the following limitations:

1. The newly established organisation be set up as an agency of the JCG,
2. Places, as much as possible, experienced former military personnel within the fields of leadership, discipline and training,
3. Arbitrary decision-making by inexperienced civilian personnel be excluded,
4. That it not be effected by the current JCG systems and organizations, and
5. Grant it the fullest possible militaristic character.

Admiral Burke was deeply impressed by this plan and on 22 April, he sent it, along with a seven page attached letter, to Rear Admiral James, a subordinate of the then U.S. Chief of Naval Operations (CNO) Admiral Shanan. Burke requested that James explain a summary of the plan in his letter to the CNO.

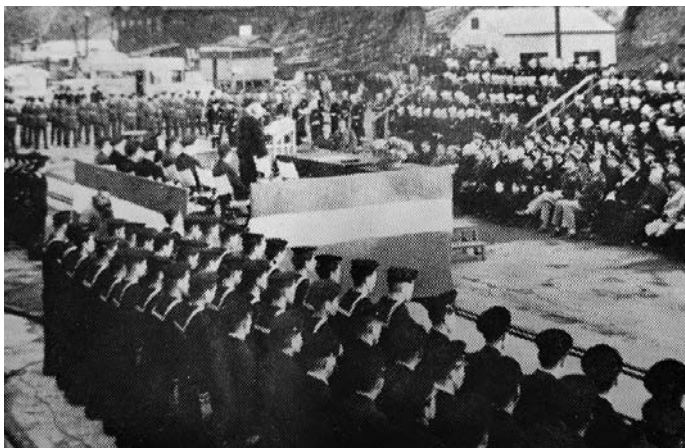
THE FOUNDATION OF Y COMMITTEE

On 19 October 1951, after the signing of the Treaty of Peace with Japan, Admiral Ridgeway and Prime Minister Yoshida held talks during which the Japanese accepted a U.S. offer to lease 18 PF vessels that were then moored at Yokosuka Port and 50 LSSL vessels located in the U.S. On 31 October 1951, Y Committee was formed and tasked to draft a plan to utilise the loaned ships effectively, coordinate with the U.N. and across GOJ ministries, and to submit a concrete plan to the Prime Minister. A second meeting was held on 2 November in which an internal regulation was set up; comprising a 'new organization structure' for 'securing human resources' and providing for the 'education for personnel'. The name of the Y Committee originated from the abbreviations used by the IJN up to the end of the war. Army was referred to as 'A', Navy as 'B' and the public sector as 'C'. Reversing the alphabetical order and reading from the last, this meant that Army became 'Z' and Navy the 'Y' Directorate.

LAUNCH OF THE COASTAL SAFETY FORCE AND MARITIME SAFETY FORCE

The Y Committee and U.S representatives (as advisors for the MSA) planned the launch of the Coastal Safety Force (CSF) for 26 April 1952. On 19 January 1952, the education of 30 officers, to be assigned later as instructors, begun on one loaned frigate. On 26 April the CSF was launched and a revision of JCG law saw the termination of the Y Committee's charter. Two days later, separate peace and security treaties came into effect heralding the beginning of the Japanese Navy.

Three months later, on 1st August 1952, the CSF was transformed to become the Maritime Safety Force (MSF) and the number of its authorised staff was expanded to 7828 personnel. These extra personnel were drawn from the MSA's minesweeping units. These units had been designated as naval vessels whilst engaged in minesweeping operations, a first for the post-war era. The MSF was provided with two frigates and one tank landing ship, enabling its personnel to conduct training at sea. It can therefore be said



The transfer ceremony.

that Japanese Navy rearmament began as early as 1946. Japanese politicians had, from an early stage, held a belief that Japan should acquire a maritime force sometime in the future.

In 1948, the U.S.' National Security Committee decided to establish a 'para-military' organization in Japan whilst the Japanese Diet approved legislation to enable the lease of U.S. ships under the title of a Charter Party Agreement. Consequently, on 14 January 1953, six frigates and three large landing ships were officially transferred to Japan; these vessels arrived over a period between 16 February and 23 December 1953.

The terms of the lease stipulated a five year lease with a further five years if requested by Japan. A separate lease of approximately 60 U.S. naval vessels was agreed on 14 May, under the auspices of the Mutual Defense Assistance Agreement which had been signed earlier on 8 March. The vessels remained under U.S. ownership but the conditions of the agreement allowed Japan to lease them indefinitely.

Meanwhile, during 1951-52, former IJN officers promoted a plan to equip the JGSDF and JMSDF with air units. The U.S. Air Force disagreed and asserted that all air units should be managed by a separate organization called the National Safety Agency (NSA) which was established in 1954 and equipped with 217 U.S. Navy aircraft.

DISCUSSIONS ON THE POSSESSION OF AIRCRAFT CARRIERS AND THE ESTABLISHMENT OF THE SYSTEM INVESTIGATION COMMITTEE

28 April 1952 saw the enforcement of a U.S.–Japan Security Treaty and with it came a strong request by the U.S. to address the challenges of increasing the power of Japanese self-Defense capability. In October 1952, and in the wake of the launch of the NSA, the U.S. Navy – with concerns about the Soviet Union's 90-strong submarine force – argued that the JMSDF should have a maritime defence capability to be able to protect sea lanes and to also escort commercial vessels by light aircraft carriers in the outer seas. On 2 September 1952, the Director General of the NSA set up a System Investigation Committee (SIC) within the Internal Bureau. Until its abolishment in 1968 the SIC played a key role in reinforcing the NSA and the establishment of the Defense Agency, as well as conducting studies and planning for national defence. This committee envisaged a maritime framework within a Concept of Defense Capability Buildup. This later defined the way forward for Japan's Defense Capability Buildup.

The Defense Capability Buildup programs evolved over seven revisions between 30 March and late December of 1953. The first iteration was completed within the strategic context of the

international situation in 1955 (China-Taiwanese ongoing conflict; the formation of SEATO); while the focal point of the 2nd plan was developing a sufficient capability to secure the sea lanes along the Japanese mainland with a task of maritime security at 10% the size of the U.S. Navy. By the 3rd plan, aircraft carriers were no longer required but this concept was revived by the 4th plan. The 5th plan outlined a requirement for an escort carrier for the purposes of research and training for non-military missions. In the 6th plan, the concept of an aircraft carrier had been dropped for financial reasons. On 26 November, just two months later, a first draft of the 7th plan was completed with a second draft finished on 21 December. This second draft was notable for changes made to the names of vessels in order to reduce the impression of rearmament. It was presented to the U.S. by Prime Minister Yoshida on 23 December.

THE BIRTH OF THE JAPANESE MARITIME SELF-DEFENSE FORCE

The conclusion of the 48-nation Peace Treaty and U.S.–Japan Security Treaty on 8 September 1951 saw a period in which Japan's national power steadily recovered and its credit within the international community improved. The number of U.S. forces stationed in Japan had decreased and establishing a build-up of Japan's Defence capabilities had become a serious challenge that needed to be addressed.

In March 1954, the Japanese Cabinet submitted two bills to the Diet. One was a draft of the Defense Agency Establishment Law and the other a draft of the Self-Defense Forces Law. Both bills



LSSL (Landing Ship Support Large) Possibly JDS AZAMI (LSSL-419) ex US LCS(L)(27).

were approved by the Diet on 9 June; coming into force on 1 July – heralding the birth of Japan's Maritime Self-Defense Force.. ■

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BOILING POINT?

15 December 2017 – President Donald Trump signed a national defence authorisation act allowing the U.S. and Taiwan to deploy ships in each other's waters.

Lu Kang, China's foreign ministry spokesman, said of the new US-Taiwan agreement: "We have already lodged stern representations with the US government." Mr Li Kexin, Minister, Embassy of the People's Republic of China to the U.S., said that if the US sent ships into the port of Kaohsiung, Taiwan's second biggest city, China would attack the island: "the day that a U.S. Navy vessel arrives in Kaohsiung is the day that our People's Liberation Army unifies Taiwan with military force."

REBUKE

People's Liberation Army Navy Commander, Admiral Shen Jinlong apparently formally rebuked Chief of Navy Vice Admiral Tim Barrett RAN at a meeting in Beijing amid a diplomatic row regarding ongoing Australian deployments to the South China Sea that many feel is likely to get worse before it gets better.

KNOWLEDGE SOVEREIGNTY?

The Higher Education Sector is increasingly alarmed by the threat of new treason laws to Universities receiving foreign cash and investment research funding. Many of the so called Group of Eight (Go8) have relied upon funding 'on the back of the Chinese student' for years – representing up to 15-20% of income at some top Australian Universities. Significant questions arise as to the exact purpose of the University Sector in Australia and the contribution it is making (or not) to Australia and Australian Knowledge Sovereignty. The HE sector was warned by UNESCO in 2017 on the 'commodification of education' – noting the mercantilist exploitation of the sector as a whole. In many regards, Australian universities have become more like financial hedge funds and banks in recent years than they have centres of learning and education. Many research programmes in the sciences,

for example cyber, have 80%+ international representation in terms of academics and PhD students – the majority drawn from SE Asia (and China), the Sub-Continent and the Middle East. General and managerial staff now outnumber academics in most universities – 55% (+) in some institutions (up from 15% in the 1980s). Lack of academy, a collegiate base and philanthropy in the Australian HE Sector – has also led to Universities accepting funding from foreign sources such as for joint research projects / centres. For example, the 2018 Australian of the Year, Quantum physicist Professor Michelle Yvonne Simmons, is funded through the U.S. DARPA; not CSIRO or DSTG... In 2017, Chinese Premier Li Keqiang also announced Chinese companies would help fund a new \$100 million science and technology precinct at UNSW.

The current Australian HE funding model is unsustainable and significantly vulnerable to external manipulation. Who exactly does the model serve? And where is the knowledge being transferred to? These are national strategic questions previously raised in *The NAVY Magazine* and are worthy it is suggested, of a Royal Commission.

FRANCE DEPLOYS SSN TO INDIAN OCEAN

As part of its ongoing commitment to the Indian Ocean, the French nuclear attack submarine PERLE (S606) joined Exercise TIGER EEL 18, conducted with the UAE. The nuclear attack submarine visited the UAE, and was hosted by Rear Admiral Didier Piaton Commander Maritime Zone, ALINDIEN, and supported by the naval base of Abu Dhabi. Few nations have the expertise needed to deploy a submarine to the Indian Ocean and a potential visit to Fleet Base West (Perth) is likely to be on the cards in support of Australia's Future Submarine programme.

GREENWHICH STATION

Apparently the UK Defence Budget remains unaffordable and unrealistic, with a funding 'black hole' of \$36 billion to 2028, the UK's National Audit Office (NAO) reported in

February. The UK MoD failed to include the \$2.5 billion cost of a fleet of (now) five new Type 26 Frigates in its equipment plan. The NAO also identified a \$1 billion rise in the cost of building four replacement SSBN Trident submarines. The NAO further criticised previous Ministers of Defence Philip Hammond (the current chancellor) and Sir Michael Fallon (who was forced to resign); indicating that "the MoD was reverting back to pre SDSR 2010 when its budget was consistently overheated and running a declared bow-wave in the region of \$63 billion".

Note: Originally 13 Type 26 Frigates were expected to be ordered for the RN. This was reduced to 8 in 2016-2017, and then to 5. There are specific concerns – despite the T26 being considered as one of the best designs for the RAN Future Frigate – that Australia could end up bearing considerable extra risks and costs; while not being the Design Authority!

25 YEAR OLD RN FRIGATE DEPLOYS TO SOUTH CHINA SEAS

As a replacement for HMS DIAMOND (D34), which broke down at the start of its 9-month deployment, the British Royal Navy deployed the twenty-five year old Type 23 Frigate, HMS SUTHERLAND (F81), to Australasia and the Far East, where she has visited Adelaide and Sydney en-route apparently to undertaking Rights of Freedom of Navigation (RFON) operations in the South China Sea. Questions remain exactly as to the sustainability of such deployments by the Royal Navy and the viability; noting the limited reach of the RN. As the CO, Commander Andrew Calale RN reported: "[the RAN has] gone out of their way to assist the Brits, [operating] 11,000 miles from their home port". The exception rather than the norm in recent years – noting that over the 2017/18 northern winter the UK had no major warships on operations anywhere in the world for the first time in living memory. And in 2016 it failed to deploy a warship to RNZN 75.

China's reaction to any UK demonstration of RFON in the SCS – following Foreign Secretary Boris Johnson's bellicose comments regarding the deployment of the QE-class to the region – is likely to be stern. Noting also recent warnings to the US, Japan and Australia and the reliance of UK on Chinese FDI & Trade, post Brexit.

Note: The RN currently has a Fleet Refresh Rate (FRR) in the order of half a century, which is simply unsustainable over the longer term. The UK Fleet, on current projections, is likely to halve in size again by the early 2040s.

Question: should the British Royal Navy be known as the RBN / RUKN as in the RNLN, RCN etc? ■



French Submarine PERLE visiting Halifax Harbour in 2016.



WHERE HAVE THEY GONE?

Fifty years ago, (1967) Australia had over 24 shipping companies operating a fleet of 125 ships, over 2,000 tonnes, in the both the international and coastal trades.

Many of the leading companies were public institutions established in the early 1900's – *Adelaide Steamships, AUSN, Burns Philp, Howard Smith, Huddart Parker and McIlwraith McEacharn* to name a few. All were founded on a firm maritime basis, often with a retired Master at or close to the helm.

They were not just shipping companies, they were horizontally and vertically integrated businesses, (before the term was invented), they were agents, stevedores, forwarders, insurers, energy producers, marine engineers covering the gamut of the shipping business.

In 1967, the structure of Australian shipping was comprised of intrastate shipping such as WA Stateships, ANL's searoad services on the Eastern seaboard, supported by a fleet of general cargo ships in various coastal trades, the Bass Strait trade and the bulk trade led by BHP. BHP had 14 of their own ships and employed an equal number of bulk carriers from the coastal consortia in the coal and iron ore trade. In addition we had 11 tankers mostly chartered operating for local oil companies in the international and coastal trade.

In their essay *The Internationalization Strategies of Small Country Firms – The Australian Experience of Globalization*, Dick and Merrett, Howard Dick view the Australian Shipping Industry as a "fascinating case" postulating that the Australian shipping industry ranked alongside banks and pastoral companies as pillars of the business world. "If there was one global industry in which Australia might have been expected 'a priori' to have achieved a competitive advantage, it was shipping."

In 2017, Australia's principal exports totalled approx. 1,100 million tonnes (estimated ship loadings) Iron ore 600 m tonnes (6,500 ship loads) Coal 380 m tonnes (2,500 ship loads) LNG 33 m tonnes (500 ship loads) Grain 33 m tonnes (700 ship loads) The above represents around 9,500 ship loadings, assuming each voyage were to South East Asia with a 2 month turnaround, this would require 1,583 ships, but none under the Australian flag!

SO WHAT HAPPENED?

The popular assertion is that the unions are to blame having priced themselves out of the market, with their excessive wage and leave demands. This is partially true, but the

same lack of competitiveness argument has been used to explain the demise of almost all manufacturing industry in Australia and the Western World.

THE UNIONS

Australian maritime unions, particularly the Waterside Workers and Seamen's Union have a history of militancy dating back to the late 1880's. Shipboard conditions were hard and showed little improvement until the mid- 1950's. Suspicion characterized their approach in any negotiation and intransigence and strike action was the bargaining tool. Things have changed in the 1980's with the adoption of the recommendations of the Crawford Report for shipping reform.

THE OWNERS

By the mid 1950's, the coastal ship-owners, apart from BHP and ANL, had circled their wagons and formed themselves into the Australian Steamship Owners for mutual protection. There were no longer any entrepreneurs, they lacked leadership and generally showed little interest in investing in shipping. They sought protection through amalgamation i.e. Bulkships and Associated Steamships and diversified into retail, Adsteam into David Jones, Howard Smith into BBC Hardware (in each instance a disaster).

BHP and the Australian National Line were a different kettle of fish, both had substantial fleets.

However, with the merger of BHP and Billiton in 2001 and the appointment of an American, Chip Goodyear as CEO in 2003, the Company had global aspirations and shipping was to be dispensed with, as it could be obtained more cheaply using Third World labour.

At the time the Company owned and bare boat chartered 20 bulk carriers with similar number under time charter, employed 1,935 seagoing, shore and stevedoring personnel. It was no longer the BIG Australian, it was an international conglomerate.

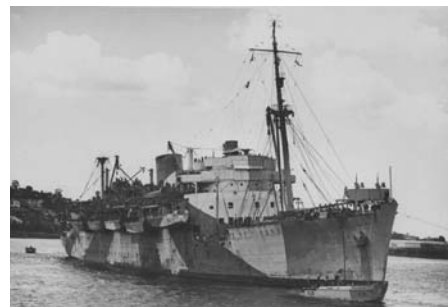
ANL was a separate issue, a company with definite prospects but undermined by state government and other transport rivalries. (Perhaps for another day.)

THE GOVERNMENT

Where did the government stand in all this, and what was its plan for shipping?

Antipathy between the Seamen's Union and Conservative governments was historic, dating even before Federation.

In Coalition governments, the Shipping portfolio has always been allocated to the



MV - HMAS KANIMBLA (I) McIlwraith McEacharn Ltd served as an armed merchant cruiser in RN (Persian Gulf) and RAN as an Infantry Landing Ship from 1943 through-out the Pacific Campaign-.

National (Country) Party because they 'know' all about exports. The Nationalist ministers have shown little interest in the industry their criterion solely based upon what is/was the cheapest price for the carriage of their commodities irrespective of the flag. The Labor Party was more philosophically inclined to the maritime industry, through its establishment of the Commonwealth Line in the 1920's and general support for Australian ownership. Nevertheless, it was often a fraught relationship when in Government. You may recollect Minister Brereton's memorable statement, "ANL, you couldn't give it away." (He did.)

No recent government of either stripe has ever had a plan for the Australian maritime industry.

DENMARK

The population of Denmark in 2016 was 5,731,000. Denmark is the 5th largest maritime nation, with a fleet of 633 ships (2014), with a total Gross Registered Tonnage exceeding 1 billion tons, doubles its tonnage in 1996 and employs over 100,000 people in the maritime sector. The Danish Government has a growth plan, with three objectives.

1. Denmark is to become Europe's maritime centre.
2. Denmark must lead the way in green solutions in shipping.
3. Growth in the maritime cluster will primarily be in "advanced shipping" e.g. sailing in difficult waters, incl. the Arctic, supporting offshore activities waters & environment – and climate – friendly sailing. ■



KIDO BUTAI (機動部隊): THE FIRST SIX MONTHS

By Geoff Crowhurst

By mid-1941 Japanese plans for war with the Western Powers were being finalised. In a radical departure from the long-accepted Imperial Japanese Navy strategy to lure the US Fleet across the Pacific to its destruction at a place and time of Japan's choosing, Marshal Admiral Isoroku Yamamoto, C in C of the Combined Fleet planned an aircraft carrier strike upon the US Pacific Fleet based at Pearl Harbour. This Paper examines the 1st Mobile Strike Force, which became known as Kido Butai (Mobile Force) – its success and ultimate failure in the first six months of the Pacific War.



Marshal Admiral Isoroku Yamamoto.

navy's strategic thinking, believing that carrier aircraft would decide future naval battles. In planning the Pearl Harbour raid, Japanese naval officers were sent to Taranto in Italy to assess the Royal Navy's successful attack on the Italian fleet. This convinced Yamamoto to destroy the US Pacific Fleet in its harbour at the outset of the war. So convinced was he, that when his superiors initially rejected his plan, he threatened to resign. With some reservations, Yamamoto's plan was approved.

KIDO BUTAI (機動部隊)

On April 10 1941 the IJN formed the 1st Mobile Striking Force, which became known as the Kido Butai. Intended to encompass all of Japan's carriers, the core units were Carrier Division 1 (AKAGI, KAGA), Carrier Division 2 (SORYU, HIRYU) and Carrier Division 5 (SHOKAKU, ZUIKAKU). Carrier divisions were attached and detached as the need arose. At the time of its formation, Kido Butai was the largest and most modern carrier fleet in the world and also the strongest, with 474 aircraft.

Vice Admiral Chuichi Nagumo, who had served most of his career on battleships, specialising in torpedo tactics, was given command of the Kido Butai. Due to a quirk in the Japanese naval command structure, personnel and administration matters were handled not by the navy, but by the Department of the Navy – a government agency. Nagumo was a Vice Admiral needing a command, and Kido Butai was a command for a Vice Admiral. Nagumo's name was at the top of the appointment's list, so he got the job. That Nagumo was the wrong man became apparent as the war progressed. In a command that required innovation and drive, Kido Butai instead got a leadership of indecision and lack of aggression.

Yamamoto considered Kido Butai to be the Navy's elite force. Its strengths were considerable. SHOKAKU and ZUIKAKU were the most modern carriers in the world. It had extensive combat experience from operations in China. It was equipped with aircraft that were superior to those fielded by Japan's enemies. The strike component was the Aichi D3a Type 99 dive bomber (called Val by the allies) and the Nakajima B5n Type 97 torpedo bomber (known as Kate). The Val carried a variety of bombs for naval or land targets over long distances. Able to carry out its attacks at an angle of 80degrees, it was an extremely accurate weapon, although its payload was inferior to the US Dauntless. The Kate could carry either bombs or the Type 91 torpedo. This coupled a stable launch platform with a highly effective

INTRODUCTION

Although outwardly supportive of Japanese War aims, privately Yamamoto was in no doubt about the outcome of war with the US. In early 1941 he commented to Prime Minister Konoye:

In the first 6 to 12 months of a war ... I shall run wild and win victory upon victory. But then, if the war continues after that, I have no expectation of success.

Within the Imperial Japanese Navy (IJN), Yamamoto and a few other senior officers questioned the battleship's dominance over the



Vice Admiral Chuichi Nagumo.

weapon. It vastly outclassed its American counterpart, the Douglas Devastator. The standard fighter was the Mitsubishi A6m Zero, which was fast, highly manoeuvrable and well-armed and superior to any available allied fighter. With experienced crews, these aircraft were a major factor in Japan's early victories. However, to achieve their phenomenal range, they sacrificed armour and self-sealing fuel tanks. This made them vulnerable to damage and prone to catching fire when hit.

Following intensive training, Kido Butai rendezvoused in Takan Bay in the Kurile Islands in November 1941. At 0600 November 26th Nagumo sortied for Pearl Harbour. Twelve days and 3400 miles later, Kido Butai reached its launch point, 250 miles north of Oahu. At 0530 on 7 December 1941, Nagumo turned the carriers into the wind and at 0600, in a superb display of handling and coordination, the Japanese launched and formed up their attack formations in just 15 minutes. By 0615, 183 attack aircraft (89 Kates, 51 Vals, 43 Zeroes) were on their way to Pearl Harbour.

Starting at 0751, the Japanese force bombed and strafed Wheeler, Hickam and Ewa airfields, effectively neutralising Pearl Harbours' air defence. Ford Island Naval Air Station was also hit early on. Torpedo bombers and high-level bombers hit Battleship Row causing chaos in the harbour. The high-level bombers dropped converted 16inch naval shells which resulted in the destruction of the USS ARIZONA (BB-39) and damage to all the other battleships except USS OKLAHOMA (BB-37), which sank after 9 torpedo hits. USS NEVADA (BB-36) also avoided the bombs for now, but took a torpedo hit.

As soon as the first wave launched, the Japanese spotted the second wave, 171 aircraft (54 Kates, 81 Vals, 36 Zeroes) onto the flight-deck. It launched slightly behind schedule at 0705 and arrived over Pearl Harbour at 0855. It attacked Kaneohe and Bellows as well as the other airfields and again targeted ships in the harbour, damaging

USS NEVADA on its dash to the sea. The second wave took the majority of the casualties from US flak and fighters. By 0945 the last of the Japanese planes were on their way back to the carriers. This audacious, well planned and executed attack sank four battleships and damaged four more. Three cruisers and three destroyers were damaged. 188 aircraft were destroyed. US casualties were severe – 2403 killed and 1178 wounded. Japanese losses stood at 29 aircraft and 55 aircrew killed.

However, as the second wave landed, Nagumo hesitated. A third strike was planned, targeting the fuel tanks and the salvage workshops which would have rendered the base unusable for months, if not years to come. Nagumo vacillated, ordering Kido Butai to return to port, concerned that the US carriers were still at large, and wanting to conserve Japan's carriers for later operations. A more aggressive commander would have ordered the third strike and accepted that the benefits outweighed the possible losses.

Kido Butai reached Japan on 25 November, except for Carrier Division 2, which was detached to assist in the capture of Wake Island. Carrier Divisions 1 and 5 were sent to cover the Japanese landing on Rabaul in January 1942 that overwhelmed the small Australian force defending the island. In early February Carrier Division 1 (with ZUIKAKU attached) sortied, trying to intercept an American carrier task group that had attacked Japanese forces in the Marshall Islands. This pursuit was abandoned after 24 hours, when it became apparent that the US force had withdrawn. On returning to port, KAGA ran aground on a coral reef. Although temporary repairs allowed it continue operations, a slow leak in the forward hull could not be stopped.

Kido Butai's next major raid was on Darwin to secure the southern flank of the Japanese invasion of Timor, which took place the next day. Carrier Divisions 1 and 2 sortied from Palau on 15 February. On 19 February at a point 220miles northwest of Darwin, 188 aircraft (71



Commander Mitsuo Fuchida.



A ship filled with TNT and ammunition, hit during the first Japanese raid on Darwin on 19 February 1942 with HMAS DELORAIN (J232-M232) in foreground.

Vals, 81 Kate, 36 Zeroes) were launched by 0845. The strike crossed the coast at 0940, having strafed Bathurst Island and shot down a US Catalina patrol plane en route. A flight of four US P40's in a circuit above Darwin, preparing to land, were dispersed by the Zeroes with three downed. Another flight of six P40's was destroyed taking off as the attack started.

From 0957 – 1030 the Japanese attacked naval and merchant ships, Darwin's single wharf, waterfront and aerodrome. Nine ships were sunk including the destroyer USS PEARY (DD-226) and SS Neptuna, which exploded dramatically when onboard fires set off its cargo of depth charges. Twenty-five ships were damaged. Two more merchant ships were sunk by Vals later in the day as they approached Darwin. An afternoon raid by land based bombers targeted the RAAF airfield. The allies lost 30 aircraft both in the air and on the ground. Waterfront damage was extensive and personnel losses amounted to 236 servicemen, civilians and government workers.

These results disappointed the Japanese. Later, Commander Mitsuo Fuchida, the strike leader, described the raid as "a sledgehammer ... used to crack an egg". The defenders claimed four aircraft destroyed although Japanese records indicate that possibly as many as eight aircraft failed to return. One Zero crashed on Melville Island, resulting in the pilot becoming the first Japanese serviceman captured by Australian forces in World War Two.

After refuelling at Staring Bay on the Indonesian island of Celebes, Carrier Divisions 1 & 2 supported the invasion of Java and cleared ABDA naval forces from the area, sinking the destroyers USS EDSALL (DD-219) and POPE (DD-225), the fleet oiler USS PECOS (AO-6), several merchant vessels and raided the southern Javanese port of Tjilitjap. Carrier Division 2 then raided shore facilities on Christmas Island before returning with Carrier Division 1 to Staring Bay, where it was joined by Carrier Division 5. From here KAGA sailed to Japan for repairs to its bow, and missed the next battle.

In late March Vice Admiral Nagumo was ordered to "... seek out and destroy British sea power in the Indian Ocean". On 26 March Kido Butai (AKAGI, SORYU, HIRYU, SHOKAKU and ZUIKAKU) sailed from Staring Bay. Light carrier RYUJO, commanded by Admiral Ozawa, operated off Malaya, providing distant support. Opposing them was the British Eastern Fleet commanded by Vice Admiral James Somerville with fleet carriers HMS FORMIDABLE (67), HMS

INDOMITABLE (92), and light carrier HMS HERMES (95). Nagumo decided to raid Ceylon hoping to catch them in port.

On 5 April 1942 Kido Butai launched 125 aircraft (36 Vals, 53 Kates, 36 Zeroes) against the port of Colombo. The strike (again led by Commander Fuchida) found the harbour mostly empty. The destroyer HMS TENEDOS (H04) and an armed merchant cruiser were sunk. Port facilities were badly damaged. The RAF was caught by surprise, hastily scrambling two squadrons of Hurricanes and a flight of Fleet Air Arm Fairy Fulmars. Caught by Zeroes while climbing to engage, 17 Hurricanes and four Fulmars were shot down. The Japanese lost five planes.

As the strike was returning to the carriers, a scout plane reported two warships approaching. A strike of 24 Vals (8 each from AKAGI, SORYU and HIRYU) commanded by Lieutenant Commander Takeshige Egusa was ordered to intercept. Egusa was the IJN's dive-bombing expert and led a

squadron specifically trained to attack aircraft carriers. They found two cruisers - HMS CORNWALL (56) and HMS DORSETSHIRE (40), which had torpedoed BISMARCK a year earlier. Splitting his force, Egusa immediately attacked both cruisers. Every bomb hit or near missed its target, which left both cruisers sinking.

After three days of fruitless searching for the enemy Nagumo decided to raid the naval base at Trincomalee. At 0620 on 9 April Kido Butai launched 129 aircraft (91 Kates, 38 Zeroes). The Vals



Lieutenant Joichi Tomonaga commanded the air assault on Midway. He flew the last strike from IJN HIRYU on a one-way mission he successfully dropped his torpedo and was shot down by Lieutenant Commander John S Thach.



HMS HERMES sinking after being struck by Japanese Bombers 9 April 1942.

were kept onboard in case the British fleet was located. This time the British received advance warning from an RAF Catalina that was shadowing the Japanese fleet. Ships in port were ordered to sea and the Japanese were intercepted by a squadron of Hurricanes and a flight of Fulmars. The Zeroes dispersed the British fighters, with nine Hurricanes and one Fulmar shot down for the loss of four Zeroes. The Japanese (again led by Commander Fuchida) found only HMS EREBUS (102), a World War One monitor, and the merchant vessel SS Sagaing. These were sunk and harbour facilities and oil storage tanks were destroyed.

As the strike was returning, scout planes located HMS HERMES, which had left Trincomalee prior to the raid. Nagumo launched a strike of 85 Vals and nine Zeroes. HERMES had no aircraft embarked and was swiftly sunk by 37 direct hits (a figure confirmed by British records). HERMES' escort, HMAS VAMPIRE (D68), the corvette HMS HOLLYHOCK (K64) and several nearby merchant ships were also sunk. At the same time however, nine RAF Blenheims of 11 Squadron arrived unseen over Kido Butai and bombed from 10,000feet. IJN ships had no radar. They depended on look outs and their Combat Air Patrol (CAP) for defence. Most Zero pilots removed their aircraft's radios to reduce weight. Flight commanders kept theirs on but the Type 2 MK 3 radio was a poor performer, with limited range and a reputation for straying off channel. With no radar providing early warning and ineffective CAP coordination, the allied aircraft were able to attack without being observed. Bombs fell around AKAGI, but none came close. The Zeroes on CAP saw the Blenheims after they had bombed and shot down five of them.

On April 10 Nagumo withdrew to rest and refit. Admiral Somerville withdrew to East Africa. For the loss of 30 aircraft, the Japanese largely cleared the RN from the Indian Ocean until the formation of the British Pacific Fleet on 22 November 1944. On return to Japan, Kido Butai received an influx of newly graduated pilots. However, weather and maintenance schedules meant training was deficient and by late May the standard of the new pilots was assessed as "extremely poor", and even seasoned pilots had "lost some of their skill", as Nagumo reported to IJN command.

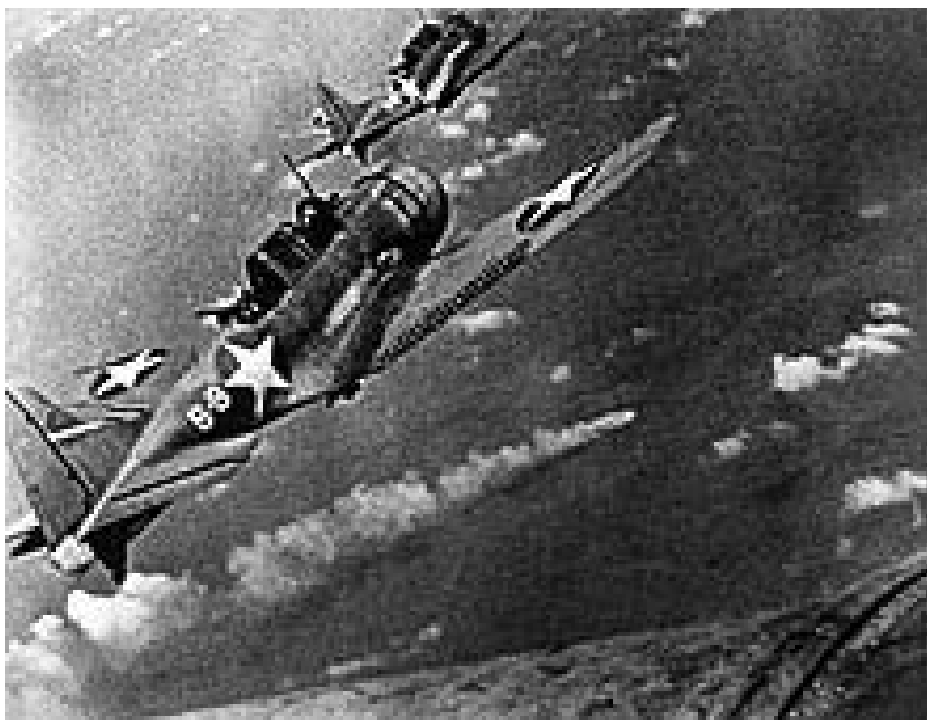
In May 1942 SHOKAKU and ZUIKAKU were sent to the Coral Sea to support the invasion of Port Moresby. This complex and often overlooked battle (The Battle of the Coral Sea [1]) went poorly for the Japanese. In the IJN's first meeting with the US carrier fleet they lost light carrier SHOHO on 7 May. On 8 May SHOKAKU was badly damaged by three 1000lb bombs. ZUIKAKU'S air component was shattered by American fighters and flak leaving both carriers incapable of operations. The Japanese invasion fleet withdrew making this the first defeat for the

IJN in WW2. In return, the Japanese sank USS LEXINGTON (CV-2) and damaged USS YORKTOWN (CV-5). The battle also highlighted deficiencies in Japanese anti-aircraft armaments. While the Type 89 5inch gun was respectable, the Type 96 25mm gun was inadequate and Japanese gun mounts were incapable of tracking fast moving targets.

After KAGA had rejoined the fleet, Kido Butai sortied for Midway, without Carrier Division 5. Unknown to Nagumo, he had lost both his numerical advantage (the damaged YORKTOWN was made ready for operations in just two days) and the element of surprise (the



SHOHO burning during Battle of Coral Sea, photographed by torpedo bomber pilot from YORKTOWN.



Douglas SBD-3 Dauntless dive bombers from USS HORNET attacking the burning Japanese cruiser MIKUMA.

USN had broken JN25, the Japanese Naval code). Nimitz positioned his three remaining carriers (Enterprise, Hornet and Yorktown) at "Point Luck", 325 miles northeast of Midway on June 2nd, ready to ambush Kido Butai. The stage was set for the largest carrier battle to date.

By June 4 Nagumo was 210 miles northwest of Midway. Between 0430 and 0445 the Japanese launched 108 aircraft (36 Vals, 36 Kates, 36 Zeroes) against Midway. Nagumo sent just seven search planes eastwards to search for US forces. As he was not expecting to find US carriers, his search efforts bordered on negligent. With a string of victories behind him Nagumo had become overconfident and fatally underestimated the Americans. Kido Butai had been located by a Catalina at 0530 and Midway immediately scrambled all available strike planes. The US carriers began launching at 0700 and in stark contrast to Kido Butai, took an hour to launch their strikes.

The Japanese strike overwhelmed the Midway defenders downing 15 fighters (mostly obsolete F2 Buffaloes) for the loss of only two Zeroes. Midway's facilities were badly damaged but Lieutenant Joichi Tomonaga (strike leader) requested a second strike at 0705. Commander Nagumo had kept a strike in reserve armed with anti-ship weapons and at 0715 ordered these aircraft rearmed with land attack ordinance.

From 0702 – 0830 Kido Butai was attacked by 4 waves of aircraft from Midway. Torpedo bombers, dive bombers and a high-altitude B17 attack kept the carriers in constant evasive manoeuvres which hindered the re-arming of the strike. At 0740 a scout plane reported US ships NNE of Midway. At 0745 Nagumo halted the re-arming and decided to land the returning strike before launching against the US carriers at 1030.

At 0815 the returning strike arrived overhead while US planes were still attacking. The strike was fully landed by 0920. Japanese deck crews rushed to re-arm the second strike back to anti-ship weapons. To speed up loading, bombs were not returned to the magazines but were stacked along the side of the hangar decks. At 0930 the first US carrier strikes arrived and Nagumo again had to perform evasive

manoeuvres to avoid American torpedoes. Thirty five out of 41 Devastators were lost for no hits. When the last of the US torpedo aircraft departed, the second strike was moved topside for launch. It was now 1022 and at this precise moment, more by luck than design, three squadrons of Dauntless dive bombers arrived overhead, unobserved by Japanese lookouts or CAP.

Over the next six minutes the Dauntlesses bombed AKAGI, KAGA and SORYU leaving them blazing wrecks. All three sank during the night. HIRYU escaped notice in a rain squall and immediately launched a strike against the US carriers. This strike landed three bombs on USS YORKTOWN. HIRYU launched a follow up strike which hit YORKTOWN with two torpedoes. YORKTOWN was finally sunk the next day by submarine I-168. HIRYU was attacked by dive bombers from YORKTOWN and ENTERPRISE at 1705 and suffered four direct hits. Damage control was seldom practised by the IJN and faulty procedures led to the loss of all four carriers.

At Midway, poor intelligence and Nagumo's indecision led to the Japanese being unable to attack the US carriers once they had been located. Lack of radar and effective fighter direction left the CAP at low level when the dive bombers arrived unobserved over the fleet. Ineffective anti-aircraft weapons and targeting systems failed to disrupt the American attacks. Sloppy munition handling turned the carriers into floating bombs and poor damage control procedures allowed fires to get out of control. HIRYU, the last carrier afloat, sank at 0820 on 5 June 1942.

Yamamoto's dire prediction had come true as Kido Butai was sunk just six months after Pearl Harbour. ■

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MARK 6: THE ROYAL NAVY'S FIRST TRUE DUAL-PURPOSE NAVAL ARTILLERY

By Jamie McIntyre

From the introduction of the first Torpedo Boat Destroyers (later shorted to Destroyer) in the late 19th Century, suitable main gun armament was always a balancing act. The weapons needed to be small enough to be safely operated on cramped, narrow decks and light enough to not compromise the top weight of relatively small, narrow hulls, but also able to deliver a sufficient weight of shell to cause damage to enemy vessels. The emergence of aircraft as a threat only exacerbated the situation, as Destroyers were too small to embark different types of single-purpose medium-calibre weapons like larger vessels and required main armament that could cover all threats. To be capable Anti-Aircraft (AA) weapons they also now had to be able to be trained quickly, elevated to high angles and with high rates of fire, all of which demanded compactness. During WW2 the major combatants all started out on different paths, some ultimately successful, some not so. This paper examines the development of the Royal Navy's 4.5" Mark 6 Gun.

INTRODUCTION

The United States Navy (USN) settled on 5in (127mm) as far back as 1911, although the six classes known as the "Flush Deck Destroyers" that entered service from 1914 had 4in (102mm). With the introduction of superb dedicated fire-control they arrived at a highly versatile solution that continues to this day in the 5in/54 Mark 45. The eight Light Cruisers of the Atlanta class, originally intended to be flotilla leaders, also had all-5in main armament, the first four having eight twin turrets and the last four reduced to six. This made them exceptionally capable AA ships, often protecting Aircraft Carriers in a role filled today by Aegis ships known colloquially as "Shotgun".

The Soviet Navy settled on 5.1in (130mm) for their Destroyers from 1935, in both single and twin mounts. Both types had reduced rates of fire at elevations higher than 25 degrees, severely limiting their AA ability. A twin mount with a maximum elevation of 85 degrees and a new 55 calibre barrel tailored to AA work was cancelled prior to production.

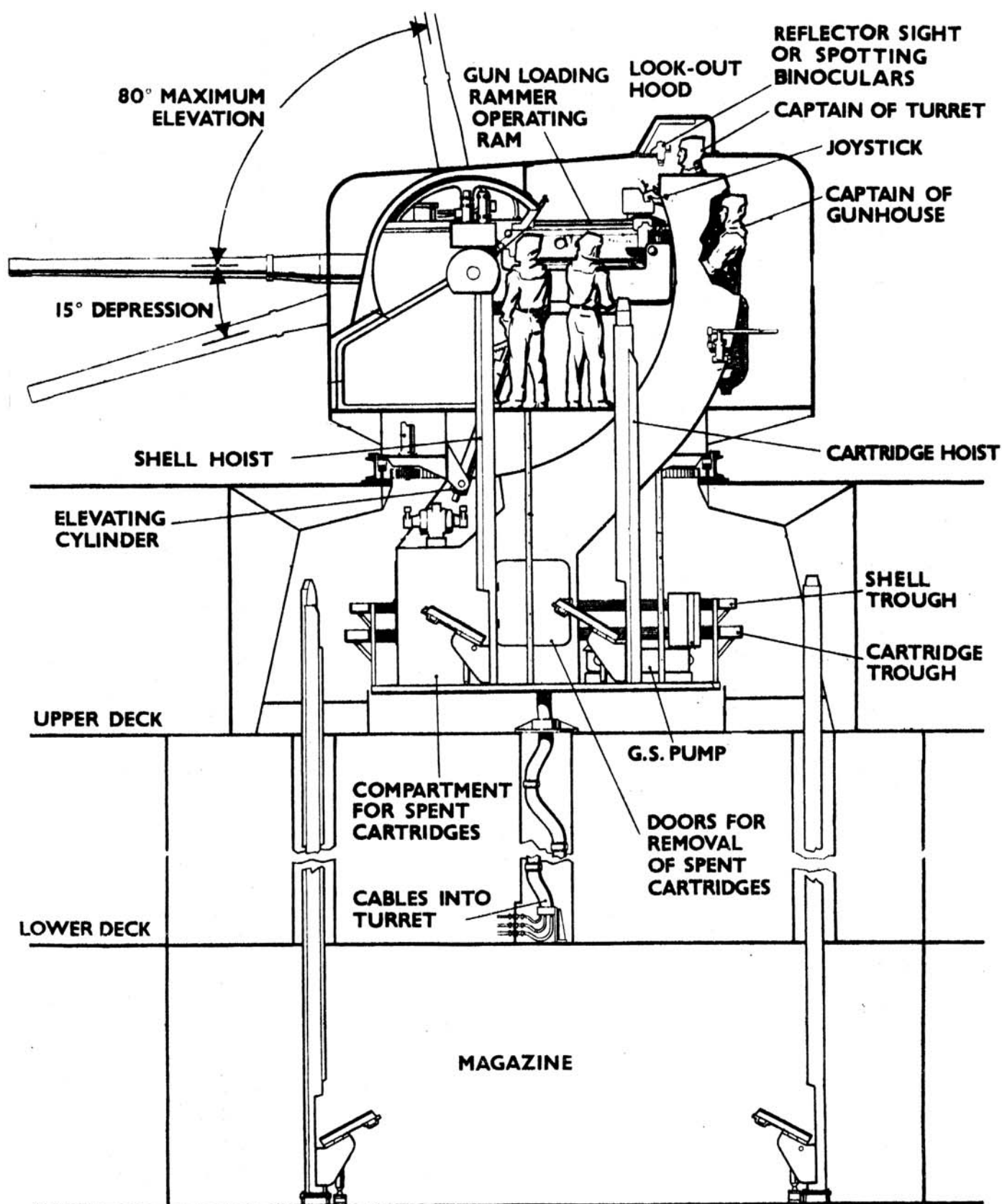
The German Kriegsmarine tried a different tack with their Type 1936A class Destroyers (often known as the "Narvik class"), using large 5.9in (150mm) guns normally fitted to Cruiser-sized vessels. Initially these were all single mounts, but once they became available twin mounts were fitted forward. These were too large and heavy to be truly successful Destroyer weapons, particularly AA, and the significant weight forward severely impacted seakeeping.

The Imperial Japanese Navy (IJN) initially started out with 4.7in (120mm), but after their severe disappointment with the 1922 Washington Naval Treaty changed to much larger vessels with 5in (127mm) guns. The enclosed turrets for Destroyers introduced in



4.5 Mk6 undergoing overhaul.

1926 offered protection from weather and shell splinters, and with a maximum elevation of 70 degrees were some of the World's first true dual-purpose gun mountings. But they were hampered by a slow rate of fire, as low as 5 rounds per minute (rpm) in some fittings, and were never tied to truly effective fire control. In contrast the 16 ships of the Akizuki class were originally intended to be AA ships (they eventually entered service from 1943 as general purpose vessels) and therefore had eight 3.9in (100mm) guns in twin mounts, with exceptionally fast training rates and the ability to elevate to 90 degrees. Tied to an excellent fire control system that for the first time included radar they proved remarkably capable in service, with the weapons actually besting the USN's 5in in AA range and rate of fire. But 3.9in was too small to be truly effective in anti-surface

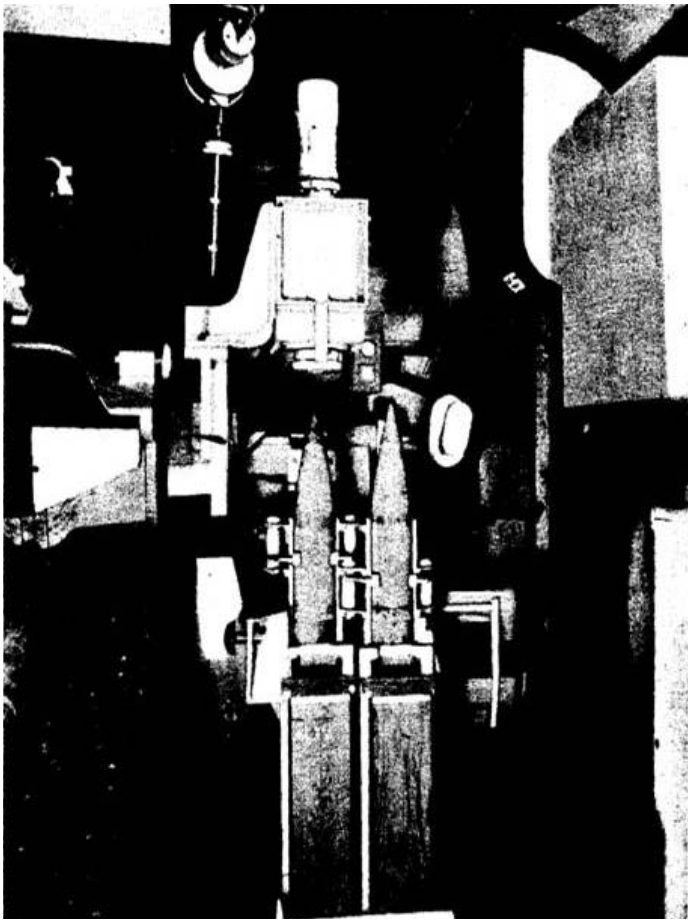


Left 45 Mk 6 Cleaned Up.

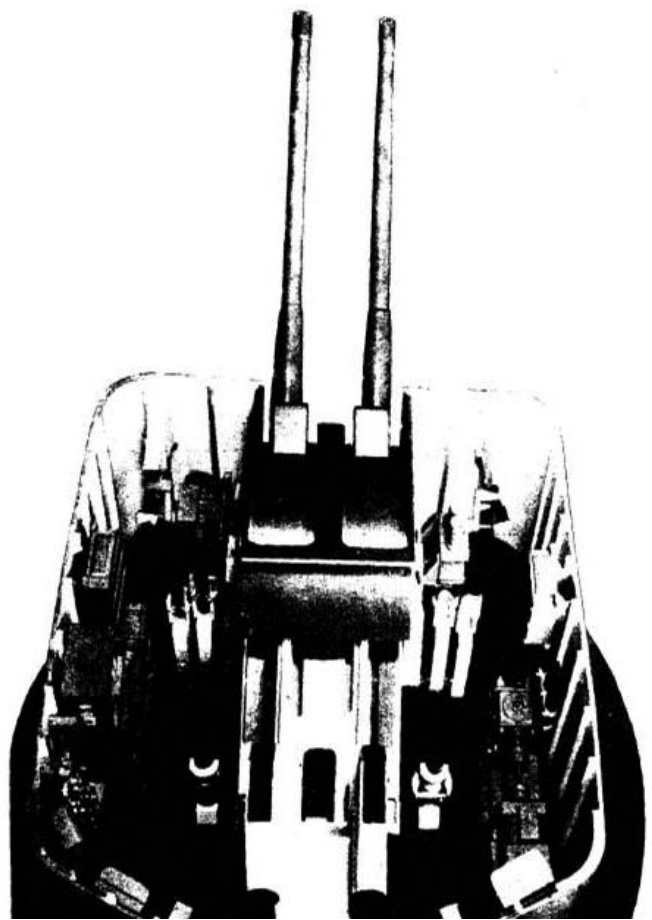
roles (although used to this day as the main armament of French warships), something compensated for by the IJN's unmatched torpedo armament and the predominate air threat posed to the IJN by that stage of the War.

INTER-WAR RN DEVELOPMENT

Starting with the Breech Loading (BL) Mark 1 gun in 1916, the main armament of choice for Royal Navy (RN) Destroyers (and therefore Commonwealth navies who also used these vessels) until mid-WW2 was 4.7in (120mm). This was determined by weight of the gun and



4.5 Mk 6 Mock Up Right Hand Side of Gun House, see De Jerseyr (1962).



4.5 Mk 6 with Gun Turret Roof Removed see De Jerseyr (1962).

its mounting, weight of projectile and rate of fire. But as the threat from aircraft increased, particularly dive bombers, these weapons were found to be lacking, with such issues as a maximum elevation of only 55 degrees, lack of dedicated fire control and manually set fuses. The W class Destroyers launched in 1943/44 were the last to feature 4.7in as the main armament, with the follow-on Z class using 4.5in.

In 1931 an experimental 5.1in (130mm) gun was trialled on a 4.7in mounting, but the fixed ammunition (shell and cartridge joined together) developed for it weighed far too much for manual handling on Destroyers. A maximum elevation of only 40 degrees meant that it would only ever be employable as an anti-surface weapon, again negatively impacting Destroyer usage.

In the mid-30's a much more versatile 4.5in (114mm, but RN versions actually had a bore diameter of 113mm) gun was developed, primarily as the main armament of Aircraft Carriers but evolving to become the AA armament of reconstructed WW1-era Battleships and Battlecruisers, new Cruisers and the main armament of Destroyers. This was determined as the largest calibre that could be used for a fixed round. The complete round for this weapon weighed 85lbs (38.6kg), as compared to 108lbs (49 kg) for the 5.1in gun. But again this would prove too heavy for sustained fire, particularly AA, and in action the rounds were even known to separate, furthering slowing firing rates. On the larger ships it would not be until post-War that much more efficient ammunition was adopted, with separate rounds and cartridges. The larger 5.25 in (133mm) Mark I gun used as dual-purpose secondary armament on the new-build King George V class Battleships and main armament on the Dido class Light Cruisers used separate ammunition from the start.

Luckily for Destroyers, experience aboard early Dido class Light Cruisers fitted with 4.5in guns whilst awaiting completion of

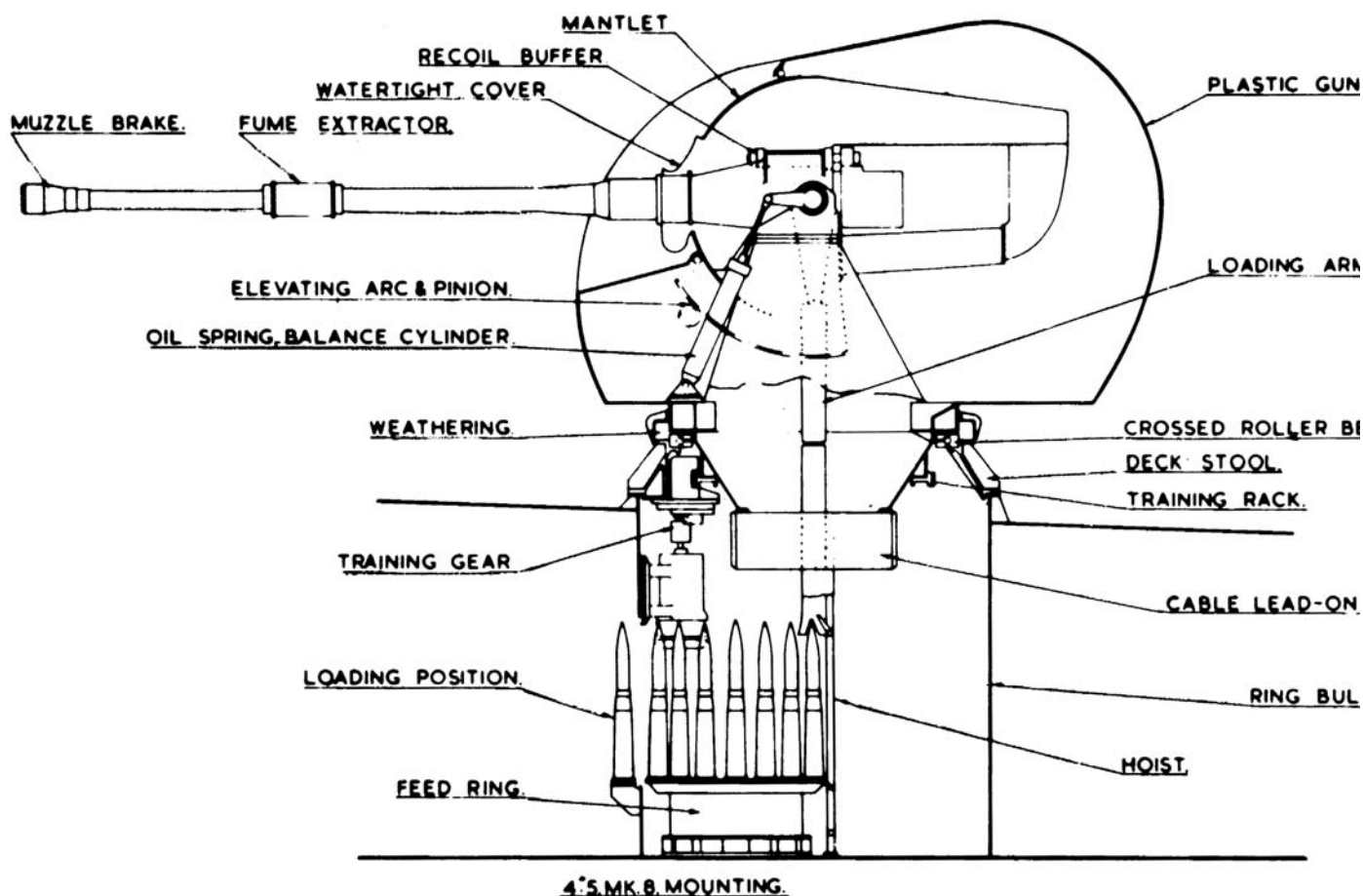
their 5.25in mounts had shown that fixed ammunition was far too dangerous to handle in rough weather, and they received 4.5in guns using separate ammunition from the start. Despite being smaller than the 4.7in it replaced the new weapon actually delivered a heavier projectile, with better ballistic properties and at a higher rate of fire. These proved so successful in service that 4.5in remains the main armament of RN Destroyers to this day.

POST & WW2 DEVELOPMENT

In the 1950's RN weapon system designation nomenclature changed, for artillery from being per the gun itself to being per the mounting the gun was used in. At the same time, arabic numerals replaced roman numerals. So 4.5in/45 Quick Firing (QF) Marks I, III and IV became Marks 2, 3, 4 and 5.

In 1944 a new mount was developed using two 4.5in/45 QF Mark IV guns. From the outset this featured high elevation, Remote Power Control (RPC, where the guns automatically train and elevate to the target, following the director) and a fast rate of fire. Entering service on the Royal Australian Navy's (RAN) Modified Battle class Destroyers HMAS ANZAC (D59) and HMAS TOBRUK (D37) in 1947, with the change this became the Mark 6.

The mount had many novel features, including extensive use of welding (a first for the British), loading trays and rammers. Ammunition was supplied by two magazines, each with a separate shell hoist, one for AA and one for High Explosive (HE)/Semi-Armour Piercing (SAP). A third hoist supplied the cartridges. This automation was expected to deliver 24 rounds per minute (rpm) per mount, but the ramming mechanism proved to be overly complex and prone to faults. For this reason, most gun crews relied upon hand-loading, a practised crew being able to maintain 12-14 rpm for long periods or 18 rpm in short bursts. In action there was a blur



Right 45 Mk 8.

of constant motion, with the rear number on each gun loading the brass cartridge onto the loading tray, the front number loading the shell itself and then the rammer driving both into the breech before the gun rocked back in recoil on firing, ran forward, the smoking cartridge was ejected and the process was repeated. Used in this manner the mounts proved highly reliable and easy to maintain.

Visually the mount was quite boxy, with a sloping roof and rounded corners. There was a raised cupola at the right rear with thick glazing for observation and local control if remote fire control was lost. The rear of the mount had angled corner plates, with a gas-tight door in each, the left hinged to the side for personnel use and the much smaller right hinged at the top for material transfer. Sealable ventilation ports were fitted above each door. A straight plate in between had two riveted circular plates high up, to allow the guns to be fitted or removed. A ladder was fitted inboard of the right door for access to the roof, and grab rails ran from just outboard of the gun cut-out right around to the centre of the rear plate. The roof had non-slip matting over much of its surface, and on many mounts a tall, thin High Frequency (HF) whip aerial was mounted on a small box at the rear centre of the roof. Various-sized riveted panels (with in-built handles on Australian-built versions) on the front & sides of the mount allowed access to the internals for maintenance. Ring bolts were fitted in the centre of the rear straight plate and to the left and right of the gun cut-out. Both guns were quite close together, only 38 in (96.5cm) apart, inside a rectangular cut-out. Later on small radar domes of various types appeared above the barrels, to measure muzzle velocity for the fire control system. When not in use the barrels were protected by screw-on end caps, kept highly polished and usually featuring the ship's crest on the face. Barrel cleaning rods were kept secured to brackets on the supporting structure underneath the mount, both barrels being meticulously cleaned after firing to prolong life.

THE MODERN ERA

The whole mount weighed 98,560 lbs (44,706 kg), and sat in a ball-bearing race in the deck, kept well lubricated for easy training. It was not secured, kept in place by its own weight, the aim being that if the ship suffered battle damage and was listing the mount/s could fall away freely to assist reducing top weight to right the ship. It was quite a sight to see the mount rocking about independent of ship's movement in heavy seas! In extreme weather, with waves breaking across the bow, the mount would be trained aft to avoid waves striking the barrels and skewing the mount sideways.

Elevation was from -15 to +80 degrees, with an elevation rate of 25 degrees per second via hydraulic rams. Training was usually about -150 to +150 degrees, dependant on adjacent superstructure, with a train rate of 25 degrees per second. Average muzzle velocity was 2,350 feet per second (716 metres per second), and barrels could last up to 650 rounds before requiring replacement. Range with a



HMAS VAMPIRE (D11) Twin 4.5 Mk 6 Mounts - AMM.



4.5 Mk 6 at Spectacle Island Navy Heritage Collection.



HMS YARMOUTH (F101) in the Falklands War 1982 during which she fired over 1000 shells from her 4.5 Mk 6 mainly on shore bombardment (NGS).

55lb (25kg) HE shell at 45 degrees of elevation was 20,750 yards (18,970 m), and AA ceiling at 80 degrees of elevation was 41,000 feet (12,500 m). At 10,500 yards (9,600 m) a 55lb (25kg) SAP shell could penetrate 2.5in (6.35cm) of armour plate if struck perpendicularly.

Apart from the aforementioned RAN Modified Battle class Destroyers (two mounts), the Mark 6 was also fitted to Daring class Destroyers (three mounts), County class Destroyers (initially two mounts, one mount later removed and replaced with four Exocet Surface-to-Surface Missile launchers), Type 12 Anti-Submarine Frigates (one mount, includes foreign derivatives such as the Dutch Van Speijk class and Australian River class, although on the former it was replaced by an Italian OTO-Melara 76mm gun during modernisation in the late '70's), Type 41 AA Frigates (two mounts) and Type 61 Aircraft Direction Frigates (one mount).

The follow-on Mark 7 was intended to be fitted to the Lion class Battleships and Malta class Aircraft Carriers, but the cancellation of both meant that it was never put into production.

In 1966 the Mark 8 mount was developed to replace the Mark 6, a semi-automatic unmanned mount with a single 4.5in/55 gun capable of firing 25 rounds per minute. The first ship to be fitted was the Iranian Frigate ZAAL (F72), later renamed ALBORZ, in 1971, followed by the RN's sole Type 82 (corrected) class Destroyer HMS BRISTOL (D23). The Mark 8 remains in service with the RN to this day aboard the Type 23 Duke class Frigates and new Type 45 Daring class Destroyers, with new "stealthy" gun houses.

POST MODERN DEVELOPMENT

In the Falklands War of 1982 the Mark 8 proved to be much less reliable than the old Mark 6 during NGS operations, with the Type 21 Amazon class Frigates forced to cease fire on multiple occasions due to faults whilst the County class Destroyers and Type 12 Frigates kept pounding away with their trusty Mark 6's. So successful were NGS operations in the Falklands that plans to convert all ten Broad-Beamed Type 121 / Leander class Frigates to Batch 3's by replacing their Mark 6 mounts with Exocet and Seawolf Surface-to-Air Missile launchers were halved to only five hulls, and the four Batch 3 Type 22 Broadsword Frigates had a Mark 8 fitted forward.

The last remaining Mark 6 mounts at sea are aboard the Ecuadorian Navy's two ex-Chilean Condell class Frigates, derivatives of the Type 121 / Leander class acquired from Chile in 2008.

Today there are many Mark 6 mounts preserved, including 3 in situ aboard the Daring class museum ship HMAS VAMPIRE (D11) in Sydney. The gate guardian at the RAN's West Head Gunnery Range in Victoria was previously used at the gunnery range as a live training aid, last fired in 2005.

Whilst not the World's first truly effective dual-purpose naval artillery, the Mark 6 definitely was for the Royal Navy, and provided unheralded capability to that service from 1947 to 1993 and to many others around the world even to this day. ■

COMMENT, by Thunderer (senior RN Weapon Engineering Officer (Rtd.)):

A minor technical error in this article is to call HMS BRISTOL a Type 81 (she was a Type 82).

In terms of numbers, I make it over 140 fitted (93 UK, 19 to RAN and balance of 28 to Netherlands, RNZN, Chile, India and South Africa).

The second half of the Leander Batch 3 was not converted to Seawolf – it was cost/effectiveness over life remaining, given that the T22 class were then coming out in numbers.

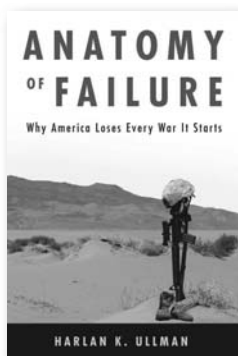
The author may have been more critical of the Mk 6 – it was only an indifferent AA weapon, with sloppy RP40 and 41 RPC drives, especially the elevating ram; requiring divided reset and usually having problems with the hydraulic shrink fit couplings of the power drives.

Other countries had much better AA weapons, and it is useful to note the generic similarities between the later UK Mk 8 and the USN Mk 45, single barrel, slower feed weapons. In most cases the RN fooled itself with very non-taxing Rushton practices.

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Anatomy of Failure

Why America Loses Every War It Starts

Harlam K. Ullman

Naval Institute Press (15 November, 2017)

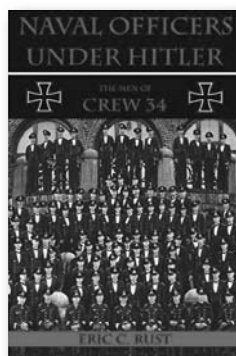
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Hardcover: \$40.00

Ullman is a sailor and warrior-scholar who saw distinguished active service in Vietnam and at sea, where he exercised command and critical thinking under fire. The two are inseparable. Why is this important? Because increasingly those who provide political advice and politicians themselves are drawn from narrow professional elites who have never led in action and seen what war looks and smells like first hand. Do they need to have done so? No. But they need to be able to listen and they should have done something other than being polities, before being polities. This is not the same as being surrounded by Special Forces and donning bomber jackets.

This is an extremely important book and should be core reading for all those working in Defence and security and making and taking the decisions necessary to guide our nations through this period of radical uncertainty. Ullman's book is timely, prescient and sadly almost out of time – too late even? Too late because the lessons we need to have learned we need to have learned yesterday. Nevertheless Ullman's key point is to learn from failure – not so much at the operational and tactical level – which we have proven good at over the past 73 years since the end of WW2 – but at the strategic level, where our failures have been manifest. Including in Vietnam, Iraq, Afghanistan and on Iran and North Korea. Ullman identifies the notion of “black holes” not as a matter of physics but also strategic black holes. He considers three black holes in the West's thinking – and that of the US: a disconnection between aims, means, ends, strategy and policy; a failure to deal with Russia's “active measures”; and a failure to avert a “hollow force”. Ullman might be right in his identification of the black holes – noting the absence of China – but not the order. If strategy is an emergent property; then it may be necessary to create designs and builds that will avoid the hollow force; then address Russian “active measures” as a by-product from a position of strength and magnanimity. And finally to address the first Black hole, that of thinking strategically, which will emerge in any case by re-vitalising the force. This is a must read and a good read.



Naval Officers Under Hitler

The Men of Crew 34

Eric C. Rust

Naval Institute Press (15 November, 2017 (1991))

ISBN-10: 1682472316

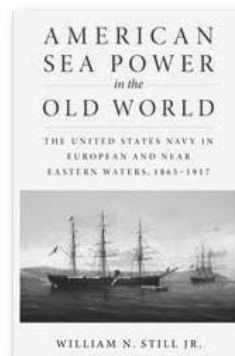
ISBN-13: 9781682472316

Paperback: \$32.50

A post war child born in Lübeck, Germany, in the early 1950s Rust served in the Bundesmarine between 1969 and 1970, before completing his academic studies in Canada and the U.S. and earning his Ph.D. from the University of Texas in 1987. The Bundesmarine or West German Federal Navy existed between 1956 and 1995, when it became the Deutsche Marine (German Navy).

This is a poignant book of service to the sea, of challenge and comradeship in defeat. It is also one of rebuilding and snatching the phoenix rising from the ashes of a Germany destroyed by fire. Rust rightly addresses the story through the facts spoken by military records, and those by the crew members themselves. He is guided by two precepts: that of Thucydides who warns chroniclers “against seeking to please the ear rather than speak truth”; noting that most facts in the lapse of ages have passed into the region of romance”. And Michael Salewski's considered opinion of the naval officer corps, that “the consequence of 1918 was the trauma of 1918; the consequence of 1945 was pride in the deeds of 1945... [for which] they expected applause”; noting “that most facts in the lapse of ages have passed into the region of romance”. As if all before 1945 did not exist and there was no need to take themselves to task. Rust looks beyond this to understand not simply why the Crew 34 fought in the way they did, but also their rationale – as he states: “whether the survivors care to admit it today, [they and their Navy] also embarked on a long flight from reality”.

First published in 1991 as the Soviet Union and Cold War came to an end, and republished in 2017 this is an important book. Bookending not simply the lives of Crew 34 – of whom very few now remain alive – but also the period 1992-2018. An age in which the West has similarly encountered global strategic and operational failure on a political, security and economic scale. It is all too simple for the warriors of yesterday – those who have served in 2002, 2003, 2013, 2017 – to take pride in the way they fought in those years; rather than to look to the failures before; during and afterwards. Unlike previous wars since, perhaps, the U.S. / French Revolutionary and Napoleonic Wars (1765-1815), this is now an intergenerational conflict we are involved with. Parents are now handing over to their children to continue the fight in the very same places they fought in, in 2002, 2003,... Rust does us a service by causing us to think through the minds of this remarkable crew and, through the narrative, to ask ourselves “what did I fight for, and was it worth it?” A remarkable contribution, as compelling today as in 1991.



American Sea Power in the Old World

The U.S. Navy in European and Near Eastern Waters, 1865-1917 William N. Still Jr

Naval Institute Press (15 February, 2018 (1980))

ISBN-10: 1591146186 ISBN-13: 9781591146186

Paperback: \$32.50

The Mediterranean, as with the Commonwealth (British Republic) Navy in the 17th Century (under Blake) and the U.S. Navy in the early 1800s, played a key role in defining the fledgling maritime nations in their initial forays, both against the Barbary Pirates. Plus ça change... Still is a maritime historian who served in the U.S. Navy between 1954 and 1956 and has written widely on the Confederate and U.S. Navies. The dates are therefore significant, 1865-1917, since they begin with the end of the U.S. Civil War (13 May 1865) and end effectively with the U.S. entry into World War I, 6 April 1917. It is not as if the U.S. Navy ever went away – following its forays into the Mediterranean after Independence – but more so that its exercise of sea power from 1864 onwards set the bases for the American Century, which can perhaps now be described as being between 1917 and 2016? This is an important book. Although first published in 1980, it considers many of the same places where the U.S. Navy is still patrolling, and maintaining a presence – including its early relationships with Turkey and the North African states, and with the Palestine and Syria. There is also something of poignancy about the book – of a time of innocence at the heyday and end of the British Century, 1815-1914, and before the pending nightmare of WW I. This is an important book of an old world now barely glimpsed as, perhaps, we sculpt a new one.

STATEMENT OF POLICY

For the maintenance of the Maritime wellbeing of the nation.

CURRENT AS AT 1 APRIL 2018

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, and the shipping and transport industries.

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. 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 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.
 - Welcomes the 2016 Defence White Paper and the Government intention to increase maritime preparedness and gradually increase defence expenditure to 2% of GDP.
 - 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.
- 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 concept of a Navy capable of effective action in war off both the east and west coasts simultaneously and advocates a gradual 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 general area.
 - 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 escort requirements of our 5 new major warships 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 on completion of the current guided missile destroyer program.
 - 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 12 new conventional 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.
 - Supports the efforts by Navy to rebuild the engineering capability to ensure effective Fleet maintenance and sustainability.
 - 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 Naval Reserve and Australian Navy Cadets organisation.
 - Advocates a strong focus on conditions of service as an effective means of combating recruitment and retention difficulties.
- 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.
 - While recognising budgetary constraints believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.



THE NAVY LEAGUE OF AUSTRALIA ANNUAL MARITIME AFFAIRS ESSAY COMPETITION



TOPICS

- 21st Century Naval Warfare
- Australian Naval History
- Australian Industrial Maritime Strategy

CATEGORIES

A first, second and third prize will be awarded in each of two categories:

Professional category, which covers Journalists, Defence Officials, Academics, Naval Personnel and previous contributors to *THE NAVY*; and **Non-Professional category**.

Essays should be 2,500-3,000 words in length and will be judged on accuracy, content and structure.

PRIZES

	1ST PLACE	2ND PLACE	3RD PLACE
Professional	\$1,000	\$500	\$250
Non-Professional	\$500	\$200	\$150

Essays should be submitted in Microsoft Word format on disk by;

Post to:

Navy League Essay Competition
Box 1719 GPO, SYDNEY NSW 2001

OR

Emailed to: editorthenavy@hotmail.com

Submissions should include the writer's name, address, telephone and email contacts, and the nominated entry category.

DEADLINE

Saturday 25 August 2018

Prize-winners announced in the January-March 2019 Issue of *THE NAVY*.



HATCH: HATCH - USS GERALD R. FORD (CVN 78) Commissioned by President Trump October 2017.



RE-MATCH: USS FITZGERALD (DDG-62) arriving in Pascagoula, Mississippi, 19 Jan 2018 for repairs.



DISPATCH: HMS OCEAN (L12) to be decommissioned and plans to 'scrap' HMS BULWARK (L15), HMS ALBION (L14) and 1000 Royal Marines in 2018 by UK MOD to 'save' HMS QUEEN ELIZABETH (R08).