

# The deterrent value of submarines

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I've been asked to talk about submarines and deterrence today. I suspect I'm preaching to the choir with this crowd, but I think there are some points still worth making. For those of you who ate too much lunch and are about to nod off, here are my three take home points:

1. Our submarine capability is sufficient to have a strong deterrent effect on other middle powers.
2. Deterring a determined nuclear weapon power requires a nuclear weapon capability. A conventional response can only get you so far.
3. If we're serious about having a deterrent submarine force, the timetable for construction and delivery of the future boats needs to be brought forward.

Let me unpack those points. The first, I think, isn't terribly controversial. The ultimate responsibility of government is to be able to protect Australia's sovereignty, which is why we have an ADF in the first place. Given our strategic geography, the ocean is our first line of defence. Australia's naval power is limited by the size of the population and economy that has to support it, but it's pretty capable. I can't think of any comparable countries that do better than we do at fielding top end capability. In fact, running my eye over orbats, in broad terms I think we'd be able to at least hold our own against all but the P5 nations (all of whom are nuclear armed, and so don't fit into this category anyway) and the largest of the economies outside that group—Japan. And I don't think Japan's naval capability is any better than ours, but they substantially outnumber us and thus would wear us down through much greater capacity. The same is probably true of India as well, or will be in the not too distant future.

But of course, planning our future defence force isn't as simple as looking at other orbats and fretting if we don't overmatch them. There's no sensible reason to worry about Japan or India—both of whom are more likely to play the role of security partners rather than potential adversaries. In fact, there's no immediate reason to worry about any non-nuclear power in terms of potentially coming to blows. If it wasn't for major power tensions the wider region would be looking pretty good. (Of

course, that's a bit like saying "other than that, Mrs Lincoln, how was the play"? but stick with me.)

I'll come back to those major powers later, but the fact that today's situation is pretty benign doesn't mean that we don't have to give some thought to possible futures where that isn't the case. If for no other reason than geography, we'll always have to watch developments to our immediate north. When I joined Defence back in 1993, I don't think anyone would have predicted Indonesia's future political evolution. We should be thankful for the way that things have turned out in the past 15 years. After all, the two countries came to blows in the 1960s, and there were heightened tensions over East Timor in the 1970s and again in 1999. As things look now, it would take supreme incompetence on the behalf of both parties for us to come to blows again, but Defence planners have to be glass half empty types. Political trends aren't always benign, and future developments could take us back to a place where our interests come into conflict.

Taking that pessimistic view, the future holds some challenges in guaranteeing our security. Economic trends suggest that our region will continue to grow faster than we will. One consequence of that is that any current advantages we have in capability and/or capacity will be eroded, so we can't count on always having the upper hand in a symmetric conflict. So we need to think about what we'd need in the way of asymmetric capabilities in order to be able to take it up to a capable conventionally armed adversary, be it a future Indonesia, or some other country that looks harmless at the moment.

As you're all aware, one of the best asymmetric platforms is the submarine. Stealth is a powerful asset, and the ability to be able to credibly threaten an adversary even close to their own bases brings a disproportionate benefit compared to investments in less covert platforms. It's also likely to prove to be a more enduring benefit. This is probably a reasonably safe place to be critical of surface combatants—so I will. While there is a legitimate argument to be had regarding the relative efficacy of ship borne defences versus anti-surface capabilities, it's hard to look at the evolution of anti-access and area denial capabilities and not come to the conclusion that being tethered to the surface is a more tenuous existence than it used to be. When facing a capable adversary, the surface hasn't been a great place to be in a serious war since the invention of the submarine and aeroplane. Add homing ballistic missiles and hypersonics to the mix and it's not where we should be looking for bang for the buck.

That advantages of submarines have always been attractive for nations looking for an asymmetric advantage in naval warfare—even a modest submarine capability can have a big impact. The Falklands War is a great example. The RN put in a big ASW effort, but an ageing Argentinean submarine managed to evade detection and but for a poor piece of torpedo maintenance, could have turned the war against the much superior power, despite their SSNs and aircraft carriers.

That said, it's also true that developments in unmanned sensors will make life under the water more difficult. It's possible that the day will come when ASW overmatches submarines. I frequently hear comments about the declining value of stealth in the context of air combat, and from time to time you see something about the oceans becoming 'transparent', with the implication that finding submarines won't be as hard as it has been in the past. I always reply to such comments with the argument that being hard to see is always going to be better than being easy to see. That means that it's always going to take more effort, and a more sophisticated effort, on the behalf of the adversary to deal with stealthy threats than with overt ones. It's hard to see the middle power nations of our region decisively cracking the ASW problem any time soon, even as they line up to buy potent anti-surface weapons from willing Russian and Chinese vendors. It's likely that cost-benefit considerations would stop us investing in complex surface vessels long before we stop buying submarines. And our submarines will continue to provide a potent deterrent to military action against Australia by anything but a major power.

Major powers present a very different calculus. And in this context we're really talking about China. I suppose we can't entirely rule out having a problem with Russia down the track, but even they would have out compete China to credibly threaten Australia's direct interests. But there's no doubt that the rise of China presents Australia with its most serious strategic challenge for the first half of this century. That seems to be the consistent assessment of Australia's intelligence agencies, as reflected in defence white papers, which I'll run through later.

The big competition in our part of the world is between two nuclear armed states in the form of the US and China. We can play a role in shaping the way in which that competition plays out, even though both of those powers field so much military capability that our contribution can't ever be pivotal if they ever come to blows. If we're thinking about a potential future war with a regional middle power, we can realistically think about the significant warfighting impact that our submarines could have by attacking surface vessels and possibly even critical land targets such as critical C4ISR nodes. They can still do those things in a major power conflict, but ultimately we're not going to tip the balance. A couple of forward deployed Australian submarines won't act to deter a country that has a fleet of over 70 modern boats—and which hasn't been deterred by the USN's SSNs, or the threat of nuclear escalation.

But that doesn't mean that there's no point in persisting with our submarine acquisition. Far from it. I think it makes good sense. But it's worth understanding the logic behind it. If we seriously worry about Chinese ambitions and want to have a credible deterrent, we need enough conventional force to make the costs of a conventional war unpalatable, and we need a back up of nuclear weapons in order to counter a nuclear threat. The key observation is that having an ally engaged in the

region that has significant conventional and nuclear capabilities is the easiest way to achieve deterrence.

And that's the crux of successive defence white papers. The 2009 and 2016 papers reached the same conclusions—Australia's best strategy is to keep the US strongly engaged in the Asia–Pacific region, and the best way to do that is to be a more robust and capable ally. By investing more in our own capability, we simultaneously add to total alliance power and take the argument about freeloading allies off the table in Washington. In that context it's worth noting that the incoming President criticised Japan and South Korea as net takers of security, but has been much less inclined to criticise Australia. So we seem to have fooled them so far.

But far from being reassuring, there are some worrying aspects to that. We need the US around to deter major power aggression, and have decided that our chance of doing that is enhanced by building our own military power in an interoperable framework. But the chances of that strategy working are greatly enhanced if other allies are pulling in the same direction. Japan in particular struggles with spending more on defence, and while there's a long way to go before we know what the Trump Pacific security policy will look like, there's likely to be continuing tension between Washington's expectations and Tokyo's response. That can only reduce the chance of us getting what we want from the US in terms of underwriting regional security. Last century we saw our major ally the UK move 'west of Suez'. At some stage this century the 'east of Hawaii' strategy might become appealing for the US as the costs of contesting the western pacific become too high.

Australia having more and more capable submarines can only help, but we might also need to have a think about a plan B. In fact, there's a reading of history that suggests that there's a credible way for Australia to keep the US engaged in our immediate region, even if it retrenches from the north Asian region. I've spoken about this before at the SIA 2011 conference, so I'll just paraphrase it here. Twice in the past the US has weighed up its power relative to northern Asian powers and found it wanting.

The first was when it first started flexing its muscles as a global power, just after the turn of the 20th century. After examining the prospects of competing with a Japan that had just defeated the Russian navy, the conclusion that Mahan came to was that the western Pacific should remain Asiatic. He concluded that Australia provided a critical link for American seapower in the Pacific. The second time, of course, was in 1942, when the US had been driven out of the Philippines and was reduced to sporadic hit and run raids in the western Pacific. Australia became a critical hub for American naval power until bases could be re-established further north. So even if the US gives up on north Asia and its allies there, all is not lost for Australia. And the more capable our own forces are, the more appealing a joint posture with the US will be for Washington.

The conclusion is that building up Australian naval power to reinforce the alliance makes sense if our goal is to keep the US engaged in the region—either in the broader sense, or as a fallback option should the US opt out of the hotter region to the north.

Our worst case scenario is a total US disengagement from the region, including Australia. In that case a more capable ADF is a necessary response. We would need to invest in those capabilities that are capable of doing the most harm to even a capable major power. Taking them on head to head would make little sense, so we're back to asymmetric capabilities like submarines. And, ultimately, if we were feeling sufficiently threatened, we would also need to worry about a nuclear deterrent, and about robust delivery mechanisms. Submarines might be important in that respect as well.

So I think I've convinced myself that more and better Australian submarines are a good idea. At the very least I've convinced myself that they present better value than some of the other things we're likely to spend big on. But there's one aspect of our submarine plan that still vexes me—the timetable for delivery. To explain why, let me give you a preview of an argument that I expand on in a paper I just submitted to the new Australian Naval Review journal.

I see a fundamental disconnect between the strategic assessments and capability conclusions reached in the 2009 and 2016 white papers. They were unambiguous—Australia needs more naval capability to deal with strategic changes that are already taking place and to reinforce the ANZUS alliance. Both the Rudd and Abbott/Turnbull governments have accepted that logic (though only the latter have so far been willing to fund it.)

But strategy isn't the only driver at work. There is also a substantial influence of the politics of shipbuilding jobs, which we've seen impact on the future submarine program in a couple of ways—first to force a CEP upon the process, and then to effectively mandate a local build. Mind you, it wasn't entirely a negative. I think the Abbott government's pre-CEP solution would have been difficult to implement effectively, and at least the politics of South Australia finally forced some real progress in naval shipbuilding projects.

But defence capability decisions should be driven by strategy rather than industry. There is a tension between strategic urgency on one hand, which argues for a short- to medium-term buildup of fleet capability, and the need for a long-term industry solution on the other, which necessarily has an eye on the longer term. The basic problem is that a sustainable industry needs a steady flow of work. Peaks and troughs in demand, which are typical of a project based approach to production scheduling, complicates the management of critical skills.

The ideal situation, at least from the point of view of maintaining a steady state industrial capability, is a continuous workflow, with concurrent building and design work. It is relatively easy to see how that works on the building side. A model in which the navy retires one vessel as a new one is delivered allows continuous production, and a steady-state workforce. But there are at least two complications with that model. First, if steady production is the goal, the fleet needs to be large enough for the lifetime of vessels to be long enough to to achieve a reasonable return on the capital invested in the assets before replacing them. Second, if the aim is to sustain an end-to-end capability, there needs to be enough design and production engineering work to keep that professional workforce gainfully occupied. In other words, there is a critical mass of both vessel numbers and types required in order to be able to support an efficient industrial arrangement.

The future submarines are a case in point. As I argued earlier, doubling in the size of the submarine fleet is a logical military response to shifts in regional power. But we won't see the fleet grow beyond its current size until sometime in the late 2030s, and the 12th future submarine will not be delivered until the late 2040s. In the meantime, some of the Collins boats will be still going around in the second half of the 2030s.

Let me recap. Australia is worried about strategic developments in the Asia-Pacific now. And we think that a larger and more capable surface combatant force and 12 new submarines is an appropriate force structure response. But, because of a desire for a sustainable naval shipbuilding sector, we are prepared to wait 30 years to put that force in place. That is an obvious disconnect in our national strategy. If we really need to spend tens of billions of dollars on new naval platforms to hedge against the strategic challenges that we see coming, then we need to do it on a suitable timescale. On current trends, the strategic competition we are hoping to influence will have played out—one way or another—before we have the hardware we think we need.

And that's not just my view. It's the view that Australian governments have come to based on inputs from their intelligence agencies. Let's look at the assessment of the US-China military balance in the past three substantive Defence White Papers.

#### DWP 2000

China, as the country with the fastest growing security influence in the region, is an increasingly important strategic interlocutor for Australia.

#### DWP 2009

In Northeast Asia, China is likely to be able to continue to afford its foreshadowed core military modernisation. Over the long term, this could affect the strategic reach and global postures of the major powers. There are many potential strategic scenarios that could emerge. Any future that might

see a potential contraction of US strategic presence in the Asia-Pacific region, with a requirement for allies and friends to do more in their own regions, would adversely affect Australian interests, regional stability and global security.

## DWP 2016

While China will not match the global strategic weight of the United States, the growth of China's national power, including its military modernisation, means China's policies and actions will have a major impact on the stability of the Indo-Pacific to 2035.

China's Navy is now the largest in Asia. By 2020 China's submarine force is likely to grow to more than 70 submarines. China also possesses the largest air force in Asia, and is pursuing advanced fifth-generation fighter aircraft capabilities. China's military modernisation includes more-capable Special Forces, aviation and command and control networks and it is also investing in new technologies including space and cyber capabilities.

So, in just 15 years between the development of the 2000 and 2016 white papers, the Australian assessment of China's increasing capabilities went from being almost incidental to having 'a major impact' on the region's stability in the next two decades. The dates included in the DWP 2016 discussion are especially relevant to this discussion. The authors of the White Paper worry about the stability of the Indo-Pacific in 2035—which might be just after the first of Australia's future submarines has been commissioned, and still 15 years before the fleet will reach the 12 boats currently planned. Meanwhile, the PLA-N will likely have 'more than 70 submarines' just four years from now.

So let's get serious. A larger fleet of more capable submarines allows us to retire strategic risk. They would provide us with a potent deterrent against middle powers. They would help us be a capable and credible ally to the US, and thus lower the costs to the US of remaining deeply engaged in our region. Our best judgement is that the next 20 years could be a critical time for the major power balance in our region—so why aren't we more exercised about getting our submarines faster?