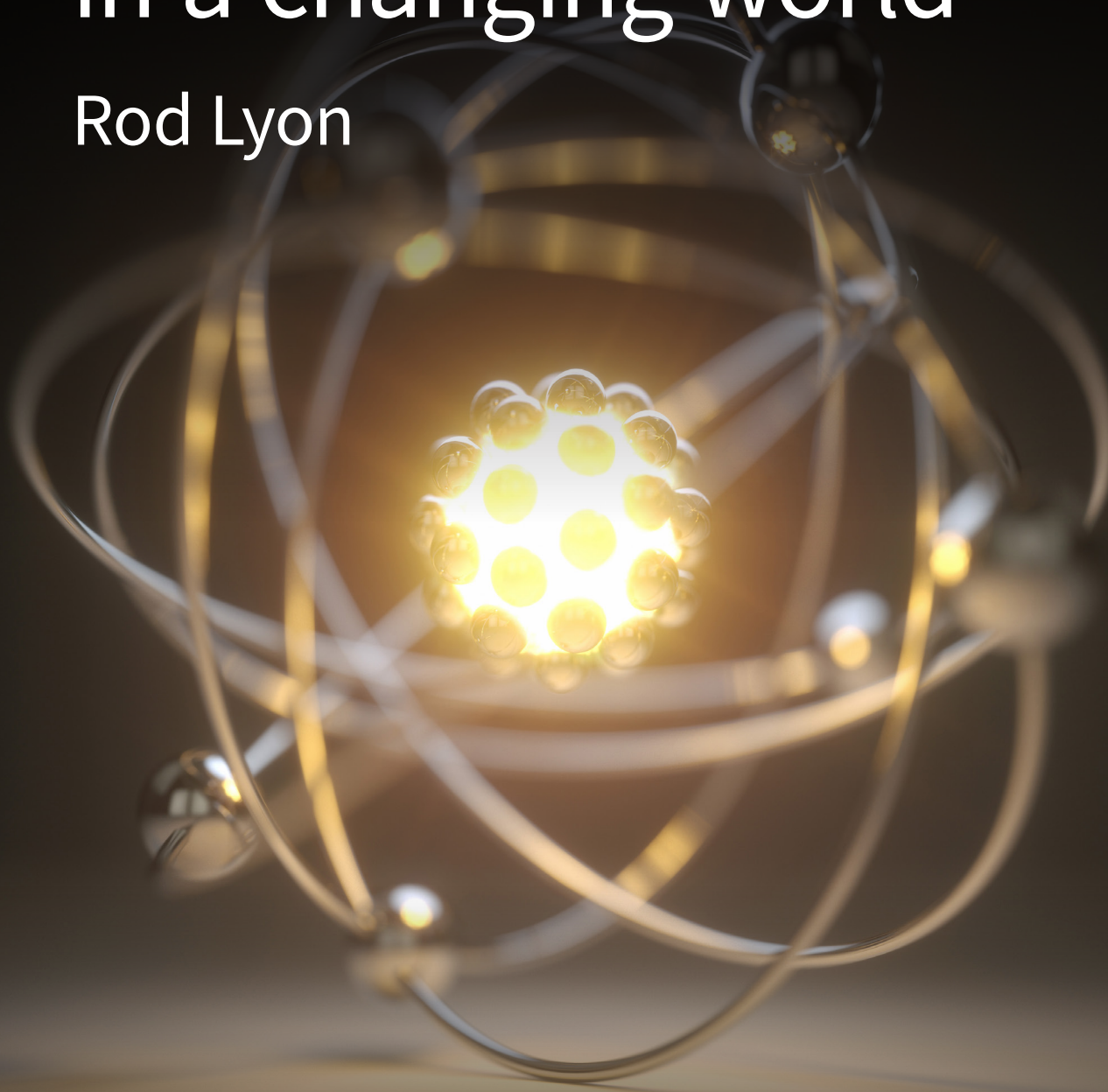


Nuclear strategy in a changing world

Rod Lyon



The Strategist Selections

Issue 2, October 2019

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About the author



Rod Lyon has worked at ASPI since late 2006, publishing an extensive range of papers and, after the creation of *The Strategist* in 2012, over 175 individual posts. During his career he has worked for both the Australian and New Zealand governments and lectured at university.

After graduating from the University of Auckland in 1982 with a PhD in political theory, he worked in the New Zealand External Intelligence Bureau before crossing the Tasman in 1985 to take up a position as a strategic analyst with the Australian Office of National Assessments.

At the University of Queensland from 2000 to 2006, he taught courses on international security, Asia–Pacific security, civil–military relations and Australian foreign policy. He was a Fulbright Scholar in 2004, researching the relative attractions of alliances and coalitions in the post-9/11 environment. His research interests include nuclear strategy and international security.

About *The Strategist*

The Strategist is the commentary and analysis site of the Australian Strategic Policy Institute, an independent, non-partisan think tank based in Canberra. ASPI is one of the most authoritative and widely quoted contributors to public discussion of strategic policy issues in Australia and a recognised and authoritative Australian voice in international discussion of strategic issues, especially in the Asia–Pacific.

The Strategist aims to provide fresh ideas on Australia’s critical defence and strategic policy choices as well as encourage and facilitate discussion and debate among the strategy community and Australian public.

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Foreword

I first met Rod Lyon in 1993 when I joined the Office of National Assessments as a strategic analyst. Rod was then, as he is now, a formidably able thinker bringing a calm intellect to some of the most challenging strategic issues of the day. By the early 1990s we were in the aftermath of the Cold War, the latter stages of which had brought nuclear weapons and the strategic balance they shape into much sharper focus. At ONA, Rod and I retained a healthy interest in Russia's nuclear arsenal, and in those parts of it still stranded in Ukraine, Kazakhstan and Belarus. But new problems were piling up fast.

In Iraq, a UN Special Commission attempted to corral Saddam Hussein's appetite for weapons of mass destruction. Evidence of North Korea's nuclear ambitions became clearer, notwithstanding the signing of the Agreed Framework in October 1994. Almost a decade had passed since New Zealand had declared itself nuclear-free, but America and its allies still worried about the validity of extended nuclear deterrence, the spread of anti-nuclearism among the democracies and the risks of nuclear proliferation elsewhere.

Fully a quarter of a century later, it is remarkable how many of those nuclear-related problems remain current if not more acute. North Korea has emerged as a fully fledged nuclear-weapon state, or at least is close enough to that objective that it must be treated as a nuclear power. The Russians and Americans are busy modernising their nuclear weapons and delivery systems. China has established a small but fully effective nuclear deterrence capability. India and Pakistan have evolved a type of 'ugly' nuclear stability. America's allies continue to fret over the strength of the US nuclear guarantee. And the proliferation risk is perhaps greater now than at any other time since the break-up of the Soviet Union.

A significant change between that earlier era and now is the regrettable loss of public policy focus on the nuclear balance and Australia's place in it. One has a sense that Australian governments don't really want to talk about the alliance and extended deterrence, and there's little in the way of a sensible arms-control agenda to point to. The 2017 foreign policy white paper offered the low-key but rather chilling observation that, 'Without extended deterrence, more countries in the Indo-Pacific would need to re-assess their security and defence capabilities.' It's worth pondering what that assessment really means.

The short essays assembled in this volume present the best guide available for those who want to think their way through the current policy challenges presented by nuclear weapons. There is no one better placed than Rod to act as a Sherpa around the nuclear landscape. Readers of these essays will get a sense of his deep fascination with the policy questions at hand.

Far from being a Cold War artefact, nuclear weapons, and the strategic thinking around them, go to the heart of our current realities. These are urgent policy debates deserving of more public and government attention. We are fortunate to have Rod Lyon's analysis here to help us all gather our thoughts.

Peter Jennings
Executive Director, ASPI
1 October 2019

The use and non-use of nuclear weapons

The opening section of this collection features a series of posts that explore the issue of ‘use’ of nuclear weapons. For those readers hoping it offers a simple introduction to thinking about nuclear strategy—a shallow end of the pool, as it were—I have some bad news. The pool has no shallow end. To think about issues of use and non-use is to wrestle with questions that lie at the heart of nuclear strategy.

But engaging those questions head-on offers, if not a simple path, at least a direct one, to what we might think of as the central dilemma of the nuclear age: how do we leverage the most destructive weapons in history in order to maximise the positive contribution they make to international security?

Much turns, of course, upon how we define ‘use’, so a degree of concentration on that point in the following five posts will come as no surprise. What does it mean to ‘use’ a nuclear weapon? The bombings of Hiroshima and Nagasaki in World War II demonstrated the appalling destructiveness of even first-generation nuclear weapons when employed directly. Ever since, nuclear weapons have been used by not being used—that is, by threatening their use instead of actually using them. And that, in turn, means we need to broaden our understanding of ‘use’. It’s wrong to believe that nuclear weapons are ‘used’ only when they are fired at an adversary.

The posts also address a couple of specific issues of ‘use’. Should we be pushing the Americans towards a no-first-use declaratory policy? And what do Australians think would constitute ‘appropriate use’ of nuclear weapons?

That final post—which emerged from a question asked in Senate estimates—reminds me to make a general observation about the entire range of material reproduced here. Blog posts are often stimulated by particular events, dates or contributions by others. I think good blogs are discussions, and the posts that I bring to a particular topic typically wouldn’t exist without the contributions of others. I am grateful to all those with whom I disagree for the honesty and integrity of their positions.

Let’s begin.



Cropped image: [Jim Forest/Flickr](#).

Hiroshima, Nagasaki and 70 years of nuclear non-use

6 August 2015

It's been 70 years since a nuclear bomb was detonated in anger, a remarkable achievement given that the bombings of Hiroshima and Nagasaki both happened within one month of the Trinity test. Another 840 months have passed without a recurrence—through the Korean War, the Cuban missile crisis and the South Asian, South Atlantic and Middle Eastern conflicts. Not only have nuclear-weapon states not used nuclear weapons against each other, they haven't used them—as the US did against Japan—against non-nuclear-armed states.

As T.V. Paul has observed, that constitutes an impressive tradition of non-use.¹ The tradition, Paul argues, stems from two factors: the horrendous consequences of nuclear-weapon use and, therefore, the reputational costs to the state using them. Those reputational costs induce policies of self-deterrence among nuclear-weapon states—hence, a tradition.

Where Paul talks of a tradition of non-use, Nina Tannenwald claims something stronger, namely a nuclear taboo.

A powerful taboo against the use of nuclear weapons has developed in the global system, which, although not (yet) a fully robust prohibition, has stigmatized nuclear weapons as unacceptable weapons—'weapons of mass destruction.'²

Paul and Tannenwald raise an intriguing question: what's the principal driving force behind non-use? Most strategists might think it's merely deterrence. But that's an unsatisfying answer, or at least an incomplete one. Mutual deterrence relationships simply don't exist between all of the world's nuclear-weapon states and their potential opponents. Besides, deterrence lies in the eye of the beholder. Seventy years down the track, we might reasonably expect to be able to draw upon a wealth of autobiographies of national leaders observing that it was fortunate they were deterred from resorting to nuclear use. No such treasury exists.

Does the concept of a taboo or a tradition provide better explanatory purchase? If the principal driver behind non-use is a taboo, the use of nuclear weapons is unthinkable. But nuclear-employment planning by the nuclear-weapon states suggests use is entirely thinkable. And empirical research in 2011 by Darryl Press, Scott Sagan and Benjamin Valentino found that the American public had a relatively weak aversion to use of atomic weapons.³ Moreover, public thinking about the possible use of nuclear weapons was driven primarily by consequential considerations rather than any normative rejection of such use as 'unthinkable'.

By contrast, if the driver's a tradition, use is thinkable but a violation of a valued pattern of historical behaviour. Normative concerns drive the taboo; prudential ones, the tradition. The case looks stronger for the tradition than for the taboo—not least because the claim is a more modest one. Still, how long will the tradition endure? The nuclear club is gradually becoming less exclusive. Possible reputational costs weigh most heavily on those states which value their reputation—what Prime Minister Robert Menzies back in 1957 called 'Great Powers ... sufficiently informed about the deadly character of these weapons to find themselves reluctant to cause a war in which they are used'.

And there's the rub. I think the tradition is largely the second-order effect of the predominantly stable nuclear order that's existed since 1945, and which has confined the bulk of nuclear weapons to the hands of the P5. Keeping the weapons largely corralled in the hands of self-deterred great powers looks like a major explanatory variable behind the effect.

I'm also reminded of Thomas Schelling's thought about those decisions which might end the tradition. Schelling argues that if an actor chooses to break it, it should be for something important.

This is not an event to be squandered on an unworthy military objective. The first nuclear detonation can convey a message of utmost seriousness; it may be a unique means of communication in a moment of unusual gravity. To degrade the signal in advance, to depreciate the currency, to erode gradually a tradition that might someday be shattered with diplomatic effect, to vulgarize weapons that have acquired a transcendent status, and to demote nuclear weapons to the status of merely efficient artillery, may be to waste an enormous asset of last resort. One can probably not, with effect, throw down a gauntlet if he is known to toss his gloves about on every provocation.⁴

That's an entirely sensible position—and the kind of thinking one should expect from a responsible great power. But, again, its strength varies from actor to actor. Not all enjoy a wide spectrum of policy options. Some are known to toss their gloves about—not on every provocation, perhaps, but on a worryingly high percentage. In an extreme case, nuclear-armed terrorists might well rush to employ even a crude explosive device.

What's the conclusion? We shouldn't take too much comfort from 70 years of non-use. It's an order-generated effect, and turns upon the durability of the nuclear order, as well as on the severity of challenges to the broader geopolitical one.

Notes

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Walking after midnight: thinking beyond the Doomsday Clock

8 February 2016

In 2016 we live in a comparatively peaceful world. No great power is at war with another. Even middle-power conflict is absent: no Iran–Iraq war with chemical weapons being tossed about, for example. Wars can certainly be found, primarily in the broken states of the Middle East. But most of those don't appear to be a harbinger of doomsday. In brief, while the world's strategic environment probably can't be described as benign, it does seem to be manageable. We're not standing on the brink of an abyss.

But watchers of the Doomsday Clock would be hard pressed to find much evidence of that manageable global order. The clock is meant to symbolise the countdown to global catastrophe—predominantly from nuclear war, but nowadays encompassing threats from climate change and new biological technologies. Those crises are described as 'existential'—as threatening the very existence of civilisation. Keepers of

the clock, the *Bulletin of the Atomic Scientists*, recently made their latest determination to leave the hands unchanged.¹ That means it remains set at three minutes to midnight. *Newsweek* covered the event with an article titled ‘Apocalypse soon’.² And visitors to the *Bulletin*’s website are invited to cast their votes on whether the clock should be adjusted by a minute or two in either direction.

The clock’s been around since 1947. For much of the 1950s it was set at two minutes to midnight, while the US and the USSR raced to build nuclear arsenals and engaged in a competition to see who could build the biggest hydrogen bomb. And for a few years in the mid-1980s, the clock was set at three minutes to midnight, symbolising the tensions in the superpower nuclear balance. The immediate post-Cold War years saw the clock wound back to 17 minutes to midnight, but adjustments since have, by and large, been towards smaller numbers. Obviously, it’s difficult to sustain a sense of urgency if the hands are even a quarter of an hour from midnight.

At this point, it’s hard to know what might see a major resetting of the clock. Nuclear disarmament might see it set back a few minutes, I suppose. But realistically you’d have to make allowance for the possibility of reconstitution of nuclear arsenals during a crisis—which I think could easily be more dangerous territory than where we are now. For one thing, there’s no guarantee that reconstitution would occur at an even, balanced rate across key geopolitical fulcra. Repeated crossing of the bridge between a nuclear and a non-nuclear world is a recipe for disaster if ever I saw one. Still, that’s not where we are now.

At least in relation to current nuclear dangers, I’m puzzled by what it is that’s supposed to happen at midnight. Do we reach midnight with the first nuclear detonation in a war? If so, what does 1 am look like? Some of the most interesting and neglected questions in nuclear strategy concern what happens after deterrence fails. But a failure of deterrence needn’t mean ‘doomsday’—or, at least, not doomsday in the sense that films and computer games often suggest.

Naturally, we should be interested in slowing, halting and reversing any slide towards the use of nuclear weapons. But if we do end up crossing the threshold, the answer’s not to throw up our hands and resign ourselves to extinction. Rather, we need to have a meaningful set of strategic choices after midnight—including options for slowing, halting and reversing further nuclear use on the day after. Obsessing about midnight doesn’t help us develop those.

Last year graphic designer Michael Bierut described the Doomsday Clock as ‘the most powerful piece of information design of the 20th century’.³ Visually, the clock’s simple and arresting—albeit an analogue image in a digital age. (Future generations might struggle to read it, just as they now struggle to comprehend pounds, shillings and pence.) But I’m dubious about how much ‘information’ it actually conveys. I’m not convinced we’re on the verge of extinction, and the idea that ‘the end is nigh’ is neither new nor especially useful. The clock’s best days now lie behind it. I vote for turning it off.

Notes

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Mr Obama goes to Hiroshima

18 May 2016

The White House announced last week that President Obama would visit Hiroshima later this month,¹ making him the first US president to do so. He won't be apologising for the US's dropping of the atomic bomb, and some reports suggest he doesn't even plan on making a major address there.² It's a case where Obama's damned if he does and damned if he doesn't, of course. If he doesn't make a major speech, commentators will see it as symptomatic of his continuing drift away from the anti-nuclear position he outlined in Prague in 2009.³ If he does, commentators will see the two speeches as the rhetorical bookends of an otherwise unremarkable nuclear legacy.

Actually, Obama's legacy isn't that underwhelming. He can point to a successful 2010 Nuclear Posture Review, a New START agreement with Russia, a nuclear deal with Iran, and a series of nuclear security summits. Yes, he has supported a modernisation program for US nuclear forces, but the US is virtually the last nuclear power out of the blocks on modernisation, not the first. As Robert Scher recently noted, the US now faces a situation where non-modernisation would leave it with 'a slow and unacceptable degradation in [its] ability to deter', facing off against other great powers which have already bitten the modernisation bullet.⁴

Arms-control champions have been pushing Obama to use the Hiroshima visit to commit the US to something substantial. Michael Krepon, for example, has argued in favour of Obama's going to Hiroshima, but only if he seizes the opportunity to advance his anti-nuclear agenda.⁵ Specifically, Krepon wants words and deeds that push for US ratification of the Comprehensive Nuclear-Test-Ban Treaty. That's probably a bridge too far for Obama, who knows the groundwork hasn't yet been properly laid in the US Senate for ratification and who's conscious of just what a large—and difficult—nuclear agenda the incoming president will already confront.

To get a feel for that agenda, have a look at the videos of the panels at the recent CSIS conference on US nuclear policy post-2016.⁶ Issues of deterrence, assurance, arms control, modernisation, money and sustaining a bipartisan consensus on nuclear weapons policy already seem likely to make the next president's job especially challenging in the nuclear field.

Still, a visit to Hiroshima can't help but be politically significant. It's not the same as visiting other cities destroyed by allied airpower in World War II—cities like Berlin, Dresden and Tokyo. As Krepon argues, 'Tokyo is remembered for the horror of a world war that was waged against cities and civilians as well as on battlefields. Hiroshima is remembered for the weapon used to destroy the city and the people living in it.'⁷

John Kerry clearly found his visit profoundly disturbing.⁸ Hiroshima and Nagasaki are the only two places on earth that provide first-hand evidence of the devastating effects that nuclear weapons have on cities, even using first-generation, primitive weapons. It's one thing for a policymaker to know that they have such effects; another thing again to see them up close. The technical descriptions offered by reputable texts such as Samuel Glasstone and Philip Dolan's *The effects of nuclear weapons* are scientifically accurate but determinedly impersonal; Hiroshima colours those descriptions with names, familial and social ties, injuries and death.⁹

Japanese public opinion is split over the issue of whether the US president should be expected to apologise for the dropping of the bomb, but no more so than public opinion in most other countries. Indeed, a recent poll conducted by the *Japan Times* found that almost 65% of Japanese respondents thought Obama should not apologise, but that he should commit to nuclear non-proliferation. Even that might be difficult to do in a way that would satisfy sceptical listeners. The president could, of course, reaffirm the US's commitment to the Nuclear Non-Proliferation Treaty, and to a vigorous counter-proliferation agenda, but he can't promise to forsake modernisation of the US arsenal.

It's going to be a neat trick for Obama to ensure that his visit reflects the strange duality of nuclear weapons: that they are both massively destructive and—for now—strategically irreplaceable. Since he's the bloke with the nuclear codes, his statements and reactions will be monitored more closely than Kerry's were. But Obama can be thankful for one of life's small mercies—unlike Harry Truman, US presidents today aren't invited to cross the nuclear threshold by dropping nuclear weapons on cities. True, it's uncertain if escalation control will work in a nuclear conflict, but planners are smart enough to know it probably won't if the first round of warheads kills large numbers of civilians.

Notes

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Nuclear weapons and first use

15 August 2016

Recent media reports suggesting that President Obama's considering embracing a no-first-use pledge in US nuclear declaratory policy have certainly rekindled the debate over the wisdom of such a move. The debate's not new, and resonances of its earlier rounds abound. Over at *Arms Control Wonk*, Michael Krepon has penned a couple of thoughtful pieces, essentially supporting the notion of a no-first-use policy—just not yet.¹ On the other side of the debate, Elbridge Colby's argued that a no-first-use declaration would be a deep strategic error.² Andrew Shearer's argued a similar line over at *War on the Rocks*.³

In arms-control terms, no-first-use pledges have a superficial attractiveness. For one thing—if they could be taken at face value—they would imply an important raising of the nuclear threshold. If all nine current nuclear-weapon states were to embrace them, none would ever use nuclear weapons first in a conflict. And the essential role of nuclear weapons would be limited to deterring, and responding to, an adversary's use of nuclear weapons in violation of that pledge.

But can they be taken at face value? One of the central problems with a no-first-use pledge is that it's inherently incredible. Such a pledge says that a nuclear-weapon state is content to lose a war at the conventional level without resorting to nuclear weapons. Perhaps that's the case with some limited conventional conflicts fought over peripheral rather than core interests. But it's not true in relation to all conventional conflicts. All of the nuclear-weapon states have *some* interests the loss of which they would regard as intolerable. Such prospect of loss would excite resort to nuclear weapons. If it didn't, why would they have built them in the first place?

The second problem is one of strategic utility. If nuclear weapons are useful in deterring major war, why are we so anxious to ensure they deter only nuclear use? NATO strategists in the days of the Cold War used to argue plausibly that theatre- and tactical-range nuclear weapons helped offset the possibility of Soviet conventional aggression by making it more difficult for the Warsaw Pact to concentrate its tank armies. Any such massing of forward-deployed armour would be a potential target for a NATO nuclear weapon. In short, NATO's option of crossing the threshold first helped to *lengthen* the odds that it would ever need to do so. NATO's logic then remains just as compelling today for any nuclear-weapon state which feels itself conventionally outgunned.

Even those nuclear-weapon states confident about their own conventional strength might well see a role for nuclear weapons in constraining an adversary's options. The US found itself in exactly that position in the early 1990s, leading the multinational force engaged in expelling Saddam's forces from Kuwait. Veiled US threats then that Washington would regard any Iraqi use of weapons of mass destruction—essentially chemical weapons—as opening the door to possible US nuclear-weapon use were designed to constrain Iraqi options and leverage the multinational force's conventional advantage.⁴

Then there's a third problem—assurance. A US no-first-use pledge would play merry havoc with its extended nuclear assurances to its allies. Allies would worry about both of the first two problems: that a US which was serious about its no-first-use pledge might be more inclined to see their interests as peripheral rather than vital; and that they're more exposed to shifts in regional conventional force balances than is the US itself. That's broadly true for all US allies around the Eurasian rimlands, but the rapid growth of Chinese conventional power in Asia makes this factor particularly telling in Australia's own region.

For all those reasons, a sudden step towards a no-first-use pledge by an American president in the last six months of his term in office would be a worrying development. True, the 2010 US Nuclear Posture Review pointed to a future in which the US would 'seek to reduce the role and numbers of nuclear weapons'.⁵ But Washington balked at making a 'sole purpose' declaration—essentially a declaration that the sole purpose of nuclear weapons was to deter any use of nuclear weapons by an adversary—during that review. And it's hard to argue that nuclear weapons have become more irrelevant in the years since.

There's strategic value in the current policy. That, by the way, isn't a pledge to use nuclear weapons first; it's merely a refusal to pledge not to do so. That position retains the possibility of first use—which is probably unappetising for some, but fulfils the tests of credibility, deterrence and assurance. If we have to live through the nuclear age, let's at least make sure the weapons make a positive contribution to international security.

Notes

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- 2 Elbridge Colby, 'Nuclear weapons aren't just for the worst case scenario', *Foreign Policy*, 4 August 2016, <https://foreignpolicy.com/2016/08/04/nuclear-weapons-arent-just-worst-case-scenario-first-use-china-obama-trump>.
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Nuclear weapons and appropriate use

30 October 2017

In Senate estimates last week, Senator Lisa Singh raised with representatives from the Department of Foreign Affairs and Trade the issue of possible use of nuclear weapons. 'In what circumstances', she asked, 'does the government's security doctrine anticipate that using nuclear weapons would be appropriate?' The breadth of the question seemed to catch DFAT by surprise. For one thing, Australian declaratory doctrine—as set forth in various defence white papers—doesn't really address the issue of direct use. And, reasoning from first principles, the question seems to invite either an overly simplified answer or an overly complicated one. The simple answer, of course, is that use of nuclear weapons is appropriate when vital interests are under threat and conventional weapons don't suffice. DFAT's Richard Sadleir gave a variant of that answer by saying that extreme emergencies of a self-defensive nature constituted the appropriate circumstances. But I think the more complicated answer should also be rehearsed.

First, let's clarify what 'use' of nuclear weapons actually means. This is, after all, a class of weaponry typically associated with deterrence, which means that 'use' mostly occurs as 'threats to use'; weapons are rattled rather than fired. The flagging of nuclear options is intended to constrain adversary behaviour during crises. That's an infrequent, but important part of modern great-power relations. Moreover, Australian declaratory policy endorses this form of use—see paragraph 5.20 of the 2016 Defence White Paper, for example.¹ Coercive threats to use nuclear weapons usually occur when large stakes are involved—as they were in the Cuban missile crisis. And the stakes of war, Raymond Aron once wrote, are the existence, the creation and the elimination of states. Considerations of that magnitude typically underpin such threats.

But reliance upon threats to use rather than actual use is only one form of the 'gravitational use' of nuclear weapons. I'm using the term 'gravitational' here in the same sense that Robert Art uses it in his essay on the fungibility of force:

When used peacefully, states employ their military power in more subtle, and therefore in less well-defined ways. Used peacefully, military power is held at the ready, and its exact influence on political outcomes becomes more difficult to trace ... The peaceful use of military power is akin to a gravitational field among large objects in space: it affects all motion that takes place, but it produces its effects imperceptibly ... Thus, to focus only on the physical use of military power is to miss most of what states do most of the time with the military power at their disposal.²

Nuclear weapons are particularly suited to gravitational use. Indeed, nuclear threats are usually implicit rather than explicit. They sit in the background, and exercise their effects from there. In this broad sense, nuclear weapons have been ‘used’ every day since their invention.

So, nuclear weapons have important roles in peacetime and in crises. But let’s turn to what Senator Singh was probably really asking: in what circumstances would Australia think it appropriate to resort to the direct use of nuclear weapons? The answer’s relatively straightforward: either to respond to an adversary’s use of nuclear weapons, or when vital national interests are at stake and conventional forces are going backwards. True, defining ‘vital’ is a non-trivial task. Still, direct use of nuclear weapons signals that red lines have been crossed—and that further escalation options are on the table.

Some analysts write as though direct use of nuclear weapons signals an end of deterrence. It doesn’t. Rather, it puts increased emphasis on what’s called ‘intra-war deterrence’: even when the nuclear threshold has been crossed, both adversaries have strong interests in damage limitation and war termination, and are thus ‘deterred’ from open-ended escalation.

Now we come to an important part of the issue: some might think that Australians would approve of direct nuclear use only in the event that Australia itself were being threatened. I don’t think that’s true. Australian security is shaped heavily by the global strategic order. And that order is principally determined far from our shores—typically in the critical force balances around the Eurasian rimlands and between the world’s great powers. Direct use of nuclear weapons in relation to those strategic balances is much more likely than it is in relation to, say, defence of the Australian continent. That’s why US extended nuclear assurances to NATO countries, and to Japan and South Korea, tend to be more explicit than they are to Australia. So, would we think that use of nuclear weapons was appropriate in relation to serious threats to the vital interests of the US or its other allies? It would depend on the circumstances, of course, but the answer’s probably ‘yes’.

I’m aware none of that makes for pleasant reading. We’re talking here about extremely serious strategic challenges—the sort that, in the past, have provoked world wars. The threat of nuclear war has done much to hold such a prospect at bay. Since nuclear weapons are probably going to be with us for some decades yet, Australia’s interests lie in responsible nuclear powers, good stewardship of nuclear arsenals, and adroit diplomacy in crises—including crises where the threshold is crossed.

Notes

- 1 Department of Defence, *2016 Defence White Paper*, Australian Government, 2016, <http://www.defence.gov.au/WhitePaper>.
- 2 Robert J. Art, ‘The fungibility of force’, in Robert J. Art, Kenneth N. Waltz (eds), *The use of force: military power and international politics*, Rowman & Littlefield, 2009, pp. 3–4.

The role of nuclear deterrence

This series of posts covers the doctrine of nuclear deterrence. What's deterrence? Abba Eban, the former Israeli foreign minister, once humorously defined it as 'the science of things that do not occur'.¹ In a more academic sense, it's a doctrine that threatens the imposition of a set of unacceptable costs on an aggressor in retaliation for a particular action. It's a doctrine built on threats and nerve, requiring the threatener to display both the ability and the willingness to impose such costs.

Therein lies both the greatest strength of nuclear deterrence and its greatest vulnerability. Deterrence is a sensible doctrine for a world with substantial numbers of nuclear warheads—because it allows such capabilities to play a stabilising role across key global and regional balances while minimising actual use. The stabilising role arises because deterrence reinforces policymakers' caution. But it exercises its greatest effects upon status quo powers—risk-averse countries with much to lose and a deep appreciation of the costs of great-power war.

After the end of the Cold War, Western governments—including Australia's—largely got out of the habit of thinking about nuclear deterrence. The doctrine had little role to play in either the unipolar moment of the 1990s or the global war on terrorism. But the return of great-power strategic competition, the modernisation of nuclear arsenals among all the P5 states, and the gradual emergence of a nuclear 'club' less exclusive than before has brought the subject of nuclear weapons and strategy back to the top table.

More than ever we need to think about how deterrence works in terms of 21st-century geopolitics. What does nuclear deterrence look like in a multipolar world, or between great powers and pariah states, or between fast-rising and sclerotic powers, or between risk-averse and risk-tolerant actors? This is an area where the nuclear field needs reconceptualisation, not simply more attention.



Image: US Department of Defense.

Note

- 1 Abba Eban, *Diplomacy for the next century*, Yale University Press, 1998, p. 11.

An Australian view of nuclear deterrence

27 January 2015

No Australian minister has made a full-blooded speech on nuclear deterrence for many a long year—not since the early 1990s, I suspect. In truth, that’s not surprising: it’s been proliferation that’s grabbed all the attention since then. Moreover, talking about nuclear weapons requires the speaker to perform a delicate balancing act between upholding the current reliance upon nuclear weapons and endorsing a longer-term post-nuclear vision. Because nuclear weapons are—by their nature—scary, the speech has to contain core elements of reassurance and moderation. And there are no votes in it.

True, a succession of governments over the last couple of decades have nailed their colours to the mast on deterrence as part of formal declaratory defence policy. Those wanting to trace the issue through a succession of defence white papers (DWP) since the end of the Cold War should have a look at paragraph 9.7 in the 1994 DWP,¹ paragraph 5.15 in the 2000 DWP,² paragraph 6.34 in the 2009 DWP,³ and paragraph 3.41 in the 2013 DWP.⁴ Echoes from those DWPs can subsequently be heard in other ministerial comments—in Stephen Smith’s response to the International Commission on Nuclear Non-proliferation and Disarmament report of late 2009, for example.⁵

But none of the white papers unpacks government thinking about nuclear deterrence and, in particular, extended nuclear deterrence, in detail. Indeed, most governments seem to have convinced themselves that—on that topic at least—the less said the better. The Rudd government went so far as to say that if extended nuclear deterrence ceased to be effective, ‘significant and expensive defence options’ would come onto the Australian strategic policy agenda—a statement which implies that nuclear deterrence isn’t merely long-lived, but important for Australian security. The Gillard government thought that a bridge too far. Its DWP endorsed extended nuclear deterrence in much the same manner as its predecessors, but the comment about significant and expensive options disappeared.

So, what should a more long-winded statement actually say? First, that the government retains its commitment to a Menzian vision of nuclear weapons.⁶ Menzians—as opposed to Gortonians and disarmers—are middle-of-the-road thinkers. They believe that nuclear weapons can play a stabilising role in international order, so long as they’re held by great powers sensible enough to be self-deterred in their use. They believe that nuclear deterrence works, and that arms control has a distinct role to play both in moderating the tensions between the nuclear powers and in preventing the proliferation of nuclear weapons to a less exclusive set of owners. Finally, they believe that US extended nuclear deterrence to its allies, including Australia, works well enough that Australia has no need of its own arsenal (though in just about every protégé state there’s a debate over what ‘well enough’ means).

Second, a statement would say that the government believes a post-nuclear world is possible but not close—indeed, it might be drifting further away. What’s close is strategic transformation in Asia, and nuclear weapons’ role as an order-stabiliser might well have a part to play before that transformation’s complete. Because of that, Australia accepts that its ally, the US, will soon embark upon a wave of nuclear-weapon modernisation, and that nuclear weapons might come to have a more important role in US alliances in Asia than hitherto. Such developments are likely because nuclear deterrence will retain its role as an important gravitational shaper of international relations, and a cap on major-power war.

Third—following on from the second point—that Australia supports the US deploying a nuclear arsenal of the size and shape needed to support nuclear deterrence in general and to extend nuclear deterrence to allies and partners. The Australian government believes that a failure of US extended nuclear deterrence—currently offered as an assurance to nearly 40 countries—would not simply be a serious problem for Australia but would likely precipitate a wave of nuclear proliferation that would be destabilising for global and regional order.

Fourth, that the idea of sole purpose that’s underpinned most official Australian commentary about nuclear weapons should be read merely as an empirical statement about Australian strategic conditions in a non-transformational Asia—not as an ideological position denying the utility of nuclear weapons in countering large-scale conventional force. Geography and distance, plus US conventional force superiority, have previously provided Australia with the luxury of thinking about nuclear deterrence only within specific scenarios—such as a nuclear attack upon the Australian continent—but it’s uncertain whether that luxury will endure.

Fifth, that Australia remains a strong advocate of nuclear non-proliferation, arms control and eventual disarmament. A world in which many fingers rest on many triggers would be an unhealthy and dangerous one. But nuclear disarmament can’t be sensibly discussed except in the context of other moves to stabilise and enhance international security.

Between them, those points say the following: Australian policymakers have a sensible, ‘centrist’ approach to nuclear weapons; they believe that nuclear weapons still have a positive role to play in global and regional security; they accept that the US has to field an arsenal that supports its doctrine and obligations; they don’t accept the doctrinal shibboleth of sole purpose; and they favour non-proliferation, arms control and disarmament. And that’s a position we should be willing to put on record.

Notes

- 1 Australian Government, *Defending Australia: Defence White Paper 1994*, Australian Government Publishing Service, 1994, <http://www.defence.gov.au/Publications/wpaper1994.pdf>.
- 2 Department of Defence, *Defence 2000: our future defence force*, Australian Government, 2000, <http://www.defence.gov.au/publications/wpaper2000.pdf>.
- 3 Department of Defence, *Defending Australia in the Asia Pacific century: force 2030*, Australian Government, 2009, <http://www.defence.gov.au/whitepaper/2009>.
- 4 Department of Defence, *Defence White Paper 2013: defending Australia and its national interests*, Australian Government, 2013, <http://www.defence.gov.au/whitepaper/2013>.
- 5 Stephen Smith, ‘Australian Government’s response to the International Commission on Nuclear Non-proliferation and Disarmament (ICNND) Report’, media release, 3 May 2010, <https://foreignminister.gov.au/releases/2010/fa-s100503a.html>.
- 6 Christine Leah, Rod Lyon, ‘Three visions of the bomb: Australian thinking about nuclear weapons and strategy’, *Australian Journal of International Affairs*, 2010, 64(4): 449–477.

The return of the deterrence problem

2 July 2015

With nuclear modernisation programs underway across a range of countries,¹ Russia asserting its right to deploy nuclear weapons in the Crimea,² NATO reviewing the role of nuclear weapons in the alliance,³ and a recent report in the US arguing for a more versatile arsenal of tactical nuclear weapons,⁴ it’s clear the world’s revisiting an old problem: how to build effective nuclear-deterrence arrangements.

Since the end of the Cold War, thinking about deterrence issues has been mainly confined to the academic and think-tank world. But policymakers are now having to re-engage with those issues. And the problem has a new twist: we no longer enjoy the luxury of a bipolar world. Indeed, as Therese Delpech observed in her RAND monograph *Nuclear deterrence in the 21st century*, nowadays ‘the actors are more diverse, more opaque, and sometimes more reckless’.⁵

Done properly, deterrence is a contest in threats and nerve, or—to use Thomas Schelling’s phraseology—‘the manipulation of risk’. (The chapter so titled in Schelling’s *Arms and influence* is a great starting point for anyone wanting to think through the broader deterrence problem.) That helps explain why some thought the concept ‘ugly’.⁶ It’s hard to make a policy threatening massive damage to societies and civilians sound noble and aspirational. Still, the bad news is that the alternatives are worse. And if deterrence is going to remain the dominant approach in nuclear-weapon strategy, we need to fit the strategy to the contemporary geopolitical environment.

Historical experience of the deterrence problem is greatest in relation to two competing superpowers, separated by intercontinental distances, endowed with the resources to manage challenges, and both knowing well the costs of major war. We’ve had relatively little experience of nuclear deterrence in contests between giants and midgets (US v North Korea), between established and fast-rising powers (US v China), and among players in a multipolar system. Even our understanding of the role nuclear deterrence plays in relations between regional rivals (think South Asia) remains underdeveloped.

It’s entirely possible that the old superpower deterrence model might not fit those new challenges well. Indeed, maybe the old model doesn’t even fit the US–Russian strategic relationship well these days: Russia’s no longer governed by a sclerotic CPSU.

Some years back, the Institute for National Security Studies’ Elaine Bunn (now a senior official in the Obama administration) wrote a paper unpacking the notion of ‘tailored’ deterrence introduced in the 2006 Quadrennial Defense Review. True, deterrence has always been characterised by particular strategic wrinkles, but Bunn’s paper was an attempt to bring those wrinkles to the fore in relation to the possibility of a nuclear-armed North Korea, Iran or transnational terrorist group. Her exploration of three different forms of tailoring—tailoring to specific actors and specific situations, tailoring capabilities and tailoring communications—helps to illustrate the growing complexity of the deterrence challenge.

It now seems likely that we’re headed back into a set of complicated deterrence debates. A strategy that might make sense in one strategic setting—for example, a degree of restraint by a giant engaged in a conflict with a midget—might well risk flagging unintended messages in another. In the giant–midget case, almost any crossing of the nuclear threshold by the giant risks imposing a set of desperate choices on the midget’s leadership, and desperate choices tend not to be good ones.

Deterrence in the context of an established power versus a fast-rising power has a different wrinkle. One effect of a deterrence-dominated world is to reward passivity over initiative. As Schelling notes, in the world of the arthritic, passivity tends to be the default choice. But fast-rising powers aren’t arthritic. Turning one aside from a revisionist agenda will probably be more challenging than deterring another established player.

Multipolarity brings its own wrinkles, including a more mixed set of adversarial relationships, asymmetrical contests, inadvertent signalling, and third-party exploitation of bilateral rivalries. Capability

issues become more vexed: actors require the capabilities to deter and defend against another, but also the residual capabilities to remain a player in other contests. The pressure must surely be towards larger rather than smaller arsenals. And reputational issues become more dominant: just as Margaret Thatcher fought the Falklands War in part to show the Soviet Union that the West wouldn't buckle in the face of force, so too players in a multipolar nuclear world will want to show resolve in one contest because of its implications for others.

Finally, and perhaps most controversially, deterrence turns upon a credible threat to cross the nuclear threshold if push comes to shove. During the 1960s the US advocated a doctrine of flexible response, arguing for a model of deterrence that would fail in small packets rather than in one catastrophic breakdown.

Notwithstanding the giant-midget problem outlined above, there's usually good sense behind such a doctrine: it makes deterrent threats more credible, avoids global annihilation in any initial crossing of the nuclear threshold, maintains a degree of 'intra-war deterrence' from the options still on the table, and optimises prospects for negotiated war termination. But historically the doctrine invited questions about the relative balance between usability and credibility in US nuclear policy—questions buried rather than resolved by the end of the Cold War.

Tailoring, messaging, usability, credibility and thresholds: I suspect policymakers will soon be thinking about all those questions again, across a range of deterrence relationships.

Notes

- 1 Eugene Miasnikov, Matthew Kroenig, Lu Yin, 'Modernizing nuclear arsenals: whether and how', *Bulletin of the Atomic Scientists*, 25 February 2015, <https://thebulletin.org/roundtable/modernizing-nuclear-arsenals-whether-and-how>.
- 2 'Russia says has right to deploy nuclear weapons in Crimea: report', *Reuters*, 11 March 2015, <https://www.reuters.com/article/us-russia-crimea-nuclear/russia-says-has-right-to-deploy-nuclear-weapons-in-crimea-report-idUSKBN0M710N20150311>.
- 3 Ewen MacAskill, 'NATO to review nuclear weapon policy as attitude to Russia hardens', *The Guardian*, 25 June 2015, <https://www.theguardian.com/world/2015/jun/24/nato-to-review-nuclear-weapon-policy-as-attitude-to-russia-hardens>.
- 4 Clark Murdock, Samuel J. Brannen, Thomas Karako, Angela Weaver, *Project Atom: a competitive strategies approach to defining US nuclear strategy and posture for 2025–2050*, Center for Strategic and International Studies, 2015, https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/150601_Murdock_ProjectAtom_Web.pdf.
- 5 Thérèse Delpech, *Nuclear deterrence in the 21st century: lessons from the Cold War for a new era of strategic piracy*, RAND Corporation, 2012, <https://www.rand.org/pubs/monographs/MG1103.html>.
- 6 Austin Long, *Deterrence: from Cold War to long war—lessons from six decades of RAND research*, RAND Corporation, 2008, <https://www.rand.org/pubs/monographs/MG636.html>.

An inflection point in nuclear deterrence?

23 August 2017

In recent days, Wilton Park—the British Foreign and Commonwealth Office's discussion forum—released a report on its June workshop on nuclear deterrence and assurance.¹ The report's not overly long, but bears a close reading given the current debates about the future of nuclear weapons. One of its conclusions is that Western governments need to make greater efforts to engage their publics on the difficult issue of nuclear deterrence, 'to maintain—and to lead—a balanced and nuanced debate' about the place of

nuclear weapons in their own future defence strategies. Presenters at the workshop were drawn primarily from NATO countries and Northeast Asia,² but Australian policymakers would do well to heed some of the key lessons.

I've argued before that Australian governments have broadly stepped away from publicly defending the doctrine of nuclear deterrence since the Cold War ended. Personally, I think that's unhealthy. When governments cease to defend nuclear deterrence, public support wavers. And building and sustaining that support is getting harder with the passage of years. Both the risks and the benefits of the doctrine were comparatively easy to sell to the generation or two that had access to direct memories of World War II. After all, a war that killed over 50 million people—that is, an average of 25,000 people every day for six years—was bound to leave deep scars about the costs of great-power war. Those generations largely understood that nuclear weapons helped make great-power war more unlikely, mainly by inducing greater caution among decision-makers.

But to many young people today, nuclear deterrence looks like a hangover from an earlier era of mass war—with a large downside and little upside. Hence the new Treaty on the Prohibition of Nuclear Weapons, written by governments with no attachment to nuclear deterrence at the prompting of social groups with no belief in it. With the treaty text safely in the locker, the ban's proponents have embarked on a bottom-up strategy of persuading individual politicians to embrace the cause. ICAN Australia's Twitter feed shows an adroit application of the lobbying principles displayed in *Miss Sloane*: individual politicians are often photographed holding signs declaring their support for the nuclear ban treaty, making it much harder for them to reverse those positions at a later date.

Meanwhile, no individual cabinet minister has volunteered any sustained defence of nuclear deterrence. At a time when many US allies around the world are attempting to strengthen US extended nuclear assurances, Canberra's been largely silent on the topic. As North Korea's ballistic missiles have become more and more capable, the dominant theme in public discussion hasn't been extended nuclear deterrence; it's been a sudden, touching—and misleading³—faith in ballistic-missile defence. The 2016 Defence White Paper, the most recent articulation of Australian declaratory policy, had little to say on the issue of extended nuclear deterrence—and that at a time of rising risks from nuclear proliferation and Russian and Chinese modernisation.⁴ In response to ICAN's current targeting of individual members of parliament, there seems to be no comparable effort from either major political party to solidify political support behind our existing defence strategy.

In short, in Australia as across much of the West, nuclear deterrence is in danger of death by neglect. Elsewhere, the reverse is happening. The Russians have moved into a tighter embrace of nuclear weapons, eager to find 'a "nuclear scalpel" capable of "surgically" destroying local military targets'.⁵ China has embarked on a substantial modernisation of its arsenal, keen to improve survivability and targeting options. In South Asia, Pakistan has moved to declare 'full-spectrum deterrence' as it seeks to offset India's growing conventional capabilities.⁶ India, too, is making its own modernisation effort, in part to stay within reach of China. And North Korea's nuclear and missile programs make daily headlines. Across the broader Asian nuclear order, the principle of voluntary restraint is weakening.⁷

Perhaps opponents of the nuclear ban treaty are hoping that it will quietly die from its own historical irrelevance—that it will fade gradually into obscurity as nuclear warhead numbers remain largely

constant, and as the US strategic modernisation program unfolds. But we shouldn't assume that anti-establishment narratives will automatically succumb to strategic good sense. There's no law of politics that says good sense triumphs.

In short, it's long past time that the Australian government re-engaged the public on the meaning and purpose of nuclear deterrence. Extended nuclear deterrence—the doctrine under which the US agrees to run nuclear risks on its allies' behalf—has traditionally enjoyed a degree of bipartisan support in Australia. (Labor's 2009 Defence White Paper defended the concept with greater vigour than either of its successors.) If that's still an accurate reflection of the prevailing orthodoxy, it would be nice to hear some voices raised to support it. Public re-engagement, of course, is only the first step on a longer and more difficult journey. Like other US allies, Australia should be looking for ways to strengthen nuclear deterrence, not merely to explain and defend it. But that's a topic for another day.

Notes

- 1 Anthony Juarez, *Report: 'Rethinking deterrence and assurance. Western deterrence strategies: at an inflection point? Wednesday 14 – Saturday 17 June 2017'*, Wilton Park, August 2017, <https://www.wiltonpark.org.uk/wp-content/uploads/WP1545-Report.pdf>.
- 2 *Programme: 'Rethinking deterrence and assurance. Western deterrence strategies: at an inflection point? Wednesday 14 – Saturday 17 June 2017'*, Wilton Park, 2017, <https://www.wiltonpark.org.uk/wp-content/uploads/WP1545-Programme.pdf>.
- 3 Andrew Davies, Rod Lyon, 'National ballistic missile defence isn't a goer', *The Strategist*, 11 July 2017, <https://www.aspistrategist.org.au/national-ballistic-missile-defence-isnt-goer>.
- 4 Rod Lyon, 'DWP 2016 and extended nuclear deterrence', *The Strategist*, 3 March 2016, <https://www.aspistrategist.org.au/extended-nuclear-deterrence-and-dwp-2016>.
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- 6 'What is Pakistan's full spectrum deterrence doctrine?', *Pakistan Defence Forum*, 10 September 2015, <https://defence.pk/pdf/threads/what-is-pakistans-full-spectrum-deterrence-doctrine.396951>.
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Post-Frisco: misshapen deterrence

13 July 2018

A fractious NATO summit—including, apparently, an implied threat by President Donald Trump to leave the alliance—shows it's not too early to be thinking about a post-alliance future. So in this post, I intend to unpack some thoughts about the future shape of nuclear deterrence in Asia. If the US hub-and-spoke alliances in Asia were to fall over, who would be the principal nuclear actors in Asia, and what would be the effect on nuclear proliferation?

Australians appreciate the enormous value of the ANZUS alliance, but some of them, at least, imagine that extended nuclear deterrence—the doctrine under which the US agrees to run nuclear risks on behalf of its allies—is now, like the weapons themselves, an artefact of a bygone world, the loss of which can comfortably be borne in an era of cyberwar and precision strike.

Well, let's scrape the current extended nuclear deterrence commitments off the strategic map and look at the concept afresh. With Trump shying away from costly commitments—and remember he cancelled the US – South Korean exercises ostensibly because of the expense involved—what would the pattern of residual nuclear deterrence look like?

China, the rapidly rising regional power, would still deploy a nuclear arsenal—an arsenal of growing sophistication though relatively constrained in its size. So too would Russia, and it has a considerably bigger arsenal than China, and more practice in leveraging its nuclear capabilities for diplomatic and strategic gain.

On the subcontinent, India and Pakistan would remain as nuclear-weapon states, although neither is formally accorded that status under the NPT (which recognises only the P5 members as fitting into that category). Pakistan relies on its nuclear weapons to offset Indian conventional superiority. India, meanwhile, hopes its smaller nuclear arsenal will deter Pakistan from crossing the threshold, while simultaneously offsetting China's conventional superiority.

And we mustn't forget North Korea, of course: even if Kim Jong-un is attempting to set his country on a new trajectory, he's unlikely to be giving away all his nuclear weapons anytime soon.

So China, Russia, India, Pakistan and North Korea would be the nuclear-armed players on the Asian chessboard. True, the US would remain a nuclear power, and a strong one at that. But its priority would be central deterrence (defence of the US homeland) rather than the protection of former allies. America first, right?

It's not a pretty picture. Of the five remaining regional nuclear-armed countries, three are authoritarian states, two of which are great powers keen to revise the international order. By contrast, only one—India—could really be called a democracy, and its strategic history is one of non-alignment. It's difficult to describe Pakistan's system of governance, but however we do so, nuclear command and control seems to lie with the armed forces rather than the civilian government.

A collapse of NATO would still see Britain and France, two advanced Western democracies, remain as European nuclear powers. But there are no comparable nuclear-armed regional Western democracies in Asia. Putting it bluntly, a post-San Francisco strategic order would bring us face-to-face with an unpleasant truth—that nuclear weapons in Asia are, in fact, distributed in ways that would reinforce the looming regional power shifts rather than help to offset them.

Frankly, that maldistribution of nuclear capabilities would be a first-order strategic problem for a range of regional countries. Japan, South Korea and Australia—all the beneficiaries of previous US extended nuclear assurances—would sense a new vulnerability in their strategic environment. But so too would other states, like Indonesia, Singapore, the Philippines and Vietnam, all of whom previously derived a set of second-order benefits from the nuclear 'presence' of the US in the region.

Today, US extended nuclear deterrence is a background feature of the current regional security environment. That's appropriate, because nuclear weapons in general have tended to be less prominent in Asian strategic relationships than elsewhere. China, for example, doesn't typically resort to nuclear coercion to get its way. But the collapse of the US alliances would elevate the question of nuclear weapons to the forefront of regional thinking.

No other state could replicate the current US system. Authoritarian nuclear powers wouldn't be acceptable guarantors of the security of advanced democracies. And no other non-authoritarian nuclear power possesses a nuclear arsenal sufficiently large and diverse to be able to carry the weight of protecting other countries' core interests as well as its own, let alone the strategic disposition to do so.

True, Britain and France both carry some of the weight of nuclear deterrence in Europe, but that's because their national strategic red lines are tied to their immediate region. Nuclear balancing in Asia would be a bridge too far for both of them.

And that leaves only a set of unpalatable options for countries like Japan, South Korea and Australia. They can either head down the path of developing indigenous nuclear arsenals, or they can attempt to dilute the advantages that nuclear weapons confer—advantages which would otherwise accrue to a set of states that did not wish them well.

In defence of nuclear deterrence

30 August 2018

I read with interest the recent *Strategist* posts written by my former colleague Andrew Davies, outlining his conversion to the anti-nuclear cause.¹ Andrew's views are always worth listening to, but on this occasion I'll beg to differ with his conclusions.

Andrew, having read Daniel Ellsberg's recent book on nuclear command and control,² worries that we're running an unacceptable risk of a nuclear war that occurs by accident. Moreover, he's concerned that such an accident might well bring civilisation to an end. He reinforces that point by his reference to the dark silence emanating from our cosmic neighbours, a silence consistent with a possibly similar tale of self-extinction by industrialised intelligent life elsewhere in the cosmos. And he draws his argument to a close with a brief look at Lewis Richardson's statistics on the frequency of war, arguing that wars are 'randomly distributed accidents'.

Let's start with command and control. Yes, history contains some hairy moments—that's been relatively well known for some time,³ and well rehearsed recently by Eric Schlosser,⁴ as well as Ellsberg. But experience is a learning curve, not just a litany of errors. We try to fix problems, and to design systems that are less susceptible to failure.

Over time, the nuclear-weapon states have learned to manage command-and-control problems somewhat better than they have done in the past. Weapon security has been improved through better locks on warheads, and weapon safety improved by better design, including use of insensitive high explosives.⁵ Even attack assessment has been improved: as I understand it, two independent sources, relying on two different physical principles, are now required to verify that a nuclear attack on the US is underway. (Readers seeking a quick description of current US command and control arrangements might like to browse this overview of the latest *Nuclear matters handbook*.⁶)

Let me say something too about the spectacular silence of our galactic neighbours. Frankly, I'm wary of blind speculation. As any science-fiction fan knows, there are a host of reasons that might cause civilisations to end abruptly. (See, for example, Cixin Liu's *The three-body problem*.⁷)

Moreover, right here on earth, we have our own collection of ancient cities covered by jungle. Civilisations are fragile, impermanent things.⁸ History is not one long, slow trudge from darkness to enlightenment, but the rise and fall of a procession of complex societies.

Still, Andrew's right that a large-scale nuclear war could constitute one form of civilisation-ending event. So, what should we be doing with our nuclear arsenals? For better or worse, nuclear weapons sit at the heart of the current international security order.

Yes, only about 25% of states rely on nuclear weapons for their security. But look further up the power ladder. All five of the permanent members of the UN Security Council are nuclear-weapon states. All of the G7 countries (Canada, France, Germany, Italy, Japan, the UK and the US) are either nuclear-weapon states or beneficiaries of extended nuclear deterrence. Of the G20, Argentina, Brazil, Indonesia, Mexico, Saudi Arabia, South Africa and the EU don't rely on nuclear weapons (although some have flirted with the option in the past or do so today); the other 13 (roughly two-thirds) do. Of the five BRICS countries, Brazil and South Africa are non-nuclear powers and Russia, China and India nuclear ones.

In short, among the powerful, the protection afforded by nuclear deterrence is 'normal'.

Now we're approaching the key question: do nuclear weapons make a positive contribution to international security? Personally, I believe that nuclear weapons deter major war, and—moreover—encourage caution in policymaking.

Never having read Richardson's statistical analysis, I'm not well placed to dispute Andrew's summary of his conclusions. But his dataset ends in 1950, only five years after the birth of the atomic age, so he certainly isn't testing nuclear deterrence.

I'm attracted too by the recent observations of Kori Schake in her review of Lawrence Freedman's latest book that quantitative analyses of conflict aren't especially helpful. Freedman and Schake argue that 'interstate wars are both rare and their circumstances particular ... In reality, each interstate war is utterly unique, thus n can never be greater than one.'⁹

Indeed, since war is really about politics and societies, we should be wary of abstracting war from its context. In that regard, it's important to remember the world before nuclear weapons. We have only one model of industrial-age warfare devoid of the sobering effects of nuclear weapons, and it was the one which prevailed between the American civil-war years and 1945. With the industrial revolution, war's centre of gravity moved away from the battlefield and towards national industrial capacity. Wars became uncapped contests in national endurance. People died in the tens of millions.

Nuclear weapons brought to an end that picture of warfare as a contest in industrial mass-production. In one sense, of course, they did so because they represented the zenith of the destruction-based model of war—and so inspired a set of mechanisms (such as the UN Security Council) and doctrines (such as deterrence) intended to help prevent war between the major powers. Nuclear weapons helped force a possible hot war to become a cold one, and pushed warfare itself towards contests that would be limited in magnitude and duration.

That vision of nuclear weapons is often missing in today's debates. Around the world, evidence mounts of a nuclear order in flux. At the top level, relations between the great powers are far from ideal. Arms-control agreements are under pressure, and modernisation programs are threatening to pull the future nuclear competition in new directions. Then there's North Korea, and the special problems that it creates.

On the broad issue of assurance, things aren't much better. President Donald Trump has seriously devalued the coinage of US extended nuclear deterrence. That's worrying, because it bodes ill for the current non-proliferation regime.

Still, those challenges don't invalidate the notion of deterrence, which is, after all, a doctrine that attempts to *minimise* actual use. But they do require us to ensure that deterrence remains effective in a shifting strategic environment. Deterrence is not without its problems—it's merely the defence doctrine of choice for a competitive, heavily armed world. Is it going to save us from all war? No. Hopefully it can save us from the most serious sort of war, namely great-power war—but even that's not guaranteed.¹⁰ Unfortunately, nuclear deterrence isn't a set-and-forget sort of thing.

But nor should we assume that nuclear war is inevitable, or that any crossing of the threshold automatically heralds the end of civilisation. If deterrence does break, we want it to do so in small packets, minimising the prospects for early targeting of cities, and maximising our prospects for de-escalation and war termination.

Andrew argues that if we want to enjoy a lively chat with our interstellar neighbours in the future, then keeping nuclear weapons around is just dumb. I think I'd reverse that judgement: I see no sense in pulling down the long pole in the tent of international security in the hope of meeting ET. ET might never visit—or even be friendly.

Notes

- 1 Andrew Davies, 'On the eve of destruction? (Part 1)', *The Strategist*, 17 August 2018, <https://www.aspistrategist.org.au/on-the-eve-of-destruction-part-1>; Andrew Davies, 'On the eve of destruction? (Part 2)', *The Strategist*, 23 August 2018, <https://www.aspistrategist.org.au/on-the-eve-of-destruction-part-2>.
- 2 Daniel Ellsberg, *The doomsday machine: confessions of a nuclear war planner*, Bloomsbury, 2017.
- 3 Bruce G. Blair, *The logic of accidental nuclear war*, Brookings Institution Press, 2011.
- 4 Eric Schlosser, *Command and control*, Penguin Books, 2013.
- 5 Michael Krepon, 'Safe nuclear weapons', *Arms Control Wonk*, 29 April 2015, <https://www.armscontrolwonk.com/archive/404598/safe-nuclear-weapons>.
- 6 Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, *Nuclear matters handbook 2016*, US Department of Defense, 2016, <https://www.acq.osd.mil/ncbdp/nm/nmhb/index.htm>.
- 7 Cixin Liu, *The three-body problem*, Tor Books, 2014.
- 8 Joseph Tainter, *The collapse of complex societies*, Cambridge University Press, 1988.
- 9 Kori Schake, 'Why we get it wrong: reflections on predicting the future of war', *War on the Rocks*, 10 August 2018.
- 10 Rod Lyon, 'Is major war obsolete?', *The Strategist*, 19 August 2014, <https://www.aspistrategist.org.au/is-major-war-obsolete>.

Extended nuclear deterrence and assurance

This is a topic where Australia has particular interests. Unfortunately, it's also one characterised by relatively high levels of misunderstanding. I've divided the posts on this topic into two groups: the first looks substantially at the broader pattern of US extended deterrence and assurance, though with a somewhat greater focus on Asia than Europe; the second focuses more narrowly on Australia.

Some commentators—including many of ICAN's supporters—believe that the critical nuclear balances in the world are those between the nine nuclear-weapon states. Those people are inclined to see extended nuclear deterrence—that is, the US commitment to provide an umbrella for its allies against nuclear coercion—as a readily disposable strategic luxury. So let me say something plainly at the outset: current extended nuclear deterrence arrangements are not a luxury.

I included the 'post-Frisco' post in the previous section specifically to show what the Asian nuclear map would look like if it consisted solely of the current nuclear-weapon states. Nuclear weapons would, in that scenario, reinforce revisionist and not status quo agendas. Extended nuclear deterrence does vital work at many points along the Eurasian rimlands. True, it is a second-order effect: it exists at the will of the dominant Western nuclear power. But that does not make it of secondary importance—its strength and durability remove the need for serious contemplation of possible proliferation by several US allies.

I've included one post here—'Two concepts of nuclear sharing'—which will probably set some readers' teeth on edge. I wrote it because I was tired of hearing that potential nuclear proliferators wouldn't choose to cut themselves off from friends and allies and would struggle to build the bomb all alone. No country has ever built the bomb relying solely upon its national assets—a point worth recalling if we think extended deterrence might be failing.

So, might it be failing? Well, the credibility of the doctrine turns on rather more than the US president's personal commitment—although it is he or she who must authorise the use of nuclear weapons in any particular scenario. It turns too upon a range of factors: it's hard to make the doctrine credible in a world with many nuclear-weapon states, hard to make it credible in a multipolar world, and hard to make it credible if the US becomes more introspective. There are reasons to worry. Given the strategic importance of the arrangements, that means both America and its allies should be giving this topic first-order attention.



Image: [Mark Bonica/Flickr](#).

Four models in search of a tailor

3 October 2013

At a seminar in the Stimson Center in late August, Brad Roberts, a former US deputy assistant secretary of defence, canvassed the future of US extended deterrence and strategic stability in Northeast Asia.¹ In an attempt to wrestle with the question of whether or not extended deterrence needed further ‘tailoring’ in the region, Roberts sketched out four alternative models for the future.

The four models can be briefly summarised as follows:

1. a continuation of the current system, whereby US nuclear weapons are only forward-deployed into the region during times of crisis
2. a return to the system in vogue during the Cold War, when US nuclear weapons were routinely deployed in the region, both on land and at sea
3. a NATO-like system whereby allies carry more responsibility for the stationing of warheads and provision of delivery systems, and are engaged in a high-level nuclear planning group
4. the emergence of a set of independent national nuclear arsenals that replicate British and French proliferation in the 1950s and 1960s.

The models offer a good starting point for a discussion about the future of extended nuclear deterrence and assurance in Asia, even though three of them aren’t especially tailored to current Asian requirements. The Cold War Asian model, for example, was there to counter the USSR (a symmetrical nuclear great power that often didn’t feel at home in Asia), a slowly modernising China and a non-nuclear North Korea, and to reassure a Japan in which the nuclear taboo was relatively stronger than it is today.

I suppose we could say the current system is tailored. But it might be better tailored to 1991 than to today. Yes, a reach-back system allows the US to forward-deploy its theatre and tactical nuclear weapons in a crisis. But it carries with it questions about the circumstances in which such deployment might occur. Indeed, in the wake of the Syrian chemical-weapons saga, are we going to find a US president seeking authorisation from Congress for that sort of move? What if the Russians come along with a plan to pre-empt deployment by energetic diplomacy?

The last two of the four options reflect European tailoring rather than Asian. Roberts admits the multilateral NATO Nuclear Planning Group doesn’t readily translate to the Asian environment. And he argues that British and French proliferation weren’t regionally destabilising in the same way that, say, Japanese proliferation might be—in large part because NATO ensured that the two European proliferators were already allied to many of their neighbours.

In all US-allied countries, there’s a range of opinions about what the nuclear future might look like. So it’s often a matter of judgement about which country favours which approach. Still, since option 4 isn’t really an option for strengthening extended nuclear deterrence, I suspect most advocates of a stronger US nuclear link would favour a halfway house between options 2 and 3. That sort of halfway house would seem to me to give allies in Northeast Asia what they want: a more robust US presence, rather than a fly-in, fly-out arrangement; a sense of shared engagement with the operational side of the nuclear deterrent; and a sense of ownership in nuclear planning. It’s true that the European model is far from a

perfect fit for Asia—there’s nothing like NATO to bring the cohesion of that theatre—so part of the tailoring exercise here will mean designing something new that addresses the key requirements.

Australia doesn’t feature prominently among the US allies with which the US feels it needs to buttress its current extended nuclear deterrence and assurance arrangements. Japan and South Korea obviously rank higher. But Canberra will need to keep a careful eye on what the US is doing with its Northeast Asian allies—an important piece of regional security architecture is being redesigned here, and it has implications for our own arrangements with the US.

For nuclear disarmament aficionados, the disappointing news will be that Roberts’ models contain no model for a diminished US extended nuclear deterrence role in Asia. That’s because a weakening of US nuclear engagement in the region could well cause the US’s own allies to lose faith and proliferate. In many ways, that would be the most destabilising outcome of all.

Note

- 1 Brad Roberts, *Extended deterrence and strategic stability in Northeast Asia*, NIDS Visiting Scholar Paper Series, no. 1, 9 August 2013, <http://www.nids.mod.go.jp/english/publication/visiting/pdf/01.pdf>.

Extended nuclear assurance and the US Navy

7 April 2015

One of the advantages of modern technology is that it offers good access to distant conferences. Internet users already have access, for example, to a mixture of transcripts, audio files and videos from the Carnegie International Nuclear Policy Conference held in Washington in late March.¹ The collection’s worth a browse for anyone interested in nuclear issues. But I’d like to concentrate today on just two of the panels: one on what allies want from extended assurance and a second on what they should expect from the same.²

I think the first of those sessions was comparatively disappointing. The panel was composed of three ambassadors: an Australian, a South Korean and a German. Ambassadors are by nature centrists, skilled at blurring unpopular messages. And extended nuclear assurance is a tough topic. The overall result was an audience left with only a thin appreciation of what allies want. True, in just about every US ally nowadays there’s a spectrum of views about where nuclear weapons fit in the future of their alliance relationship. But even an unpacking of that spectrum and the associated political drivers animating its diverse components might have made for a more interesting panel.

I also think the question of what allies want from extended nuclear assurance can be answered simply and directly. Allies want credible signals from Washington that the US’s willingness to run nuclear risks on their behalf remains strong in a transforming strategic environment. Their anxieties on that question are quickened by the pace of transformation, a growing ambivalence in US declaratory policy, and the multi-decade shrinkage in the US theatre- and tactical-range nuclear arsenal.

The second panel, composed of three non-ambassadors, was more engaging. In one particularly thoughtful burst on the Asian environment, Brad Glosserman (of the Pacific Forum CSIS) outlined a set of things that he believed allies *shouldn’t* expect. That list included ‘details’ about US deterrence

arrangements, forward-deployed US nuclear weapons, a comprehensive US strategic doctrine for Asia, clarity in the US–China relationship, and an end to political dysfunction in Washington.

I'm not sure there's much demand in Australia for greater details about US nuclear-weapon systems and arrangements. Nor do I think the final three points on the list are particular expectations in Canberra. Yes, a more comprehensive US strategic doctrine for Asia would be nice but, as Brad pointed out earlier in his presentation, the rebalance already offers a US leaning forward in Asia. But there is, I think, both in Canberra and in other allied capitals, an interest in strengthening the credibility of US extended nuclear assurance. Credibility turns on clear signals of commitment. And commitment might well include a greater level of forward deployment.

That's where I part company with Brad. So far, the reach-back model of US theatre- and tactical-range nuclear weapons in Asia turns solely upon air-delivered munitions flown into the theatre during crises. There aren't land-based nuclear weapons already situated on the territories of America's Asian allies. And the US Navy hasn't carried non-strategic nuclear weapons since the early 1990s. It's that absence of naval-based weapons that concerns me. The Asia–Pacific's still, for most American allies, primarily a maritime theatre. If the US Navy isn't going to be a contributor to extended nuclear assurance, that's going to leave a substantial gap in the fabric.

Nuclear weapons deployed on naval vessels—and, no, I'm not just talking about strategic ballistic missiles deployed on submarines—would offer a variety of gains. They would increase the US's nuclear presence in the region, while minimising the possibility of terrorist seizure of the weapons. They would allow the same set of weapons to play a strategic role across a set of different bilateral alliances in the Asia–Pacific. Mobile platforms help offset the theatre's vast size. And naval basing allows the US to exploit its naval strength in a maritime strategic environment.

It's been clear for some time that the US Navy's not a fan of nuclear weapons. At the tactical level, it's long believed that it has significant advantages in relation to a conventional conflict—in acoustics, for example—that would be lost in any crossing of the nuclear threshold. But if the Asian strategic environment continues to darken, reintroducing nuclear weapons onto naval vessels might be the easiest way to strengthen US extended nuclear assurance in Asia. Maybe the environment doesn't require a full return of the numbers and types of naval nuclear weapons deployed during the Cold War. Still, crossing off the list of possible US actions in the Asia–Pacific even a small increase in such weapons seems too hasty.

Notes

- 1 Carnegie–Tsinghua Center for Global Policy, 2015 Carnegie International Nuclear Policy Conference, 23–24 March 2015, Washington DC, <https://carnegietsinghua.org/2015/03/24/2015-carnegie-international-nuclear-policy-conference>.
- 2 Jane Hardy, Sinan Ülgen, Jürgen Schulz, Chun Yung-Woo, 'Reassurance: what do allies want?', panel session at the 2015 Carnegie International Nuclear Policy Conference, 23 March 2015, Washington DC, <https://carnegieeurope.eu/2015/03/23/reassurance-what-do-allies-want-pub-57677>; James Miller, Brad Glosserman, Catherine Kelleher, Kori Schake, 'Reassurance: what should allies expect?', panel session at the 2015 Carnegie International Nuclear Policy Conference, 23 March 2015, Washington DC, <https://carnegietsinghua.org/2015/03/23/reassurance-what-should-allies-expect/i20o>.

Why is assurance in trouble?

16 December 2016

US allies around the globe have begun to contemplate a future in which America plays a more restrained role. Here in Australia, we're acutely conscious of the recent surge of interest in the future of ANZUS. But media reports also tell of a sudden interest among some German commentators in the possibility of an independent European nuclear arsenal, or even an indigenous German one.¹ And Northeast Asian allies are contemplating both possible reductions in US forces stationed in their countries and the withdrawal of the US nuclear umbrella.

In short, US assurance policies are struggling. To see why, let's step back to think about what assurance is. It's the confidence that an ally will provide assistance when serious national interests are threatened. So there are two factors that contribute to that level of confidence: the assuring state's capability to provide actual assistance, and its resolve to do so when needed. If we wanted to represent assurance as a mathematical equation, it would be written as $A = C \times R$ (assurance equals capabilities multiplied by resolve). The equation is one of multiplication rather than addition because if either of the variables is zero, so is assurance.

Of course, assurance—like deterrence—is in the eye of the beholder. And typically the beholder's interested not merely in *some* level of capability, but in a level of capability that offers a margin of superiority over a potential adversary. Similarly, the beholder's interested not merely in *some* level of resolve, but in that level of resolve which suggests that vital national interests can be safely entrusted to the hands of a foreign power. So we might rewrite the equation as $A = PMC \times PLR$ (assurance equals the perceived margin of capability multiplied by the perceived level of resolve).

And here's where the problems start to become clearer. As other great powers have risen, and are developing and modernising their military capabilities and unfolding anti-access and area-denial plans for their immediate environs, it's become harder for the US to retail a story about its margin of superiority over potential adversaries. Over the past decade the need to tell that story has forced the US into its 'air-sea battle' doctrine and, subsequently, the 'third offset'. Neither is especially convincing, so on the capabilities side of the equation the overall assessment is one of relative US slippage. The upshot is that US allies proximate to potentially hostile great powers are more anxious about Washington's ability to save them.

There's a particular wrinkle on that side of the equation in relation to nuclear weapons. The American determination to decrease the profile of nuclear weapons in its own strategic posture has increased anxieties among its allies covered by the US nuclear umbrella. That's because the margin of conventional superiority of US forces seems to be narrowing over time, as other great powers modernise their militaries. But it's also because some traditionally constrained actors, like North Korea, are moving closer to a point where they could use nuclear weapons against the US homeland if Washington was to intervene on its ally's behalf. (That's one factor driving US and allied interest in ballistic-missile defences.)

So, the capabilities factor of the equation has its problems. But with Donald Trump's election as US president, we now have a new bout of allied anxiety about the resolve factor as well. Trump campaigned on the notion of 'America first'. He weakened US declaratory policy about alliances, portraying US commitments as optional and depicting security partnerships as protection rackets. He ruminated about

whether it might be better for Japan and South Korea to build their own nuclear weapons, rather than rely upon US extended nuclear deterrence. Nationalism and unilateralism trumped internationalism and consultation.

So allies now worry not only about a shrinking margin of US capability, but also about the US commitment to protect their vital interests in a world of contested multipolarity. And that's driving those allies to consider a range of strategic options that weren't even on the table in earlier days.

Is there a path back to the earlier condition of robust assurance? Possibly, but the incoming administration's going to have its work cut out on both factors in the assurance equation. Restoring US declaratory policy probably involves telling a new ordering story about the US role in the world during an age of contested multipolarity and domestic priorities. That's a big ask. Restoring a US margin of capability over potential adversaries might be an even bigger one.

The obvious answer is that US allies are going to have to bring more to the party, and to depend less on Washington to safeguard their interests. Their doing so would help to encourage the US to stick around—after all, assurance is a two-way street. But a set of game-changing strategic policies in Asia might well lie down that path. We should brace ourselves for a roller-coaster ride ahead.

Note

- 1 Ulrich Kühn, 'The sudden German nuke flirtation', Carnegie Endowment for International Peace, 6 December 2016, <https://carnegieendowment.org/2016/12/06/sudden-german-nuke-flirtation-pub-66366>.

Two concepts of nuclear sharing

24 January 2018

Suddenly and unexpectedly, a small but intense debate has ignited in Australia over an unlikely topic—the wisdom of acquiring an indigenous nuclear weapons arsenal.¹ One of the more novel contributions was made in a recent post on the Lowy Institute's blog, *The Interpreter*. The author, Peter Layton, suggested that Australia ought to consider the merits of 'nuclear sharing', either by deliberately strengthening its extended nuclear deterrence arrangements with the US or—more audaciously—by buying its way into a share of the British nuclear arsenal.²

While his post examines both alternatives, it's clear Peter favours 'going British'. But at first glance there'd seem to be some serious hurdles in the way. For one thing, Australia still wouldn't have full control over its own nuclear arsenal. Indeed, we'd be paying more—a lot more—to mimic an arrangement that the US already has with some of its key allies, but with a partner possessing a much smaller nuclear arsenal that's typically deployed in the north Atlantic. Further, we wouldn't be bringing anything to the table in terms of actual *nuclear* sharing; the Brits would be doing that, since it's their arsenal. All we'd be sharing is money.

So I'd like to use this post to unpack two concepts of nuclear sharing: the kind we already enjoy as a US ally, and the kind we might be more interested in pursuing if we really were intending to proliferate.

Let's start with the first. US allies around the world that benefit from US extended nuclear assurance participate in a range of supportive activities intended to strengthen the credibility of that assurance and to share the risks associated with nuclear deterrence. Some allies host US nuclear warheads. Some host the aircraft that would deliver those warheads. Some support nuclear operations by providing

aerial refuelling or air defence for nuclear-armed aircraft. And some contribute less directly: Australia, for example, has long been a contributor to US strategic command and control, rather than to the weapons systems themselves.

This form of nuclear sharing makes the benefits of nuclear deterrence more widely available to US allies—and aims to forestall proliferation among a group of advanced Western countries that could, if they chose, cross the nuclear threshold with relative ease.

The second form of nuclear sharing—the form currently practised by North Korea and Iran—covers a set of activities intended to lift both parties over the nuclear threshold. Cooperation is typically built on the basis of a shared strategic agenda—as when China helped Pakistan with nuclear-weapon design to frustrate India, for example.

This second form of sharing is anathema to many—because it smacks of proliferation rings, nuclear smuggling and illicit technology transfers. And, let's be honest, sometimes the 'sharing' is involuntary; several nuclear-weapon programs have depended on stolen information and technology. Still, as Jack Boureston and James Russell observe dryly, 'None of today's nine nuclear weapons states achieved their status without the assistance from people, information, equipment and/or sensitive technology that came from somewhere else.'³ Thomas Reed and Danny Stillman, in their book *The nuclear express*, argue that all current nuclear programs have, over time, turned upon a shared pool of knowledge that can be traced back to the Manhattan Project—a research effort in which 'less than a quarter of the senior technical staff at wartime Los Alamos, New Mexico, were native-born American citizens'.⁴

In short, when the need to proliferate is strong, nuclear sharing (of this second kind) makes sense. Proliferating is hard work. Sharing the burden with others typically hastens the process by broadening both the human capital and the technological skill set upon which the potential proliferator can draw.

What might sharing arrangements involve? Well, in principle, they might occur across the full range of activities necessary to build, deploy and sustain a nuclear arsenal. There are opportunities for cooperation in acquiring fissile materials, designing and fabricating nuclear devices, testing nuclear weapons, constructing delivery vehicles, supporting each other's nuclear operations, and so on. Parties to a sharing agreement might feasibly devise a cooperative venture at any point along that spectrum. They might cooperate on uranium enrichment, for example, but not on anything else. Similarly, they might cooperate on bomb design, or on nuclear testing, but not on delivery vehicles. Or they might cooperate only on delivery vehicles, steering clear of the more sensitive areas of cooperation.

Why is it worth thinking about this second form of nuclear sharing? For the simple reason that it might be about to enjoy a seminal revival. The first form of nuclear sharing is a core part of the global order forged by the US since the early days of the Cold War. While US alliances continue and extended nuclear deterrence endures, US allies have less incentive to proliferate. The second form gives us a picture of what a post-alliance world might look like.

In that world the Nuclear Non-Proliferation Treaty might not hold. For a number of states, a program of technical cooperation with a friend or partner would then offer the fastest route to successful proliferation. Some of those might see Australia, which has a record of close nuclear cooperation with both the UK and the US, as a potential partner for their own endeavours—despite the relatively underdeveloped nature of our nuclear sector.

Moreover, the shoe might well be on the other foot: in a darker Asian strategic environment, we might be the ones soliciting closer nuclear-sharing arrangements. If we were keen to proliferate quickly, where might we look for assistance?

Notes

- 1 See, for example, Paul Dibb, 'Our nuclear armament position is worth reviewing', *The Australian*, 23 October 2017, <https://www.theaustralian.com.au/commentary/opinion/our-nuclear-armament-position-is-worth-reviewing/news-story/d662ae050f0d1b203c8d9f1025687d1f>; Richard Brabin-Smith, 'Nuclear risk in Asia: how Australia should respond', *Policy Forum*, 11 December 2017, <https://www.policyforum.net/nuclear-risk-australia-response>; Hugh White, 'Nuclear weapons for Australia—not so fast', *The Strategist*, 16 December 2017, <https://www.aspistrategist.org.au/nuclear-weapons-australia-not-fast>; Malcolm Davis, 'Going nuclear?', *The Strategist*, 9 January 2018, <https://www.aspistrategist.org.au/going-nuclear>; Tony Walker, 'Why Australia might be forced to consider nuclear weapons', *Sydney Morning Herald*, 12 January 2018, <https://www.smh.com.au/opinion/why-australia-might-be-forced-to-consider-nuclear-weapons-20180111-h0gojv.html>; Ramesh Thakur, 'The bomb for Australia? (Part 1)', *The Strategist*, 17 January 2018, <https://www.aspistrategist.org.au/bomb-australia-part-1>.
- 2 Peter Layton, 'Why Australia should consider sharing nuclear weapons', *The Interpreter*, 17 January 2018, <https://www.lowyinstitute.org/the-interpreter/why-australia-should-consider-sharing-nuclear-weapons>.
- 3 Jack Boureston, James A. Russell, 'Illicit nuclear procurement networks and nuclear proliferation: challenges for intelligence, detection, and interdiction', *NPS Strategic Insight*, April 2009, <http://edocs.nps.edu/npspubs/institutional/newsletters/strategic%20insight/2009/bourestonApr09.pdf>.
- 4 Thomas C. Reed, Danny B. Stillman, *The nuclear express: a political history of the bomb and its proliferation*, Zenith Press, 2010.

Extended (nuclear?) deterrence: what's in a word?

22 January 2019

Over recent years, a somewhat geeky debate has emerged among the exponents of deterrence and assurance. Although the discussion typically occurs between Americans and nationals of an allied country, it's overly simplistic to describe it as one between the US and its allies—the divisions aren't that clear-cut.

The debate is part philosophical and part phraseological. At its core sits a single adjective. Some Americans (including policymakers) say that what the US offers its allies is 'extended deterrence'. But a number of allied nationals (again, including policymakers) find the phrase underwhelming; they'd prefer that it read 'extended *nuclear* deterrence'. And so we come directly to the crux of the argument: the presence or absence of the word 'nuclear' in the assurance that the US provides to its allies.

Some might find it difficult to imagine—in a world of great-power competition and faltering global order—that much of strategic consequence turns upon whether one particular aspect of US declaratory policy is best described by a noun with one adjective or a noun with two. But perceptions matter, so let's unpack the distinction a little more.

The first adjective in the phrase ('extended', the adjective everyone can agree on) refers to geography. In essence, it says that the deterrent powers of the US arsenal are 'extended' to cover forward-based allies and not merely the US homeland. Since US alliances are transoceanic, that first adjective plays an important role.

But the second, disputed, adjective refers to a more specific commitment—an assurance that the deterrent effects of US nuclear weapons are extended to cover forward-based allies. The word 'nuclear'

underlines the level of seriousness of America's commitment to its allies' security. The first adjective focuses on the geography of obligation, the second on its intensity.

Allies tend to focus on the nuclear element of deterrence because, as signatories of the Nuclear Non-Proliferation Treaty, they're not entitled to build nuclear weapons of their own. Either nuclear deterrence comes to them 'extended' by a nuclear-armed ally or it doesn't come to them at all—unless, of course, they choose to withdraw from the NPT and develop their own nuclear weapons. That's why proponents of extended nuclear deterrence often see it as the key to non-proliferation.

Naturally, an important stress test for the doctrine of extended nuclear deterrence is whether or not allies find it credible—that is, do they really believe that Washington would fight a nuclear war on their behalf when doing so would increase the risk of nuclear attack on the US homeland? Michael Quinlan, the British strategic thinker, once described the 'appallingly difficult dilemma' that extended nuclear guarantees encountered: 'how to give confidence to the forward members of an alliance in which nuclear power had for various reasons to be concentrated not in their hands but mostly in the hands of the rearmost member, on the far side of an ocean'.¹

That confidence tends to be shaken even by small things—such as the omission of the second adjective from the phrase 'extended nuclear deterrence'. Allies tend to see the full phrase as an important, if totemic, indicator of their own worth in the international order, whereas some in Washington probably see the phrase as entailing an unfortunately specific, and perhaps unnecessary, form of entanglement.

By contrast, allies tend to interpret the phrase 'extended deterrence' as a specific form of abandonment, whereas some US policymakers see it as a mere statement of strategic fact—that effective deterrence depends on a spectrum of capabilities rather than mere nuclear threats.

I said at the outset that this wasn't simply a debate between the US and its allies. Sometimes US—and allied—declaratory statements shift around, using the phrases either interchangeably or in support of a broader messaging about the role of nuclear weapons in US strategic policy and their prominence in alliance relationships. The Trump administration's Nuclear Posture Review, for example, uses 'extended nuclear deterrence' 11 times and 'extended deterrence' only six—in each case attempting to pick the version which best portrays the message it's trying to convey. The second adjective typically appears in the context of strengthening US assurance of allies.²

By contrast, the Nuclear Posture Review conducted under President Barack Obama used 'extended deterrence' 13 times and 'extended nuclear deterrence' not at all.³ But that was a document published back in the halcyon days of 2010, when memories of Obama's anti-nuclear speech in Prague the year before were still fresh, and the international security environment looked considerably more promising than it does today. In short, as international security has deteriorated, nuclear weapons have come more to the forefront of alliance politics—and the second adjective has returned.

A similar observation can just as easily be made about formal statements by US allies. The Australian government's response to a set of questions asked by former Greens senator Scott Ludlam back in 2011, for example, shows a preference for the noun with two adjectives, even during the years of a Labor government.⁴ But it doesn't need a particularly determined search of Hansard to show that 'extended deterrence' is used virtually interchangeably with its longer-format sibling.

One final, real-world wrinkle deserves mention. The term ‘extended deterrence’ might seem to imply greater US nuclear disengagement from its allies and, as I say above, perceptions matter. But in reality, America’s nuclear commitments to its allies remain robust under both formulations. Anyone who doubts that might like to read through section V of the Obama administration’s nuclear employment strategy.⁵ In practice, there’s less daylight between the two phrases than the debate presupposes. That there’s a debate at all turns upon the fluctuating level of confidence that sits at the heart of current alliance arrangements.

Notes

- 1 Tanya Ogilvie-White, *On nuclear deterrence: the correspondence of Sir Michael Quinlan*, International Institute for Strategic Studies, 2014.
- 2 US Department of Defense, *Nuclear Posture Review*, February 2018, <https://dod.defense.gov/News/SpecialReports/2018NuclearPostureReview.aspx>.
- 3 US Department of Defense, *Nuclear Posture Review report*, April 2010, https://dod.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf.
- 4 Australian Senate, ‘Questions on notice: Defence (question no. 714)’, Parliamentary Debates, 13 October 2011, https://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansards/44a5a46d-a92f-4e32-9264-5bdc1e61282a/0313/hansard_frag.pdf;fileType=application%2Fpdf.
- 5 *Report on nuclear employment strategy of the United States specified in section 491 of 10 USC*, US Department of Defense, 2013, <https://apps.dtic.mil/docs/citations/ADA590745>.

Australia and the US nuclear umbrella

This section explores an issue of importance to Australian policymakers, academics and think-tankers—and almost no one else. That issue involves the specific extension of the US nuclear umbrella to Australia. Some claim that the US has never provided such an assurance to Australia. Australian ministerial statements usually tie that assurance in relatively broad terms to the ANZUS alliance—as the minister for defence, Christopher Pyne, did in February 2019 in his statement on the joint facilities.¹

But has any US president gone further, and publicly underlined Washington’s commitment to the nuclear defence of Australia? The answer is yes, but it’s not in a place most Australians think to look. When President Richard Nixon enunciated the Guam doctrine, it was the third clause that received all the attention—the clause requiring allies to bear the brunt of their own conventional defence. Today, even some among Australia’s close-knit strategic community might be hard-pressed to say what the first two clauses covered—and that’s a pity since the second clause extends a nuclear assurance to US allies in Asia.

At some point it might be appropriate for Australia to seek a 21st-century version of that assurance. Its hosting of the joint facilities gives it a sound claim. Those joint facilities strengthen US capabilities in ballistic-missile-launch detection, submarine communications, intelligence collection, arms-control monitoring, military satellite communications and global space surveillance. Those capabilities contribute directly to US central deterrence, as well as to broader regional and Australian national security.

Also included in this section are a few posts that explore the potential failure of extended nuclear deterrence, and what that might mean for Australia.



Image: Kristian Laemmle-Ruff via the Nautilus Institute.

Note

- 1 Christopher Pyne, 'Joint facilities: enhancing Australia’s security and prosperity', ministerial statement, 20 February 2019, <https://www.pyneonline.com.au/media-centre/speeches/ministerial-statement-joint-facilities-enhancing-australias-security-and-prosperity>.

US extended nuclear assurance: hiding in plain sight

11 June 2013

There's been a resurgence of interest in recent years among Australian academics in the issue of US extended nuclear assurance to its Asian allies in general and to Australia in particular. I've written on this issue,¹ but so too have Andrew O'Neill, Stephan Frühling, Ron Huisken and Richard Tanter,² to name just some of the contributors.

One particular point has often generated a degree of confusion and uncertainty—the question of whether Washington has ever actually extended a nuclear guarantee to Australia. This isn't a trivial question. In a submission to the Australian parliament's Joint Standing Committee on Foreign Affairs, Defence and Trade in March 2004, Ron Huisken observed that he knew of no specific US commitment to extend nuclear assurance to Australia. Australians, said Huisken, had often 'claimed' a US nuclear guarantee, and Washington had never contradicted those claims, but it wasn't clear the US had ever actually provided a guarantee.³

Richard Tanter, in his 2011 article for *Pacific Focus*, repeated that argument, saying, 'Despite any number of reiterations of US support for the alliance with Australia as a whole, there is no known publicly available US official statement specifically providing an assurance of US nuclear protection for Australia in the face of nuclear threat or nuclear attack.' He also observed that nuclear assurance has received scant attention from Australian policymakers, with the 1994 Defence White Paper providing the first noteworthy example of official engagement with the doctrine.⁴

The inability to identify a US commitment to extended nuclear assurance for Australia has progressively led to the idea either that no such commitment exists or that it does exist but is deeply buried in the classified agreements that surround the actual ANZUS Treaty. I want to provide a modest input to this debate. I believe the US extended nuclear assurance to Australia *does* exist and it isn't classified. In fact, it hides in plain sight: it's clause 2 of the Guam doctrine.

For readers who came in late, here's the version of US commitments with respect to the Asia-Pacific first outlined by Richard Nixon at a press conference at Guam in July 1969 and recorded in his administration's first annual report to Congress on US foreign policy, submitted in February 1970:

1. The United States will keep all its treaty commitments.
2. We shall provide a shield if a nuclear power threatens the freedom of a nation allied with us, or of a nation whose survival we consider vital to our security and the security of the region as a whole.
3. In cases involving other types of aggression we shall furnish military and economic assistance when requested and as appropriate. But we shall look to the nation directly threatened to assume the primary responsibility of providing the manpower for its defense.⁵

I quote this piece of text for a particular reason. It's the wording that William McMahon, then minister for external affairs, used in his ministerial statement on international affairs provided to the House of Representatives on 19 March 1970. He specifically outlined the full three clauses of the Nixon doctrine and read clause 2 as an extended nuclear assurance, stating that 'the assurance of United States protection against nuclear aggression is itself of immense value in deterring any threat of such aggression'.⁶

In the debate on the ministerial statement, Gough Whitlam, then leader of the opposition, also accepted clause 2 as a US nuclear guarantee, although he proceeded to argue that the guarantee only really applied to full members of the NPT.⁷

I'll sum up by making three points—about context, scope and the future. First, I'd like to wrap some context around the events described above. It's worth noting that Australia signed the Nuclear Non-Proliferation Treaty on 27 February 1970, only three weeks before McMahon's ministerial statement, and that the NPT entered into force on 5 March 1970. It forced Australia and other countries to choose their nuclear identities. Australian foot-dragging on signature was motivated not solely by doubts about the agreement's efficacy, but by a concern that Australia might be putting aside a capability it would need at some future point. Clause 2 of the Nixon doctrine gave Canberra what it wanted before signature—an assurance of US nuclear protection into the future.

Second, anyone who reads clause 2 will see that it provides a shield against a nuclear power which threatens an ally's freedoms. Its scope is much broader than ANZUS, which is limited to armed attacks in the Pacific area. Threats to an ally's freedoms by a nuclear power might well involve attempts at nuclear coercion or large-scale conventional conflict, so the scope of clause 2 isn't limited solely to the deterrence of nuclear aggression. And while clause 2 implicitly includes conventional responses and not merely nuclear ones, remember that clause 2 is additional to clause 1, which has already committed the US to its standard treaty obligations.

Third, what does this all mean for Australia's relationship with the US in the Asian century? Japan and South Korea have already embarked on dialogues with the US about their own extended nuclear assurances in the shifting power relativities of 21st-century Asia. Perhaps it's time for us to do the same. If the Australian public debate about extended nuclear assurance is so impoverished that participants genuinely can't identify the source of that assurance anymore, it's time for revalidation and reinvigoration of the commitment.

Notes

- 1 Rod Lyon, 'The challenges confronting US extended nuclear assurance in Asia', *International Affairs*, July 2013, 89(4): 929–941.
- 2 Andrew O'Neil, 'Extended nuclear deterrence in East Asia: redundant or resurgent?', *International Affairs*, 2011, 87(6): 1439–1457; Stephan Frühling, 'The fuzzy limits of self-reliance: US extended deterrence and Australian strategic policy', *Australian Journal of International Affairs*, February 2013, 67(1): 18–34; Ron Huiskens, *Northeast Asia: a nuclear Gordian knot?* International Commission on Nuclear Non-proliferation and Disarmament, April 2009; Richard Tanter, "'Just in case": extended nuclear deterrence in the defense of Australia', *Pacific Focus*, April 2011, XXVI(1): 113–136, <http://nautilus.wpengine.netdna-cdn.com/wp-content/uploads/2011/12/201cJust-in-Case201d---Pacific-Focus.pdf>.
- 3 Ron Huiskens, 'Submission no. 10 to Inquiry into Australia's Defence Relations with the United States', Defence Sub-Committee of the Joint Standing Committee on Foreign Affairs, Defence and Trade, March 2004, note i, <https://www.aspistrategist.org.au/wp-content/uploads/2019/06/R-Huiskens-submission-10-to-Joint-Committee-on-Foreign-Affairs-and-Trade-2004.pdf>.
- 4 Tanter, "'Just in case": extended nuclear deterrence in the defense of Australia', 121, 118.
- 5 Richard M. Nixon, 'First annual report to Congress on United States foreign policy for the 1970's', in *Public papers of the presidents of the United States: Richard M. Nixon, 1970*, US Government Printing Office, 1971, p. 141, <https://quod.lib.umich.edu/p/ppotpus/4731750.1970.001/203?rgn=full+text;view=image>.
- 6 Australian House of Representatives, 'International affairs, ministerial statement, Mr McMahon: The Nixon doctrine', Parliamentary Debates, 19 March 1970, vol. 66, p. 679, http://historichansard.net/hofreps/1970/19700319_reps_27_hor66.
- 7 Australian House of Representatives, 'International affairs, ministerial statement, Mr Whitlam', Parliamentary Debates, 7 April 1970, vol. 66, p. 751, http://historichansard.net/hofreps/1970/19700407_reps_27_hor66.

Extended nuclear assurance: another thread in the tapestry

25 November 2014

Last year the government released a range of documents relating to Australia's approach to the Nuclear Non-Proliferation Treaty. The documents, dating between 1945 and 1974, were compiled in a volume edited by Wayne Reynolds and David Lee and published as part of DFAT's Documents on Australian Foreign Policy series¹—a series that has also done good work in relation to Timor-Leste, ANZUS and other topics.

I've been reading the manuscript off and on over the last couple of weeks, and the work certainly deserves greater public attention than it has so far attracted. Yes, the documents are heavily redacted—the phrase 'matter omitted' appears with depressing frequency. Still, what's included is comparatively frank—and revealing. Moreover, given the scarcity of material released from Defence files across this period,² some glimmers of policy thinking are better than none.

The documents cover a number of policy issues surrounding the central question of whether or not Australia should sign and ratify the NPT. Some details come as a surprise. For example, we learn that some officials were giving consideration to Australia's seeking recognition as a nuclear-weapon state under the NPT. Since the country had already hosted a range of nuclear tests on its territory, and Australian personnel had been engaged collaboratively in a number of non-explosive nuclear activities, the bare bones of an argument existed that we had a case to be treated as a nuclear-weapon state. (See paragraphs 36–37 in document 89.)

These days the broad outline of Australia's nuclear history is no secret.³ But time and again, the documents reward the reader with interesting insights. The record of the interdepartmental meeting on 19 April 1967 (document 88), for example, contains an assessment of where Australia then stood in its technical capabilities. In the words of Sir Leslie Martin, one of the defence scientific advisers at the table, 'No other country outside the nuclear powers knew more than we did on nuclear weapons. Our physicists had participated in explosions. We had seen what was inside a weapon, and knew how to make it.' No wonder Australia appeared in the CIA's 1957 assessment of possible future nuclear-weapon states.⁴

As the prospect of a treaty gathered pace, officials became anxious to ensure that it didn't cut off Australia's options. Similarly, they worried about the safeguard provisions, and how intrusive those might be. But my own interest lies more in their worries about security assurances: whether the ANZUS Treaty guaranteed protection against a nuclear attack or large-scale conventional attack, and whether in the event of such an attack the political pressures would favour US nuclear retaliation on our behalf or not.

Many conversations, with the Americans and others, cover that topic. Of particular interest is the following text taken from an aide-memoire sent by the US government to the Australian government on 1 May 1968 (document 126):

The United States Government fully appreciates the reasonableness of the Australian Government's intention to give the Nonproliferation Treaty careful study. However, the United States Government believes that the question of Nonproliferation Treaty security assurances is one of primary concern to non-aligned non-nuclear states and not to military allies of the United States, who are already covered by the nuclear protection of the US.

Australia is an especially close ally of the United States, having joined with the United States in two security treaties—the ANZUS Pact and the SEATO Pact. These alliance commitments are stronger than any we could give to non-allied states in conjunction with the Nonproliferation Treaty. The strength of our security commitments pursuant to treaties of alliance is based not only on the treaties themselves but on a history and tradition of close political and military collaboration. The United States and Australia have fought together as allies in World War II and Korea, and are now fighting together in Vietnam. The sacrifices which the United States is sustaining in Vietnam testify to the seriousness with which the United States views its commitments.

That final clause of the first paragraph is especially interesting: US allies are ‘already covered by the nuclear protection of the US’. I’ve previously written that a public form of the US extended nuclear assurance to Australia can be found in the Nixon doctrine, clause 2 of which was interpreted by both government and opposition in Australia as constituting such an assurance.⁵ From the aide-memoire, it’s clear that other confidential assurances preceded that.

Perhaps unsurprisingly, the words by themselves don’t appear to have satisfied the doubters. Document 153, for example, records Minister for External Affairs Paul Hasluck’s doubts in a discussion with the Italians in September 1968: ‘would the United States use its deterrent to save 12 million people in Australia, in the knowledge that this action would immediately endanger 200 million people in the United States?’

But the declassified documents verify one important fact: the doubts about extended nuclear assurance that have waxed and waned in Australia over decades don’t stem from the failure of the US to provide such an assurance. They stem from the failure of some Australians to believe it.

Notes

- 1 Wayne Reynolds, David Lee (eds), *Australia and the Nuclear Non-Proliferation Treaty, 1945–1974*, Documents on Australian Foreign Policy, Department of Foreign Affairs and Trade, 2013, <https://dfat.gov.au/about-us/publications/Pages/australia-and-the-nuclear-non-proliferation-treaty-1945-1974.aspx>. Individual documents can be accessed online at <https://dfat.gov.au/about-us/publications/historical-documents/Pages/volume-28/volume-28-australia-and-the-nuclear-non-proliferation-treaty-1945-1974.aspx>.
- 2 Greg Pemberton, ‘Department of Defence destroying and hiding sensitive documents’, *Sydney Morning Herald*, 7 November 2014, <https://www.smh.com.au/public-service/department-of-defence-destroying-and-hiding-sensitive-documents-20141107-11htgy.html>.
- 3 Jim Walsh, ‘Surprise Down Under: the secret history of Australia’s nuclear ambitions’, *Nonproliferation Review*, 1997, 5(1): 1–20, <https://www.nonproliferation.org/wp-content/uploads/npr/walsh51.pdf>.
- 4 Director of Central Intelligence, ‘Nuclear weapons production in fourth countries: likelihood and challenges’, US Central Intelligence Agency, 18 June 1957, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB155/prolif-2.pdf>.
- 5 Rod Lyon, ‘US extended nuclear assurance: hiding in plain sight’, *The Strategist*, 11 June 2013, <https://www.aspistrategist.org.au/us-extended-nuclear-assurance-hiding-in-plain-sight>.

Australia and the enrichment option

5 November 2015

Prime Minister Malcolm Turnbull has recently shown a more open-minded approach to Australia's nuclear future. In a radio interview in South Australia in late October he speculated on the possibility of a nuclear industry in Australia:

PRIME MINISTER: On nuclear power I commend Jay Weatherill for having the Royal Commission. I think it's good that he has done that.

QUESTION: I mean he's probably going to say yes, go ahead and create some kind of nuclear industry. What would you say?

PRIME MINISTER: I was just talking about this with the cook in the café downstairs when I was having some coffee and breakfast with Steve Marshall. As Brett the chef was saying, his view, and I think a lot of South Australians feel like this, and it is a perfectly reasonable view, is we have got the uranium. We mine it. Why don't we process it, turn it into the fuel rods, lease it to people overseas? When they are done we bring them back and we have got stable, very stable geology in remote locations and a stable political environment. That is a business that you could well imagine here. Would we ever have a nuclear power station in Australia or like the French do, dozens of nuclear power stations? I would be a bit sceptical about that ... But playing that part in the nuclear fuel cycle I think is something that is worth looking at closely.¹

This looks like a cautious testing of the waters by the prime minister. Brett the chef's left carrying the weight of the proposal, with the prime minister saying only that it's worth looking at closely. But if Australia's going to be working across the full nuclear fuel cycle, from the mining and milling of uranium ore—which is what we do now—to nuclear fuel fabrication, fuel leasing and the storage of spent nuclear-fuel waste, the country's going to have a nuclear industry and not just a mining operation. Such a capability would be both a commercial and a strategic asset. And it would mark a deep-level policy shift in Australia's nuclear identity, which since the days of Bob Hawke has consciously shunned the possibility that we might possess sensitive nuclear technologies such as uranium enrichment.

It was the Hawke government, in the balmy anti-nuclear days of the early 1980s, which shut down Australia's research and development program into centrifuge-based uranium enrichment. That program had begun in 1965, so by the mid-1980s we were throwing away 20 years' worth of effort. (A small R&D program in laser enrichment was subsequently closed down in the early 1990s.) The program was a casualty of Labor's interest in a stronger position on non-proliferation and disarmament, not a victim of underperformance. Indeed, the publicly available information suggests Australian nuclear engineers had been successful in building an experimental cascade that delivered enrichment results comparable to those being achieved at the time by Urenco.²

But enrichment, of course, doesn't merely provide fuel for nuclear reactors; it's a critical pathway to fissile materials for nuclear weapons. Enriching the percentage of the uranium-235 isotope in a given quantity of uranium—it's only 0.7% in natural uranium—is one means of building a nuclear bomb. That's why it's typically described as a 'sensitive' technology. Still, Australia has a strong case for an interest in uranium enrichment. We're not Iran—we have the world's largest uranium reserves, and a program to provide

low-enriched nuclear fuel to others and to manage the resulting wastes would be a positive one for the international community.

If the new prime minister is serious about the possibility of building a cradle-to-grave nuclear industry in Australia (though without nuclear power stations), he should be interested in an early resuscitation of the enrichment research and development program at ANSTO, Australia's nuclear science and technology organisation. An enrichment R&D program doesn't mean Australia intends to build nuclear weapons. In our case, even an industrial enrichment capability wouldn't suggest that. A sound understanding of the enrichment process is important in its own right, not just for our own prospects but for understanding what other countries are doing in their nuclear programs.

True, an Australian enrichment capability would also be a strategic signal. It would constitute a hedge against any sharp deterioration in the regional security environment—a hedge similar to that enjoyed by a range of other countries around the world and in all likelihood one we'll never need, because we're already protected by US nuclear weapons under the ANZUS alliance. Still, the 21st-century strategic order hasn't yet unfolded in Asia. Keeping options open is no bad thing.

There have been other proposals over the years for Australia to think about the enrichment option.³ Time to put the topic back on the agenda. As for Brett the chef, perhaps he should be applying for a job at Prime Minister and Cabinet under the new open admission rules.

Notes

- 1 Malcolm Turnbull, 'Interview with 5AA, Adelaide', transcript, *PM transcripts: transcripts from the prime ministers of Australia*, Department of the Prime Minister and Cabinet, 28 October 2015, <http://pmtranscripts.pmc.gov.au/release/transcript-40049>.
- 2 ABC, 'Nuclear enrichment program to be presented to govt', *7.30 Report*, transcript, 14 June 2007, <https://www.abc.net.au/7.30/nuclear-enrichment-program-to-be-presented-to-govt/2679452>.
- 3 See, for example, John Carlson, 'The potential for a regional uranium enrichment centre in Australia', *Security Challenges*, 2013, 9(4): 1–9, <https://www.regionalsecurity.org.au/Resources/Files/SC9-4Carlson.pdf>.

The 2016 Defence White Paper and extended nuclear deterrence

3 March 2016

Back in 2013, Ashley Tellis nicely captured some of the core truths about Australia and its relationship to nuclear weapons:

Currently, the sole example of an Asian state possessing latent nuclear capabilities, but with an arguably low dependence on nuclear weaponry, is Australia. Thanks to favorable geography and the benefits of US extended deterrence, Australia enjoys the best of both worlds: distance from the most significant threats, yet protection by the globe's most capable power. Should technology or politics ever alter these realities, however, Australia could develop significant nuclear capabilities. The country has a fascinating, though not well-known, history of entanglement with nuclear weapons.¹

Australia's unique status, complemented by its conflicted identity on nuclear weapons,² means that any official government commentary on the nuclear issue attracts exegetical analysis. Large conclusions tend to be drawn from brief sentences. But in the case of the 2016 Defence White Paper,³ the challenge is greater than usual. The document contains only fleeting references to nuclear matters, and extended nuclear deterrence rears its head only once.

The relevant piece of text is paragraph 5.20, reproduced here to keep the topic in context:

Australia's security is underpinned by the ANZUS Treaty, United States extended deterrence and access to advanced United States technology and information. Only the nuclear and conventional military capabilities of the United States can offer effective deterrence against the possibility of nuclear threats against Australia. The presence of United States military forces plays a vital role in ensuring security across the Indo-Pacific and the global strategic and economic weight of the United States will be essential to the continued effective functioning of the rules-based global order.

So, what do those sentences tell us about current Australian government thinking in relation to nuclear weapons? In truth, remarkably little. Some might see a hint of 'sole purpose' in the second sentence—namely, the suggestion that we rely on US nuclear capabilities solely to offset nuclear threats. But a careful reading doesn't support that interpretation. The paragraph doesn't, for example, offer any judgement as to what deters the possibility of *conventional* threats against Australia, so leaving open a potential role for US nuclear capabilities in that broader role.

Apart from the cautiously phrased thoughts offered in paragraph 5.20, nuclear aficionados will search in vain for judgements about the continuing efficacy of nuclear deterrence, whether in its general or extended form. The word 'nuclear' appears only 10 times in the document—seven times in relation to North Korea, South Asia, Iran and the broader issue of weapons of mass destruction; once in relation to the specialised support that Defence might be called upon to offer in response to civil emergencies; and twice in paragraph 5.20. While simple word counts don't prove much, 'nuclear' appeared 26 times in the 2009 white paper and 27 times in 2013. It's hard to imagine that the core issues have become less salient in the intervening years.

In this year's white paper there are no statements about the continuing resiliency of nuclear deterrence as an inhibition on great-power war. Similarly, there's no judgement that our major ally will continue to rely upon nuclear deterrence to underpin its strategic power. There's no speculation of the sort offered in the 2009 version about the 'significant and expensive' alternatives that might confront Australia if US extended nuclear deterrence were to prove incredible. The 2013 white paper shied back from that hypothetical and this latest offering exercises a similar discretion.

Nor is there any coverage of a more worrying possibility: that other US allies—either in Asia or elsewhere—might begin to find US nuclear assurances strategically unsatisfying and move towards their own indigenous nuclear arsenals. One of the most compelling reasons for Australia to support US extended nuclear deterrence is because it helps underwrite the security of nearly 40 US allies and partners worldwide, many of which confront larger and more immediate adversaries than we do. If extended nuclear deterrence starts to break among that group of allies and partners, we'll be living in a different world.

It's probably expecting too much to hope that any Australian defence white paper would offer a comprehensive view of Australian thinking on nuclear weapons. But nor should government statements shy away from the issue to the extent this one does. With a wave of nuclear modernisation occurring across the globe, including in the US, and the world settling into a second nuclear age markedly different from the first, governments should be prepared to articulate and defend their thinking about nuclear

strategy when they have the opportunity. Bald statements about our continuing faith in extended nuclear deterrence are no longer enough. We should be exploring options to strengthen deterrence in a rapidly changing world.

Notes

- 1 Ashley J. Tellis, 'No escape: managing the enduring reality of nuclear weapons', in *Strategic Asia 2013–14: Asia in the second nuclear age*, Ashley J. Tellis, Abraham M. Denmark, Travis Tanner (eds), National Bureau of Asian Research, 2 October 2013, <https://www.nbr.org/publication/no-escape-managing-the-enduring-reality-of-nuclear-weapons>.
- 2 Christine Leah, Rod Lyon, 'Three visions of the bomb: Australian thinking about nuclear weapons and strategy', *Australian Journal of International Affairs*, 2010, 64(4): 449–477.
- 3 Department of Defence, *2016 Defence White Paper*, Australian Government, 2016, <http://www.defence.gov.au/WhitePaper>.

Australia, extended nuclear deterrence, and what comes after

2 June 2017

Recent media reports suggest senior US officials have told Australia's foreign minister, Julie Bishop, that if North Korea's nuclear-weapon program can't be reversed, South Korea and Japan will likely pursue their own indigenous nuclear arsenals.¹ In fact, the proliferation chain might not be quite that straightforward—in every proliferating country, strategic logic has to coexist with a permissive political environment. But the strategic logic is certainly becoming more compelling. Compelling enough, at least, that Australia should be considering two important issues: what South Korea's and Japan's crossing of the nuclear threshold would say about the continuing credibility of the US doctrine of extended nuclear deterrence; and how Australia's own nuclear identity might shift in a more densely proliferated world. Both questions are so important that they merit some discussion during Monday's AUSMIN dialogue, despite the already crowded agenda.

Let's start with the first—and simplest—question. If South Korea and Japan were to decide they needed their own nuclear arsenals, their decisions would suggest, strongly, that the age of the US nuclear umbrella was drawing to a close. The credibility of US nuclear assurances would face a challenge as fundamental as that posed by French proliferation back in the 1960s, but in an environment marked by greater anxiety over Washington's constancy. US allies around the world would revisit their own degree of faith in such commitments—and any such reassessment would, of course, be influenced by the fact that two of their number, both essentially status quo powers, had already abandoned the church.

True, Japan's and South Korea's particular strategic motivations wouldn't necessarily be replicated among all US allies and partners. Nor would all enjoy the opportunity to cross the nuclear Rubicon in relatively short order—an option that exists for Tokyo and Seoul because of their extensive civil nuclear capabilities. But the honest assessment must be that defection by two principal US allies would be grievously felt, and might even precipitate the collapse of the broader doctrine of extended nuclear deterrence.

If that was to happen, we could easily find ourselves living through an age of sudden, intense nuclear proliferation. Current geopolitical uncertainties—already disruptive and disintegrative—might crystallise in an unpleasant fashion. The Taiwanese, the Poles, the Germans, the Saudis, the Turks and the Egyptians,

for example, might follow the South Koreans and the Japanese. Holding Iran away from a bomb would become much more difficult. Within a decade or two we could be living in a world with around 20 nuclear-weapon powers, not just the current nine.

In relation to the second question—about Australia’s nuclear identity—it’s important to confront the central question right up front. If South Korea and Japan decide they’re unable to rely upon US extended nuclear deterrence, does it make sense for Australia to continue to do so? For it to add up, we’d need to have a convincing argument about why we were more strategically important to Washington than the two allies in the North Pacific—so making it more credible that the US would run nuclear risks on our behalf that it might not on theirs. That’s going to be a challenging argument to make, and it would only become more challenging in the wake of further defections from the current nuclear order.

Extended nuclear deterrence makes most sense in a low-proliferation world where the nuclear-weapon states are risk-averse great powers, because the risks the guarantor runs on behalf of its allies are few and unlikely. But it makes less sense in a densely proliferated world, where guaranteeing to run risks on behalf of others is a much more fraught enterprise. Each new proliferator tears at the plausibility of extended nuclear deterrence, but risk-tolerant proliferators do particular damage. The upshot is that the concepts of extended deterrence and assurance make good sense in a world of five nuclear-weapon states, less sense in a world of 10, and almost no sense at all in a world of 20.

Over recent years, Australian government ministers and official documents have had little to say about nuclear deterrence in general and extended nuclear deterrence in particular. Still, it’d be wrong to conclude from that limited evidence that Australia would be indifferent to the folding of the US nuclear umbrella. On the contrary, any such development would excite the most serious reconsideration of alternative strategic options since Australia signed the NPT in 1970. In a densely proliferated world, the costs of remaining a conventionally armed middle power would probably rise steeply. In his chess-themed novel *The queen’s gambit*, Walter Tevis brutally describes the Caro–Kann Defence as ‘all pawns and no hope’. Future Australian governments—of whatever persuasion—would be reluctant to allow their defence policies to be described in similar fashion.

Note

- 1 Simon Benson, Emily Ritchie, ‘Asia nuclear arms race feared’, *The Australian*, 26 May 2017, <https://www.theaustralian.com.au/nation/foreign-affairs/asia-nuclear-arms-race-feared-as-julie-bishop-and-us-sound-warnings/news-story/fee7229fec15c23f842f6f0e3594b4e2>.

Australia and nuclear strategy: the empty middle ground?

28 February 2018

Some years ago, Christine Leah and I published an article that explored Australian thinking about nuclear weapons and strategy. We argued that for more than six decades Australians had essentially espoused ‘three visions of the bomb’.¹

Those visions—which we labelled Menzian, Gortonian and disarmar—competed on four grounds: the role that nuclear weapons play in international order; the doctrine of deterrence; the importance of arms control; and the relevance of nuclear weapons to Australia’s specific needs.

It's important to have a sense of each of the visions. Menzians believed that nuclear weapons made a positive contribution to global order provided that they were held by responsible, self-deterred great powers. Deterrence played a central role in that contribution because the primary role of nuclear weapons was to deter great-power war, not to fight it.

Extended deterrence allowed great powers' allies to benefit from the security offered by nuclear weapons without needing to build their own. Arms-control agreements were important in stabilising international competition and minimising the risk of nuclear proliferation.

And Australian security was maximised by constraining nuclear weapons to their broader, indirect, systemic role; it would be damaged by the wider spread of such weapons.

Gortonians believed that nuclear weapons, over time, would proliferate beyond the small group of great powers. But they also believed that great powers were, like other states, self-centred, and that nuclear weapons would only ever be used to defend key interests. Since interests usually attenuated with distance, it would always be difficult for a great power to extend deterrence to its distant allies; deterrence was, by its nature, a 'local' phenomenon.

Arms control wasn't central to the Gortonian world view: this was the group that opposed Australian signature of the Nuclear Non-Proliferation Treaty, fearing it would tie our hands in relation to future options. And, of course, the Gortonians believed that an indigenous nuclear arsenal was necessary to safeguard properly Australia's key strategic interests—including defence of the continent itself.

Disarmers saw nuclear weapons as order-destroyers rather than order-builders. They denied that great powers were responsible custodians of nuclear arsenals and believed that such states were even more self-interested than smaller states. They declared nuclear deterrence—and extended nuclear deterrence—a myth, and pointed to both the continuation of conventional war and the potentially high cost of system failures as reasons to seek a better path to security.

The disarmers were arms controllers on steroids: they sought grand outcomes, and pursued an absolutist version of nuclear disarmament. And, of course, they saw no value in nuclear weapons for Australian security—whether of the indirect contribution championed by the Menzians or the direct contribution sought by the Gortonians. They wanted Australia to disengage from the nuclear world—spurning the notion of extended nuclear deterrence, closing the joint facilities and forgoing sales of its own uranium.

The three visions advertised radically different futures. The Menzians had a plan for Australia to live in a world where nuclear weapons were held by a small number of great powers. The Gortonians had a plan for Australia to live in a more highly proliferated world. The disarmers had a plan for Australia to live in a world without nuclear weapons.

Each of the visions boasted a long lineage, but it would be wrong to imagine that they were equally influential in shaping Australian nuclear policy. In brief, the Menzians were the dominant vision in every decade; the Gortonians were the nuclear mavericks of the right, the disarmers the nuclear mavericks of the left. Across both major political parties, Labor and the Coalition, a bipartisan commitment to the Menzian vision prevailed.

And so we come to 2018.

An age of nuclear revival is upon us. The great powers are modernising their nuclear arsenals. North Korea has shown that it can design and test not merely simple fission devices, but thermonuclear ones. Our major ally, the United States, has published a Nuclear Posture Review that's distinctly more muscular than the one it published in 2010—despite the key elements of continuity that the latest document contains.

A small debate has begun to unfold about whether Australia should be reconsidering its own indigenous nuclear arsenal—a debate containing many resonances from the Gortonian vision. Separately, the disarmament vision has begun to reclaim its ground, championing the nuclear ban treaty as the way forward, and urging Australian signature and ratification.

But what's striking about the recent national conversation on nuclear weapons has been the relative absence of the Menzian voice. Governments have traditionally been key supporters of that vision because it articulates a centrist, moderate view of nuclear order, and because it allows Australia to benefit from nuclear deterrence while bearing few of the costs. Moreover, it adds meaning and purpose to Australia's long-running efforts to strengthen global and regional non-proliferation regimes.

But in recent years, public defence of nuclear deterrence has been confined to a few references in defence white papers. Ministers and departmental heads, for whom the complexities of nuclear order were once the grist of daily debate, have moved on to other priorities, as though the big nuclear questions have all been settled.

That's wrong. Nuclear issues are returning rapidly to the international agenda. Menzians need to find their voice—and soon. If they don't, the other two visions will begin to compete over the empty middle ground. And Australians would find that competition bitter and divisive.

Note

- 1 Christine Leah, Rod Lyon, 'Three visions of the bomb: Australian thinking about nuclear weapons and strategy', *Australian Journal of International Affairs*, 2010, 64(4): 449–477.

Australia, nuclear weapons and America's umbrella business

9 July 2019

Hugh White's new book, *How to defend Australia*, has stirred up a hornet's nest on the topic of potential nuclear proliferation. In one sense, that's a surprise, since anyone who's read the relevant chapter knows that it's book-ended by carefully crafted paragraphs which state explicitly that White 'neither predicts nor advocates' Australia's development of an indigenous nuclear arsenal.¹

But in between those paragraphs, White explores the history of Australian interest in a national nuclear weapons program, underlines the dwindling credibility of US nuclear assurances to allies, canvasses a possible nuclear doctrine for Australia, and recommends a force structure—*more* submarines—suitable to what he sees as our new straitened strategic circumstances. If he's not advocating a nuclear arsenal, why is he telling us so much about what it ought to look like?

Let's start with the possibility of Australian nuclear proliferation up front. As I wrote recently for a chapter in *After American primacy*, there are five barriers to Australian proliferation: ideational, political, diplomatic, technological and strategic.² Briefly, crossing the nuclear Rubicon would require:

- Australians to think differently about nuclear weapons—as direct contributors to our defence rather than as abstract contributors to global stability
- a bipartisan political consensus to support proliferation, during both development and deployment of a nuclear arsenal
- a shift in Australia’s diplomatic footprint, to build a case for our leaving the Non-Proliferation Treaty, and abrogating the Treaty of Rarotonga, while still being able to retail a coherent story of arms control and nuclear order
- serious investment in the technologies and skill sets required to construct and deploy, safely and securely, both nuclear warheads and appropriate delivery vehicles
- and a strategy which gives meaning to our arsenal and an explanation of our thinking to our neighbours and our major ally.

White’s chapter draws together a set of thoughts that relate primarily to the fourth and fifth barriers. His focus is on defending an Australia that’s ‘all on its own’ against a nuclear-armed—and conventionally well-equipped—great power. If he didn’t at least consider the option of an ‘Aussie bomb’, his work would be incomplete.

Still, White sees the primary threat as one of nuclear coercion—nuclear blackmail, he calls it—rather than actual nuclear attack. In response, he argues in favour of a ‘minimum deterrence’ nuclear posture for Australia, citing the British and French programs approvingly. Minimum deterrence, says White:

does not envisage that nuclear weapons would ever be used this way [in actually fighting wars], or indeed used at all: their sole purpose is to deter nuclear attack by others. It is one of the bewildering paradoxes of nuclear strategy that if an attack occurs then the strategy has already failed, and there is not much point in using the weapons to retaliate. But their effectiveness *as a deterrent* depends on their being evidently capable of use, and on those responsible for ordering their use being evidently willing and ready to do so.³

But ‘minimum deterrence’ is a slippery term—Chinese, Indian and Pakistani declaratory policies have all, at one time or another, applied it to their own programs. The term, by the way, typically means something different from what readers might think; it means the minimal nuclear capability necessary to underpin effective deterrence, not—as a literalist might imagine—the nuclear capability necessary to underpin a minimal level of deterrence. In the French case, for example, Cold War nuclear doctrine called for an arsenal that could ‘rip the arm off’ a superpower, leaving it an amputee among its more able-bodied peers.

Australia, were it to develop nuclear weapons, would need a nuclear arsenal and nuclear posture aligned with its strategy. So, what is it we might want nuclear weapons to do? If we want them to constitute an effective deterrent against an authoritarian great power, neither arsenal nor posture could be threadbare. And we surely couldn’t espouse a doctrinal position that minimum deterrence would fail with an adversary’s first use and that there would be no point in retaliation.

What, after all, might drive a decision by Australia to proliferate? White argues that it would be Australia finding itself—like Kevin McCallister in the movie—‘home alone’. If so, what’s happened to our current

strategy of working with allies and partners to promote and defend the regional order we most want? A nuclear-armed Fortress Australia isn't especially appealing. I think there's a different scenario in which Australia might choose to build a relatively modest, but capable, nuclear arsenal, and that's where we would be trying to underline both a condition of prickly regional multipolarity and our capacity to play a role as a regional security contributor.

Australia's security is fundamentally shaped by the global and regional orders. At the moment, US extended nuclear deterrence is a key ingredient of those orders. The US nuclear umbrella protects almost 40 allies worldwide. What happens if America goes out of the umbrella business? Well, we know what our region would look like: the remaining nuclear powers would be Russia, China, India, Pakistan and North Korea.

As I said in an earlier post, the maldistribution of residual nuclear weapons would reinforce the power shifts already under way within the region.⁴ Moreover, a fast-rising power, like China, could choose to 'sprint to parity' with the US and Russia under such conditions—it's certainly not constrained by formal arms-control agreements.

That would be a world where Japan, South Korea and Australia had shared incentives to proliferate, and perhaps Indonesia and Vietnam too; where we probably wouldn't be the first horse out of the gate; and where we might reasonably hope to 'share' the challenges of proliferation with others.

Let me say that such a future world is less attractive than the one we live in now. Asia typically hasn't put a high priority on nuclear weapons, which tend to sit in the strategic background rather than the foreground. A sudden cascade of nuclear proliferation would make for a more fraught and difficult region—which is one good reason we ought to be working harder to keep the US engaged in Asia and its umbrella business healthy.

Notes

- 1 Hugh White, *How to defend Australia*, La Trobe University Press in conjunction with Black Inc., 2019.
- 2 Rod Lyon, 'Nuclear weapons and the defence of Australia', in Peter J. Dean, Stephan Frühling, Brendan Taylor (eds), *After American primacy: imagining the future of Australia's defence*, Melbourne University Press, 2019, pp. 60–74.
- 3 White, *How to defend Australia*, p. 239.
- 4 Rod Lyon, 'Post-Frisco: misshapen deterrence', *The Strategist*, 13 July 2018, <https://www.aspistrategist.org.au/post-frisco-misshapen-deterrence>.

'Sociable' nuclear proliferation

22 July 2019

In recent weeks, a lively debate has swirled around Hugh White's canvassing of a possible indigenous nuclear-weapon program in Australia's future—or, more accurately, in that version of Australia's future where the US presence in Asia and extended nuclear deterrence have collapsed and Australia, 'home alone', is attempting to defend itself against a hostile, powerful China.¹ In this post, I want to transplant that scenario to the broader regional framework and unpack some preliminary thoughts about what Australian strategy—as opposed to Australian defence—might look like.

As I've observed in a previous post, the failure of US extended nuclear deterrence would result in a profound imbalance of residual nuclear capabilities in Asia.² The remaining nuclear powers would be—in order of arsenal size—Russia, China, Pakistan, India and North Korea. (Russia's arsenal is currently

measured in the thousands, China's in the hundreds, Pakistan's at about 140 warheads, India's at perhaps 120 warheads, and North Korea's at roughly 40–70 warheads.) Only one of the five is a democracy and it has the second smallest nuclear arsenal and a strategic doctrine that still bears the marked imprint of non-alignment. Even without a single warhead being fired in anger, the gravitational effects of that imbalance would be felt—intolerably—across the region.

Now, that's the scenario which underpins the current debate over whether Australia might reconsider its nuclear options. But, so far, much of our debate has centred too narrowly on our immediate defence needs and on whether we even have the capabilities to build nuclear weapons anyway.³ There's a much bigger question that arises, and it's one that concerns a range of regional countries and not merely Australia. Isn't this a situation where a—measured—cascade of proliferation would enhance regional stability rather than undermine it?

If we judged that rectifying the regional nuclear imbalance was important to us, we'd see our policy options in a different light. Australian proliferation would probably be part of the rectification, but a small and slow part. By ourselves, it would take decades to build a credible arsenal. And geography still wouldn't be our friend—the brutal truth, which in many ways is a virtue for Australian security too, is that Australia stands too far back from the critical force balances along the Eurasian rimlands to be seen as a central player. In short, regional stability would continue to turn primarily upon balances other than the China–Australia one.

So, might we see nuclear-weapon programs unfold elsewhere across the region? Yes. And we shouldn't expect them to look like the proliferation efforts of the past, which were typically national-centric efforts. The nuclear-weapon states the world has now are—broadly—great powers and rogues. Great powers needed little help to proliferate; rogues attracted little help to proliferate. But we shouldn't automatically expect status quo middle powers, driven by a sudden imperative to proliferate, to behave the same way. 'Sociable' proliferation, where partners work together to obtain nuclear capabilities, is much more likely—particularly if those middle powers share a set of strategic interests that they see as stabilising and regionally beneficial. Thus we might see both a new, cooperative model of proliferation and a different region emerge at the same time.

Of course, sociable proliferation would still mean the end of the Nuclear Non-Proliferation Treaty. A range of status quo states would have to leave the treaty, and they'd probably be leaving not one by one but two by two. Their doing so would, in all probability, collapse the tent. After all, Asia's not the only region where a sudden cascade of proliferation might make sense. Nuclear-weapon programs would likely spring up elsewhere—in both the Middle East and Europe, for example—whether Asia acted or not. Some would succeed, some would fail; not all countries are well placed to proliferate sociably.

But let's wrench the argument back closer to home. Would there be a case for Australia to do more to support rectification of the nuclear imbalance in Asia and, if so, what should we be doing? (Just as a forewarning, readers should remember that the following recommendations are scenario-dependent—they are *not* designed for the world we live in now, or even for the world most likely to come into being.)

Since the fundamentals of Australian security are set at the Eurasian rimlands, yes, Australia should be doing more to correct the nuclear imbalance the scenario depicts. We might do so, timidly, by signalling our understanding of other countries' proliferation efforts in cases which we saw as regionally stabilising.

Signalling is cheap but not especially sociable. More practically, we might consider a range of supportive or cooperative linkages to other countries' efforts. At the other end of the spectrum from supportive signalling are actual joint proliferation programs where countries share both the burdens and the rewards of proliferation.

Northeast Asian countries are generally further down the track in terms of nuclear latency than their Southeast Asian counterparts. So we would be talking a lot more to Japan and South Korea about shared interests and prospects for cooperation. Within Southeast Asia, we would probably be canvassing with Indonesia and Vietnam the opportunities to enhance bilateral or even trilateral cooperation. And we would likely be talking to New Delhi about how Australia could help India strengthen its position on the regional nuclear ladder.

Thinking about Hugh White's scenario in its strategic dimensions highlights just what a different world that might yet turn out to be. Big questions would confront Australia—and none of them would have simple, rules-based answers. But the big questions would likely reinforce our core strategic principle: that partnerships have been the basis of real Australian leverage in the world and we should work with others, not alone, even in the hard area of proliferation.

Notes

- 1 Hugh White, *How to defend Australia*, La Trobe University Press in conjunction with Black Inc., 2019.
- 2 Rod Lyon, 'Post-Frisco: misshapen deterrence', *The Strategist*, 13 July 2018, <https://www.aspistrategist.org.au/post-frisco-misshapen-deterrence>.
- 3 Heiko Timmers, 'Nuclear weapons? Australia has no way to build them, even if we wanted to', *The Conversation*, 10 July 2019, <https://theconversation.com/nuclear-weapons-australia-has-no-way-to-build-them-even-if-we-wanted-to-120075>.

The North Korean challenge

For decades, the North Korean nuclear program crawled forward at the speed of a tortoise. That wasn't totally reassuring because, given enough time, even a tortoise can reach its objective. But what it did mean was that we always sensed we had time to act if things looked like they were taking a turn for the worse—which was, of course, the thinking that lay behind the policy of 'strategic patience'.

Then came 2017. The tortoise leapt up and sprinted towards the finish line. Pyongyang successfully tested what was probably a thermonuclear device. And it displayed two different intercontinental ballistic missiles, successfully launching both on highly lofted trajectories. Seemingly in the blink of an eye, the nuclear threat posed by North Korea transformed from the comparatively pathetic to the seriously worrying.

Few countries in the world possessed both thermonuclear warheads and ICBMs, and none was a rogue hermit kingdom with little equity in the global order. None was run by a leader who seemed to have authorised the use of VX to kill his half-brother—and that after the VX had been smuggled across international borders for use in a public airport. None was likely to be quite so disposed to sell critical nuclear components or technologies on the black market.

Two US – North Korean summits later, we're not much closer to reining in Pyongyang's nuclear program. This series of posts explores some of the strategic challenges that North Korean proliferation brings to the contemporary nuclear world. The posts don't provide much by way of answers. One of them argues that Kim Jong-un probably believes that he can slide back into a set of reassuring behaviours more typical of other Asian nuclear-weapon states—but that will be hard to do.



Image: (stephan)/Flickr.

North Korea: waiting out the tortoise?

12 February 2016

North Korea's latest satellite launch helps expose the paucity of the international community's options for responding against a determined proliferator. The UN huddles to agree on new sanctions against Kim Jong-un's regime. China counsels all parties to act calmly and with deliberation, clearly still believing that the present regime in Pyongyang is preferable to an uncertain future on the peninsula. The Obama administration clings tenaciously to its policy of strategic patience—a policy that makes sense only on the condition that we can wait out North Korean radicalism.

North Korea's nuclear and missile programs are never going to win any prizes for speed or technological prowess. Events typically have a stage-managed character to them. They're often conducted to celebrate particular occasions on the leadership calendar: Kim Jong-un's birthday, for example. Official media coverage of the events contains a mixture of real and concocted footage. The test of an apparent submarine-launched ballistic missile depicts the missile streaking boldly into the sky, which in all likelihood never happened.¹ Coverage of the space launch last Sunday appears to include footage from the 2012 space launch.²

But one thing is clear: even a tortoise will eventually reach the winning post. What constitutes the winning post? A semi-reliable long-range ballistic missile that can be fitted with a solitary nuclear warhead and perhaps some elementary penetration aids to confuse a ballistic-missile defence. How far is North Korea from that goal? We don't know—and that's worrying in itself. Common sense says it's better at building shorter-range missiles than longer-range ones, but the same is true of everyone. Common sense also says it's harder to miniaturise a nuclear warhead than to build one at all, but again that doesn't get us far in judging North Korean progress down the miniaturisation path.

In the absence of hard data about the rate of technological progress, there's an obvious tendency to make worst-case assumptions about North Korean capabilities. That seems to be the US military's approach, with senior US military leaders occasionally stating that they have to assume Pyongyang already has the ability to target the continental US with a nuclear warhead.³

The assumption isn't contrived. The launch of a satellite into space uses similar technologies to those needed for a long-range missile. The launcher has to accelerate the satellite to a velocity of 7 kilometres per second to achieve orbital insertion, and that's the sort of capability a state needs in order to build an intercontinental ballistic missile. If the throw-weight of the launcher is large enough—in other words, if the nuclear warhead weighs approximately the same as the satellite—it should be possible to substitute one payload for another.

True, a satellite launch isn't exactly like a ballistic-missile test: it doesn't allow testing of a re-entry vehicle, for example. Stresses upon an ICBM re-entry vehicle are higher—because of velocity and heat—than they are upon a shorter-range re-entry vehicle. And the payloads might not be perfectly interchangeable, for the simple reason that the physical dimensions of a nuclear warhead are more constrained than those of a satellite meant to broadcast a few happy slogans about life under Kim Jong-un. But remember the tortoise. If we give Pyongyang long enough, and the regime endures, it will eventually reach the winning post.

With sanctions ineffective, negotiations non-existent, and strategic patience wearing thin, the international community is in the market for new ideas on how to constrain the tortoise. What we might call the gentler options have so far failed, which means that harder options are gradually looking more attractive. Those include something already under discussion: the deployment of US ballistic-missile defences to neighbouring countries. But Beijing opposes that option, concerned that the associated radars would look deeply enough into China that they could provide early tracking capabilities against Chinese strategic missiles.

The harder options might also include the deployment of a small number of US nuclear warheads in Northeast Asia to reinforce extended deterrence relationships with US allies, though it's hard to see the Obama administration pursuing that course. And we shouldn't entirely rule out the possibility of overt military action against the North's nuclear and missile programs. That would be an extreme option—many would prefer tolerating Pyongyang's possession of a small nuclear arsenal before reaching that point. Still, tolerance turns upon the same axis as strategic patience—the judgement that we can wait out North Korean radicalism. Can we?

We're past the easy options, and they haven't worked. But in all likelihood the latest bout of nuclear and missile testing won't be enough to precipitate the harder options now necessary to deflect Pyongyang from its course.⁴ International leaders will take solace in the fact that they're menaced by a tortoise, after all.

Notes

- 1 Catherine Dill, 'Video analysis of DPRK SLBM footage', *Arms Control Wonk*, 12 January 2016, <http://www.armscontrolwonk.com/archive/1200759/video-analysis-of-dprk-slbm-footage>.
- 2 John Schilling, 'North Korea's space launch: an initial assessment', *38 North*, 9 February 2016, <https://www.38north.org/2016/02/jschilling020816>.
- 3 Aaron Mehta, 'US: N Korean nuclear ICBM achievable', *Defense News*, 8 April 2015, <https://www.defensenews.com/2015/04/08/us-n-korean-nuclear-icbm-achievable>.
- 4 Katharine H.S. Moon, 'It's Groundhog Day with North Korea', Brookings Institution blog, 8 February 2016, <https://www.brookings.edu/blog/order-from-chaos/2016/02/08/its-groundhog-day-with-north-korea>.

North Korea: is war near?

21 April 2017

Imagine that you're on a quest. You've journeyed, wearily, for decades. The bones of your dead horses describe a winding trail in the wilderness behind you. You come at last to a crossroads, from which several paths lead forward. The sole source of navigational guidance is a wizened, monosyllabic stranger. After a series of oblique exchanges, you conclude that along some paths lies the risk of quick death, along others the risk of slow death. None leads to Nirvana.

Okay, that's about where we are in relation to North Korea. We have in power in Pyongyang a young, ambitious, but insecure leader who has invested a lot of political capital in an accelerating nuclear and missile program. Meanwhile, we have a new administration in the White House—one keen to distance itself from its predecessor's policy of denial and delay. Presidential elections are underway in South Korea, with the real possibility of a more left-leaning administration coming to power in Seoul after 9 May.¹ There's a government in power in Japan that's as strategically forward-leaning as any since World War II,

and some Japanese politicians are openly discussing Tokyo's need for prompt-strike options against North Korea.² In Beijing, there's still a residual commitment to dialogue: the Chinese don't believe North Korea yet has a reliable, operational nuclear warhead or an intercontinental ballistic missile. But they're also starting to believe the Trump administration's statements that if China doesn't move to solve the problem of North Korea's exotic weapons bilaterally, the Americans will do it unilaterally.

Despite all the talk of war, no one's in a hurry to fire the first shots. Posturing is cheap, but war is expensive. Besides, the US believes that posturing is paying dividends: putting Kim Jong-un on notice, while simultaneously encouraging the Chinese to do more to rein in their erratic neighbour. But Kim believes the same: that his posturing is finally attracting the level of attention befitting North Korea's needs, and that from this latest swirl of attention he might well emerge with yet another deal that offers both a temporary reprieve for his arsenal and international recognition for his regime.

So, for the moment at least, posturing rules. Unfortunately, that means only that war is unlikely, not that it's impossible. Doubtless many observers are hoping the posturing will harden into a long-term policy of deterrence. To be frank, that's unlikely too. The US can't have a deterrence relationship with someone who uses VX to kill his own half-brother and attempts to sell lithium-6 on global markets.³ Great powers might well have—between themselves—deterrence relationships that tolerate a degree of leadership eccentricity, but giants don't have those relationships with midgets.⁴ A long-term deterrence relationship between the US and North Korea is actually one of the least likely outcomes here. It ranks right up there on the implausibility scale with Kim Jong-un opting for unilateral disarmament. War looks more likely than either of those scenarios.

And that's the nub of the problem: all conceivable solutions to the North Korean issue are unlikely to get us where we want to go. Think about it. Let's start with the dialogue option. What are the odds that a revived dialogue, of however many parties, is going to lead to complete, verifiable, irreversible dismantlement (CVID) of the North Korean nuclear program? They're brutally long. The North Korean regime has made clear, citing the cases of Libya and Iraq, that WMD dismantlement has previously been an invitation to intervention by external powers.⁵ Yes, we can have tomorrow a dialogue that doesn't lead to dismantlement, but what's the point of that? As Abe told Pence, 'dialogue for the sake of dialogue is valueless'.⁶

The same thing can be said about sanctions. Can we have another, tougher round of sanctions, including secondary sanctions on those Chinese banks and businesses that help keep North Korea afloat? Yes, probably. Beijing wouldn't like that much, but the latest report from the UN's panel of experts suggests we're still some distance from a set of sanctions that brings genuine pressure to bear on Kim Jong-un's decisions.⁷ That's not the question, though, is it? The question is, can we ever make sanctions sufficiently forceful that we can bring about the endpoint of CVID? That seems less likely.

What about regime change in North Korea? Regime change in South Africa helped put an end to that country's nuclear-weapon program, and so might offer a way forward in Pyongyang. Such change doesn't seem very likely, though. Kim Jong-un's busy eliminating possible challengers from within the family, the North Korean military seems too politically subservient to stage a coup, and the prospect for a revolution from below seems almost laughably small. Yes, we might be able to assassinate Kim Jong-un—but what comes after? And what happens to the nuclear weapons in that scenario?

Where does all that leave us? Well, there's good news and bad news. The good news is that the risks of military action make such an option unlikely. The bad news is that our other options are unlikely to succeed. Difficult decisions lie ahead. Complicating those decisions is the element of time. Solving the North Korean problem five years from now is probably going to be harder than solving it now.

Notes

- 1 Choe Sang-Hun, 'South Korea election turns into 2-way race as dark horse surges', *New York Times*, 14 April 2017, https://www.nytimes.com/2017/04/14/world/asia/south-korea-election-ahn-cheol-soo.html?_r=0.
- 2 Liubomir K. Topaloff, 'Japan's nuclear moment', *The Diplomat*, 21 April 2017, <https://thediplomat.com/2017/04/japans-nuclear-moment>.
- 3 David E. Sanger, William J. Broad, 'North Korea's nuclear strength, encapsulated in an online ad for lithium', *New York Times*, 3 April 2017, <https://www.nytimes.com/2017/04/03/us/politics/north-korea-nuclear-trump-china.html>.
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- 5 Stephen Evans, 'The Saddam factor in North Korea's nuclear strategy', *BBC News*, 9 September 2016, <https://www.bbc.com/news/world-asia-37321686>.
- 6 'The latest: Pence, Japanese leaders begin talks in Tokyo', *AP News*, 18 April 2017, <https://www.apnews.com/5d60d56df0034ac2ac20ec9b684716ec>.
- 7 'Report of the panel of experts established pursuant to resolution 1874 (2009)', United Nations Security Council, 27 February 2017, http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2017_150.pdf.

Ballistic missiles and the '½ rule'

18 May 2017

North Korea's ballistic-missile tests are indeed a roller-coaster ride. After a string of failures in its recent ballistic-missile-testing program, with some missiles failing almost immediately after launch, last Sunday it conducted what some are calling its most successful ballistic-missile test to date.¹ The test provides a shot in the arm for Pyongyang's WMD programs. It also signals to the broader international community that the North's ballistic-missile capabilities are definitely improving. Yes, the missile flew to a range of 787 kilometres—on the face of it, nothing startling.² But over at *38 North*, John Schilling noted that the test represents 'a level of performance never before seen from a North Korean missile' and suggested that the missile's range is better seen as 4,500 kilometres, not 800 kilometres.³ He's not making a wild guess.

The test provides an excellent opportunity to remind readers of an important general rule about missile range. The rule can be found in a useful—and free—little publication called *The physics of space security: a reference manual*.⁴ In their chapter on space launches, the authors take the reader through what's called the '½ rule':

A useful rule of thumb is that a ballistic missile that can launch a given payload to a maximum range R on the Earth can launch that same payload vertically to an altitude of roughly $R/2$. This relation is exact in the case of a flat Earth and therefore holds for missiles with ranges up to a couple thousand kilometers (the Earth appears essentially flat over those distances, which are small compared to the radius of the Earth). But the rule continues to hold approximately for even intercontinental range missiles.⁵

Broadly, the rule states that if a missile is fired straight upwards into space, it will achieve an altitude of one-half of its maximum range. A Scud missile with a maximum range of 300 kilometres, for example, would—if fired straight up—reach an altitude of 150 kilometres before falling back to earth.

So the interesting statistic from the recent North Korean test is not the missile's range but its altitude. That's been reported at 2,111.5 kilometres—a figure that, had it been achieved by firing the missile straight up, would point to a range of 4,223 kilometres. That altitude was achieved while using some of the missile's thrust to go almost 800 kilometres downrange, which points to a range figure a little greater than that.

Of course, range also depends on payload, so perhaps it would be more accurate to say that the test missile might have flown to a range in excess of 4,223 kilometres with that particular payload. North Korea has emphasised that the missile is capable of carrying a large, heavy warhead. From publicly available sources, it's hard to tell how large the actual payload was.

Several analysts have pointed to the fact that this missile is not an ICBM. That's true. An ICBM is defined in the strategic arms-control agreements between the US and Russia as any ballistic missile with a range of, or above, 5,500 kilometres. That range wouldn't actually allow North Korea to target the continental US—or, at least, not the 48 contiguous states. But President Trump has said that North Korea will not be allowed to develop an ICBM, without providing any different definition of such a capability.

Some commentary on Sunday's test has observed that the North Koreans might well be testing ICBM 'subsystems' in their current program. By flying the missile on a highly lofted trajectory, for example, the North Koreans have been able to subject their re-entry vehicle to a more stressful heat test than could have been achieved by a standard trajectory. William Broad and David Sanger, writing in the *New York Times*, suggest that such gains show a Pyongyang tip-toeing over the line that the US has attempted to draw in relation to ICBM-applicable technologies.⁶

As North Korea makes greater efforts to field an arsenal of longer-range missiles, we might begin to see a pattern of more frequent lofted missile tests. If so, that's going to set Washington's teeth on edge, not to mention Tokyo's and Seoul's. Australia itself has already been threatened with nuclear attack by North Korea, and the credibility of that threat can only grow as Pyongyang's missile capabilities increase.

If we're witnessing the start of a new wave of longer-range missile tests, we might all soon be paying much greater attention to the ½ rule. Pyongyang needs to be particularly careful about conducting a test where the missile reaches an altitude suggestive of a 5,500-kilometre range. If that were to occur, the ½ rule might end up being a trigger for war.

Notes

- 1 'North Korea claims new missile can carry "large" nuke', *CBS News*, 15 May 2017, <https://www.cbsnews.com/news/north-korea-missile-test-kn-17-large-heavy-nuclear-warhead-kim-jong-un>.
- 2 Jack Kim, Ju-min Park, 'North Korea's latest missile launch suggests progress toward ICBM: experts', *Reuters*, 15 May 2017, <https://www.reuters.com/article/us-northkorea-missiles-idUSKCN18A12B>.
- 3 John Schilling, 'North Korea's Latest missile test: advancing towards an intercontinental ballistic missile (ICBM) while avoiding us military action', *38 North*, 14 May 2017, <https://www.38north.org/2017/05/jschilling051417>.
- 4 David Wright, Laura Grego, Lisbeth Gronlund, *The physics of space security: a reference manual*, American Academy of Arts and Sciences, 2005, <https://www.ucsusa.org/sites/default/files/legacy/assets/documents/nwgs/physics-space-security.pdf>.
- 5 Wright et al., *The physics of space security*, p. 77.
- 6 William J. Broad, David E. Sanger, 'North Korea missile test appears to tiptoe over a US tripwire', *New York Times*, 15 May 2017, https://www.nytimes.com/2017/05/15/world/asia/north-korea-missiles.html?_r=0.

‘Tragic but distinguishable postwar states’

5 August 2017

As some readers will probably recognise, the title of this post is a phrase drawn from Herman Kahn’s *On thermonuclear war*, one of the more depressing texts of the 20th century. Kahn, writing in 1960 when the Cold War was at its height, argued that policymakers should try to limit losses even in the most serious forms of warfare: that there were marked differences between conflicts that resulted in the deaths of two million people and required a one-year economic recuperation, and those that resulted in the deaths of 160 million people and required a 100-year recuperation—not to mention a number of ‘distinguishable’ points along the spectrum between those extremes.¹

Over recent months there’s been no shortage of commentators telling us that conflict on the Korean peninsula would be ‘tragic’. If by ‘tragic’ they mean ‘costly’, I’m inclined to agree—although Western perceptions of ‘costly’ conflicts seem to have shifted over recent decades, driven in part, no doubt, by the rise of the one-child family. Still, we need to look beyond the adjective; the Kahn aphorism is a reminder that tragedy comes in many forms—and that some tragic outcomes are distinctly preferable to others.

The viability of military options on the Korean peninsula has resurfaced in the wake of North Korea’s latest ballistic-missile test. Strategic opinion seems genuinely divided on one critical question: can nuclear deterrence effectively corral North Korea’s growing nuclear arsenal? On one side is a group that believes that even a North Korea with an appreciably bigger nuclear arsenal than the one it now enjoys can be deterred by the classic—and proven—mechanism of nuclear deterrence. On the other side is a group that sees the North Korean nuclear problem as idiosyncratic, and worries that nuclear deterrence might not translate well to our current dilemma.

It’s a critical point. If nuclear deterrence will work in relation to North Korea, we can be more relaxed about the pace and scope of North Korea’s nuclear and missile advances. If it won’t, the requirement to find some other leverage against Pyongyang takes on a degree of urgency.

So what do we know of nuclear deterrence? Sadly, not as much as we’d like. Part of the reason lies with the mechanism itself. As former Israeli foreign minister Abba Eban once said, ‘deterrence ... is the science of things that do not occur’.² Frankly, we often struggle to accurately attribute causation to events that do occur; doing so in relation to ones that don’t is a much more complex endeavour.

Moreover, although nuclear deterrence has been around for decades, practical experience of its operation is somewhat limited. The bulk of that experience derives from the Cold War, when two heavily armed superpowers built a finely wrought balance of terror. Those superpowers shared a sense of the high cost of great-power war, the resources to throw at command-and-control problems, a willingness to tolerate each other’s spheres of influence, and an intercontinental separation between their homelands. Most of all they shared an aversion to risk—because both had large equities in the international system.

Yes, other nuclear powers existed alongside the US and the Soviet Union. But the deterrent capabilities of the British and French arsenals were never really tested outside the broader superpower contest. A similar point might be made with regard to China’s nuclear force, deployed in Asia, the secondary theatre of the Cold War. Still, the P5 players all saw themselves as members of an exclusive club—a club which enshrined their status as ‘responsible’ nuclear powers. Those perceptions—plus their shared

day-to-day experiences of managing international security crises on the UN Security Council—shaped their dealings with each other.

Of course, the bomb eventually spread beyond the P5. India and Pakistan built arsenals for regional deterrence, as did Israel. And North Korea, a narco-criminal pariah state boasting a record of bad behaviour, eventually pushed its way into the nuclear club. Its doing so has sharpened an important question: is this a club that anyone can join through mere determination to proliferate? (Personally, I'd favour making admission harder, at least to the point where it matches quality preschool enrolment: a country that wants nuclear weapons has to show that it can play nicely with the other kids.)

North Korea is the first of the non-P5 nuclear powers to aspire to intercontinental capabilities. ICBMs matter because they allow Pyongyang to play at the global level, rather than just at the regional level. Deployed in sufficient numbers, ICBMs allow a state with almost no equity in the global order to pull down that order on a day of its choosing.

Perhaps deterrence would stop such an event from occurring. But just how certain can we be of that? Are we basing that judgement simply on the value that Kim Jong-un places on his own life and the survival of his regime? He certainly cares little for his people. He already holds Seoul hostage to his whims, courtesy of North Korean artillery deployed north of the Demilitarised Zone. We shouldn't allow him to place much of the world in a similar position courtesy of nuclear-armed ICBMs. If it looks like we're reaching such a point, we need to think seriously about Kahn's 'tragic but distinguishable postwar states'.

Notes

- 1 Herman Kahn, *On thermonuclear war*, Princeton University Press, 1960.
- 2 Abba Eban, *Diplomacy for the next century*, Yale University Press, 1998, p. 11.

North Korea: slouching towards Bethlehem?

5 September 2017

North Korea's sixth nuclear test is easily its most impressive. The fifth—in September last year—involved the detonation of a device similar in yield to the bomb the Americans dropped on Hiroshima in 1945. The latest test features a substantially larger yield.¹ Seismic signals are an imperfect indicator, but estimates currently range from about 70 kilotons all the way up to about 500 kilotons. It's possible, but not certain, that the test featured a genuine thermonuclear device, a second-generation nuclear-weapon design in which a primary fission explosion ignites a secondary fusion stage. If any radionuclides have leaked from the test site, we'll get a better picture of the explosion, but that could be some weeks away.

Still, the big conclusions are relatively straightforward. First, North Korea's nuclear capabilities are no longer constrained to the detonation of relatively low-yield fission devices. The days are over when we could depict the North Korean nuclear program as merely the equivalent of the US program in 1945. Second, when the results from the sixth nuclear test are placed alongside the large strides that Pyongyang has made recently in ballistic-missile development, we're fast approaching a crunch point where something must be done to corral the North's nuclear arsenal. A fresh bout of hand-wringing and garment-rending—even another bout of sanctions—is probably not going to give us much leverage on the problem.

Each test, whether of missile or nuclear weapon, gradually builds North Korea's capacities. True, none of the individual tests is a back-breaker by itself. But the broader programs are breaking the backs of the global and regional orders. That's because a North Korea equipped with nuclear-armed ICBMs is simply unacceptable. It's unacceptable at the global level because a pariah state can't be allowed to hold a sword over the head of the international community. And at the regional level, an emboldened North Korea will destabilise Northeast Asia—corroding the US's Asian alliances and likely begetting a new wave of proliferation by latent nuclear states.

In brief, if North Korea keeps going down the path it's currently taking, the outcomes are intolerable. A North Korea that had a slow-moving nuclear-weapon program boasting only limited reach was a tolerable threat. Regional nuclear competitions are relatively common—not to the point where we can become blasé about them, true, but still relatively common. Today's North Korea has morphed into something much more deadly. It's the sole nuclear-armed state outside the P5 that seeks intercontinental-range destructive capabilities. And yet it's the nuclear-armed non-P5 state with the least equity in the international order.

Some argue that North Korea seeks nuclear weapons because of insecurity; that it's fear of attack and invasion that's the principal driver of Pyongyang's WMD programs. Frankly, that argument's not convincing. Security concerns might be sufficient to drive a small nuclear-weapon program, but not the one that now confronts us. Rather, Pyongyang seeks nuclear weapons as a status symbol, as the price of entry to the only one of the world's exclusive clubs to which it might actually gain admittance. ICBM-equipped nuclear powers number only four: the US, Russia, China and North Korea. Kim Jong-un seeks international recognition on the basis of the only achievement his regime can boast—the development of a capability to pull down the global order on a day of his choosing.

Reversing that development is now an issue of urgency. I'd like to think that doing so might offer an occasion for international cooperation, because responsible great powers should share the judgement that having intercontinental-range nuclear weapons in the hands of a pariah state is an unacceptable condition. Still, the prevailing geopolitical winds scarcely seem conducive to such an outcome. And there's a fair degree of slack in the steering wheel of US global leadership with President Trump in the White House.

But if we're prepared to admit North Korea into the ranks of the world's ICBM-equipped states, what's the basis for denying that status to any future proliferator? Some years back, Robert O'Neill observed that 'the bomb' had successfully escaped the hands of first the superpowers, and then the great powers, to come to rest in the hands of the world's underdogs.² Accepting that the underdogs can wreak nuclear havoc at intercontinental ranges seems to drag us even closer to the abyss.

In one important respect, of course, nothing has changed after the sixth nuclear test: we still don't have any easy options for reversing North Korea's nuclear and missile programs. Kinetic options look costly, non-kinetic options ineffective. But doing nothing will be worse. A crisis postponed is not necessarily a crisis averted. A future North Korea would have more and better nuclear warheads, greater numbers of delivery vehicles, and proven nuclear technologies ready to be sold to the highest bidder.

Notes

- 1 'Large nuclear test in North Korea on 3 September 2017', press release, NORSAR, 3 September 2017, <https://www.norsar.no/press/latest-press-release/archive/large-nuclear-test-in-north-korea-on-3-september-2017-article1534-984.html>.
- 2 Robert O'Neill, 'Weapons of the underdog', in John Baylis, Robert O'Neill (eds), *Alternative nuclear futures: the role of nuclear weapons in the post-Cold War world*, Oxford University Press, 2000, pp. 191–208.

Confident Kim

21 March 2018

As international concern mounts about North Korea's nuclear and missile programs, recent events suggest a Pyongyang strongly interested in a new round of talks—or at least in talks with South Korea and the US, if not with Japan.¹

Sceptics say we've been here before, and that previous negotiations—and agreements—have proven to be mere speed bumps on a long road to actual North Korean nuclear capabilities. Even joint North–South declarations in favour of denuclearisation of the peninsula have proven no more effective. But in his latest post, Ron Huisken argues that Kim Jong-un might now actually want to cut a deal.² That's an intriguing possibility. So should we be more hopeful this time around?

Let's start with Kim Jong-un himself. He's riding high at the moment. He has solidified the Kim Jong-il – Ko Yong-hui line within the ruling family. He's killed off his half-brother, Kim Jong-nam, and promoted his sister, Kim Yo-jong, to the country's politburo. He's seen his sister feted as the belle of the ball at the Winter Olympics.

And during the past year, the results of his nuclear and ballistic-missile tests have probably exceeded his wildest expectations. He's successfully tested two new intercontinental-range ballistic missiles and a thermonuclear device. The result must surely be a young leader in Pyongyang who feels more secure and confident than he did a year or so ago.

How does that observation help us in our thinking about the broader problem? Let's apply the Theory of the Confident Kim and see where it takes us. First, it's not unreasonable to assume that a Kim Jong-un more at ease with his immediate security and the acceptability of his regime to the wider world is also a Kim Jong-un more willing to look towards his longer-term ambitions.

After all, he's still young. He can probably expect his period of rule to resemble more closely that of his grandfather (46 years) than that of his father (17 years). At the moment, Kim Jong-un has been in the saddle for a little over six years. So, in round numbers, he might—confidently—anticipate another 40.

Second, he's probably not just thinking about the long game, but also about the appropriate breadth of his own ambitions. Within a relatively short space of time, he has managed to reverse North Korea's strategic fortunes and to reset the agenda in Northeast Asia. An American president has agreed to meet with him. Over the coming decades, he probably hopes to achieve much more.

Those ambitions almost certainly include pushing the US off the Korean peninsula and encouraging the emergence of a South Korea more accommodating to Pyongyang's wishes. They might also include eventual reunification with South Korea—as long as that can be achieved on terms Pyongyang would find advantageous. And on that point, it's important to remember the status the first family already enjoys in North Korea. Kim's currently treated as a deity—would he settle for being a bog-standard politician?

Third, we should expect a more confident Kim to find ways of signalling that he is his own master. In this regard, it's worth recalling that Kim is—apparently—willing to accept a freeze on further nuclear and missile testing while negotiations are underway without requiring a similar freeze on US – South Korean

military exercises. Given that the freeze-for-a-freeze proposal is China's public position, it's hard to imagine a clearer signal that Kim doesn't see himself as China's puppet.

Moreover, both his prominence in the talks with the visiting South Korean delegation and his offer of direct talks with President Donald Trump are signs of the more confident Kim reaching out and interacting with the world.

Fourth, though—and this is the crunch point—we shouldn't delude ourselves that a more confident and secure Kim Jong-un would be in any hurry to give up his nuclear arsenal. His confidence derives, in large part, from those very capabilities. He believes that thermonuclear-tipped ICBMs deter US intervention on behalf of its allies and give him greater freedom of manoeuvre in Northeast Asia.

Certainly he understands that possible future denuclearisation is an important carrot to keep the US, South Korea and Japan diplomatically engaged. And diplomatic engagement is essential to getting the security assurances and economic assistance that Kim wants.

But he's likely to see his nuclear capabilities as something to be given up only slowly, sparingly and selectively, if at all. Full denuclearisation probably won't happen faster than it has taken for North Korea to nuclearise, and that's been a project spanning decades. Indeed, getting to zero via a negotiated settlement might be achievable only in the context of broader nuclear disarmament.

So, is Kim looking to cut a deal? Yes, probably. Isn't that good news? Not necessarily: the problem concerns the nature of the deal he's willing to cut. To put it bluntly, a more confident Kim is probably more willing to bargain but less willing to compromise. And that means the international community still faces a daunting set of challenges on the Korean peninsula. We aren't out of the woods on this one, regardless of how the upcoming summits unfold.

Notes

- 1 Jesse Johnson, 'North Korea says Japan "may not get a ticket for Pyongyang" if pressure policy continues', *Japan Times*, 18 March 2018, <https://www.japantimes.co.jp/news/2018/03/18/national/politics-diplomacy/north-korea-says-japan-may-not-get-ticket-pyongyang-pressure-policy-continues/#.XRrZZOgzY5t>.
- 2 Ron Huisken, 'Might Kim actually want to cut a deal?', *The Strategist*, 20 March 2018, <https://www.aspistrategist.org.au/might-kim-actually-want-cut-deal>.

What 'denuclearisation' means to Kim Jong-un

21 September 2018

In the wake of the recent North Korea – South Korea summit, it has become clearer than ever how Kim Jong-un defines 'denuclearisation': it's a series of limited unilateral declarations which constrain the North's nuclear and ballistic-missile programs in the order and to the degree that best suit Pyongyang's strategic interests, and from which he might escape at a time of his own choosing. In going down that path, Kim is playing from an old song book—Asian nuclear arms control has typically relied much more heavily than its Western counterpart on the concept of voluntary self-restraint.

A recent article in the *New York Times* argued that Kim has figured out he can keep his nuclear program going, just as long as he does it quietly—following in the footsteps of India, Pakistan and Israel.¹ There's a large element of truth in that. But Kim's not just trying to make North Korea look like the other non-P5 nuclear-weapon states. By accepting a series of self-imposed limitations and (conditional) obligations—in

relation to nuclear and ballistic-missile testing, missile-engine test stands, and some parts of the ageing infrastructure at Yongbyon—Kim’s trying to make North Korea look like the other Asian nuclear-weapon states (China, India and Pakistan), none of which has a particularly strong record of formal, legalistic nuclear arms control of the type most favoured in Washington.

Western arms control—and Russian, for that matter—turns upon exactly that legalistic, exegetical approach, in which constraints are specifically defined. Think of the SALT and START agreements, for example. They wrestled English and Russian adjectives to the floor to define the specific obligations of their signatories. What counts as a strategic nuclear delivery vehicle? How many manoeuvrable, independent re-entry vehicles are allowed, and on which missiles? What do verification measures look like? When do obligations start and finish? What are the provisions for extending the treaties?

Interestingly, the P5+1 ‘sold’ that model of arms control to Iran with the negotiation of the Joint Comprehensive Plan of Action: anyone who cares to browse the agreement will find a dense thicket of regulation, touching even Iranian enrichment research and development efforts in relation to specific centrifuge models. (True, some thought the agreement didn’t regulate the right things, but that’s another matter.)

Kim’s not interested in going down that route. The North Koreans have been suspicious of detailed verification regimes involving international experts ever since the International Atomic Energy Agency picked apart their initial statements about plutonium reprocessing in 1992—back in those heady days when North Korea was a party to the non-proliferation treaty.² For obvious reasons, Kim’s in no hurry now to clarify North Korea’s existing capabilities. He hopes to keep as much of his arsenal as he can—and the easiest way to do that is to conceal the dimensions of that arsenal.

Nor does he believe that he has to accede to the Western model of arms control. A distinctive Asian model has emerged over the decades—one which helps offset the portrayal of Asian nuclear-weapon states as more worrying than their first-world counterparts. True, Asian nuclear powers are less attracted than their Western counterparts to formalised game theory as a guide to effective deterrence—but that doesn’t mean their decision-making is emotive or irrational. Their command and control structures are typically less well resourced than those run by the US and Russia—but it’s probably wrong to think of those structures as inherently fragile. And Asian nuclear-weapon states are less driven by ideology than were the dominant nuclear players of the Cold War—but they’re not rabid nationalists automatically driven towards ready use of nuclear weapons.

Kim’s principal challenge, of course, is going to be convincing the Americans that he’s done enough to be given a pass mark on denuclearisation. That’s going to be hard, for three reasons. First, the pace of North Korean development in 2017 was so frantic—and so astonishing³—that what might easily have qualified as a pass mark at the beginning of January almost certainly wouldn’t have done so by the end of December.

Second, the perceived value of voluntary self-restraint isn’t fixed—it varies from country to country and from time to time, in relation to the nature of both the leadership in the self-restraining state and the intelligence about the probable existence of covert programs that undermine the validity of the original commitment. Both the Kim family’s long history of aggressive behaviour and Kim Jong-un’s more recent efforts to conceal key elements of his program surely dilute the value of any pledge of self-restraint.

And finally, in the months since the Trump–Kim summit in Singapore, it’s become apparent that Kim has no intention of throwing away a capability which has seen him feted at diplomatic summits, redefined the relationship between the two Koreas, and helped to break the back of the previously worrying sanctions regime.

Sadly, North Korea doesn’t look self-restrained. Nuclear weapons sit in the foreground of its military capabilities, not in the background. Developments in its nuclear program aren’t slow and predictable, but volatile and unpredictable.

Of course, Kim has two things counting in his favour. The international community is fearful that true denuclearisation might come only with a high price tag. And the current US president seems more willing than the broader US national security community to tolerate a degree of smudging of the definition of success—in part to keep alive the notion that the Singapore summit was instrumental in managing the North Korean nuclear threat.

Notes

- 1 David E. Sanger, ‘North Korea’s Trump-era strategy: keep making A-bombs, but quietly ...’, *New York Times*, 16 September 2018, <https://www.nytimes.com/2018/09/16/world/asia/trump-north-korea-nuclear.html>.
- 2 David Albright, ‘North Korean plutonium production’, *Science & Global Security*, 1994, 5: 63–87, <http://scienceandglobalsecurity.org/archive/sgs05albright.pdf>.
- 3 Jeffrey Lewis, “‘Your mission is to keep all this from collapsing into nuclear hellfire’”, *Foreign Policy*, 18 September 2018, <https://foreignpolicy.com/2018/09/18/your-mission-is-to-keep-all-this-from-collapsing-into-nuclear-hellfire>.

Our nuclear future

This final section examines a series of possible nuclear futures. Frankly, I don't think the nuclear ban treaty is going to lead us to the happy kingdom of nuclear disarmament. Getting to global zero involves seriously hard work, especially if the more than one-half of the world's population who currently enjoy the protection of nuclear deterrence are to feel similarly secure in a post-nuclear world.

While ICAN pursues its objective of convincing federal parliamentarians to sign its pledge to support signature and ratification of the ban treaty, modernisation of nuclear arsenals is underway among the great powers. The long-lived weapon systems of the past imply a similar capability in terms of the weapon systems of the future. Modernisation, already well advanced in Russia and China and beginning in the US, advertises a future in which nuclear systems will remain core capabilities for decades to come.

Then there's the future characterised by the US – North Korea relationship: the future of highly asymmetric nuclear powers. Bernard Brodie's work back in the 1950s had something to say about that sort of relationship, and the difficulties it contains.

And there's the grand question of whether we're headed into an 'ordered' future or an 'ugly' one. Our first option should be to strengthen an order that's been decaying. But the news is not all bad. Indeed, one of the lessons for the world from the South Asian experience is that there's an ugly stability in nuclear deterrence that would probably endure even if our attempted reordering fails.

A final point: nuclear relationships typically mirror geopolitical ones. We should expect our nuclear future to reflect the world's broader strategic relationships. That sounds trite. But solving nuclear puzzles means solving the geopolitical puzzles that underpin them, not simply wishing nuclear weapons were gone. Almost nothing about nuclear weapons is simple. As I said at the start, the pool has no shallow end.

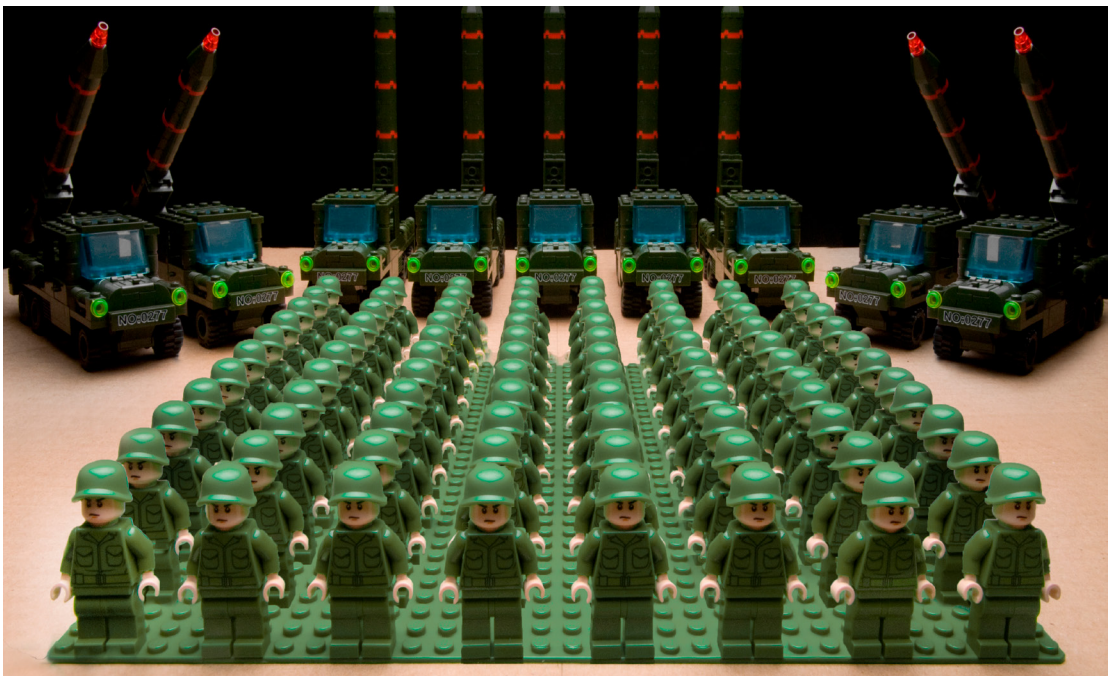


Image: Eric Constantineau/Flickr.

ICAN and the search for the fortunate islands

10 October 2017

This year's award of the Nobel Peace Prize to the International Campaign to Abolish Nuclear Weapons has stirred mixed reactions. The Norwegian Nobel Committee states that the organisation received the prize 'for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons'.¹ Some commentators have seen the award as rewarding a new, more activist, civil-society-based approach to peace, bypassing the old institutionalised, state-centred model.² Others are less charitable.³

Certainly the award maintains the committee's reputation for surprising choices. Its reasoning is arguable too. For one thing, I wouldn't have thought the humanitarian consequences of direct use of nuclear weapons were in need of much publicity. They've been well known since the bombing of Hiroshima. For those of a more scientific mind, Samuel Glasstone and Philip Dolan's 1977 text, *The effects of nuclear weapons*, covers the ground.⁴ And as for the nuclear ban treaty, it's primarily a diplomatic symbol of disarmament—a norm-setter—rather than a practical instrument.

More ominously, though, the award can be seen as reinforcing the judgement that the tide's going out on nuclear disarmament, not coming in. I suppose much depends on how one sees ICAN's signal achievement during the year—namely, its advocacy of the new Treaty on the Prohibition of Nuclear Weapons. Fans say the treaty's unique and special—the first time the international community has outlawed nuclear weapons. Others hold a bleaker view. I must confess my sympathies lie with that second group. The ban treaty was adopted in July at the United Nations by 122 nations that gave up exactly nothing. None of the 122 actually deploys nuclear weapons or benefits from an extended nuclear guarantee from a nuclear-weapon state. And all of them have already previously undertaken, in the Nuclear Non-Proliferation Treaty, not to build nuclear weapons.

Still, the treaty's a worrying sign: as the requirements of nuclear arms control are becoming more demanding, large segments of the world appear to have been lulled into the false security of believing that the best approach to nuclear weapons is just to ban them. That's a dopey idea. So far, it has taken the combined efforts of many players, over decades, to define a global nuclear order that—in William Walker's words—turns on two linked systems: a managed system of deterrence and a managed system of abstinence.⁵ At a single stroke, the ban treaty delegitimises the first and defines an alternative vision of the second.

In their efforts to insist that nuclear weapons are just like long-lived anti-personnel landmines—marginal to international security—ban advocates risk pulling down the long pole in the tent of the current global order. By making the perfect the enemy of the good—after all, its signatories don't believe any nuclear weapons are 'good'—the ban treaty will probably make great-power nuclear arms control harder, not easier. Gradual, verifiable reductions in nuclear arsenals, which have seen US and Russian warhead numbers fall by tens of thousands and increased strategic stability between the superpowers, are, in any event, becoming more difficult to negotiate now that the ceilings are dropping to levels more commensurate with anticipated missions and relations between the great powers are souring. But having the ban enthusiasts shout unhelpfully from the sidelines that the real number should be zero warheads, not 1,550, or 1,000, or 300, is just going to make the process even more constipated.

Nuclear-weapon states that sign the ban treaty—and none look likely to do so—would (under Article 4) receive a period of grace within which to rid themselves of their satanic burdens. But no such period of grace would extend to signatories—like Australia—that currently shelter under another state’s nuclear umbrella. Under the subclauses of Article 1, they’re obliged to renounce their own nuclear umbrella and denounce the broader existence of nuclear umbrellas in the modern world.

In short, we’d confront a world of unreality if we headed down the path that the winner of the Nobel Peace Prize proposes. Putting things in their proper perspective, the pursuit of nuclear disarmament is the geopolitical equivalent of poet Ernest Dowson’s search for the fortunate islands.⁶ Dowson’s hero, of course, was doomed to a protracted and potentially fruitless search ‘in the seas of no discovery’. ICAN’s approach is much more direct: it proposes finding the fortunate islands by banning the unfortunate ones.

Notes

- 1 Norwegian Nobel Institute, ‘The Nobel Peace Prize 2017’, 6 October 2017, <https://www.nobelpeaceprize.org/Uten-foreldre/The-Nobel-Peace-Prize-2017>.
- 2 ‘The Guardian view on the new peace laureates: a better bet’, editorial, *The Guardian*, 7 October 2017, <https://www.theguardian.com/commentisfree/2017/oct/06/the-guardian-view-on-the-new-peace-laureates-a-better-bet>.
- 3 See, for example, Bret Stephens, ‘Don’t ban the bomb’, *New York Times*, 6 October 2017, <https://www.nytimes.com/2017/10/06/opinion/nobel-peace-prize-nuclear-weapons.html>; David E. Weisberg, ‘2017’s wasted Nobel Peace Prize’, *The Hill*, 9 October 2017, <https://thehill.com/opinion/international/354602-2017s-wasted-nobel-peace-prize>.
- 4 Samuel Glasstone, Philip Dolan (eds), *The effects of nuclear weapons*, 3rd edition, US Department of Defense, 1977, <https://www.deepspace.ucsb.edu/wp-content/uploads/2013/01/Effects-of-Nuclear-Weapons-1977-3rd-edition-complete.pdf>.
- 5 William Walker, ‘Nuclear order and disorder’, *International Affairs*, 2000, 76(4): 703–724.
- 6 R.K.R. Thornton, Caroline Dowson (eds), *Ernest Dowson: Collected poems*, Birmingham University Press, 2003, p. 209, https://books.google.com.au/books?id=i_jUAwAAQBAJ&printsec=frontcover#v=onepage&q&f=false.

Trident and the nuclear future

2 November 2017

The nuclear world is bifurcating. Along one fork sit those favouring the nuclear ban treaty—affronted by the ongoing role that nuclear deterrence plays in key global and regional security arrangements, appalled by the prospective humanitarian consequences of any direct use of nuclear weapons, and determined to beat swords into ploughshares at the earliest opportunity. Along the other sit those committed to nuclear deterrence—firmly attached to the idea that nuclear weapons make a positive contribution to international security, worried by the prospective return of great-power conventional war, and dedicated to modernising strategic nuclear-weapon systems for future decades.

We get a nice snapshot of that second fork by looking at the current modernisation plans for the US Trident D5 submarine-launched ballistic missile. Since submarine-based nuclear weapons tend to be the least vulnerable, and therefore the best suited to secure second-strike missions, they’re unlikely to be beaten into ploughshares anytime soon. And by ‘anytime soon’, I mean anytime before 2060 or 2070, which is about as far ahead as current modernisation planning sees.

In Western arsenals, submarines carry a disproportionate share of the load of strategic nuclear deterrence. When the New START deadlines come into force on 5 February 2018, about 70% of deployed US strategic nuclear warheads will be based on the Trident D5s (1,090 out of the allowable 1,550 warheads).¹ And the missile already supports 100% of the UK’s nuclear deterrent—as it has done

since 1998. (In Britain's case, the American-manufactured missiles are mated with nuclear warheads of British design and manufacture.) So the importance of the Trident life-extension program should come as no surprise.

Life-extended Trident D5 missiles were introduced to the US Navy earlier this year. They'll be the weapon system that links the current Ohio-class submarines to the future Columbia-class ones. The Ohios are forecast to move out of service between 2027 and 2040. But the incoming Columbias—the first is scheduled to enter service in 2031—will continue to deploy the Trident. And a common missile compartment, designed to house the missiles, will be a feature of both the Columbia design and the incoming British Dreadnought-class submarines, which will begin to replace the current Vanguard class from 2028.

Just how long can the Tridents last? Well, that's a moot point. The life-extension program is a major undertaking.² Some years back, the director of the US Navy's strategic systems programs suggested that the two main challenges involved 'determining the service life of the three-stage boost motors that comprise the missile propulsion system and modernizing the extremely complex D5 guidance system and missile electronics'.³ US sources suggest the missile is meant to remain in service until 2042. But that date's probably a conservative estimate. Both Washington and London anticipate relying on sea-based nuclear deterrents into the 2060s and 2070s, and probably beyond.

Retrofitting a new missile into the common missile compartment at some point is surely possible. (After all, back in the late 1960s the Poseidon C3 was designed to use the same launch tubes as the smaller Polaris A3.) Still, much will depend on future assessments of the D5's ongoing reliability. The Americans like to get value out of their strategic weapon systems. It's not out of the question that a weapon system first deployed aboard the USS *Tennessee* in 1990 could celebrate its 60th birthday still at sea.

US Navy documents note that 'life extension efforts will push the Trident D5 missile's service life beyond that of all five previous systems combined'.⁴ (Those include the Polaris A1, A2 and A3, the Poseidon C3, and the Trident C4.) That's impressive. Still, long-lived strategic weapon systems can also be found in the other two legs of the US nuclear triad. The US ICBM, the Minuteman III, first entered service in 1970—and current plans suggest it won't retire until 2030. Meanwhile, the B-52 strategic bomber first saw service in the 1950s, and some tens of the H variant (the last of which rolled off the production line in October 1962) will still be part of the US strategic arsenal formally limited under New START.

What does all that tell us? Well, nuclear modernisation efforts aren't undertaken lightly—necessity is typically the driver. The Americans and the British have embarked on a modernisation program for the sea-based leg of their nuclear triad which is intended to ensure a safe, secure, effective arsenal for the next 50 years. Lest readers imagine that Washington and London are forcing the pace in nuclear modernisation, let me assure you that they aren't. Russia's already well down this path.⁵ China's making serious efforts to nurture its own sea-based nuclear capabilities.⁶ And France is currently retrofitting its new M51 missile to its Triomphant-class ballistic-missile submarines.⁷ Conclusion? Nuclear weapons aren't about to disappear from the world.

Notes

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In praise of nuclear disarmament ... eventually

23 April 2018

The International Campaign to Abolish Nuclear Weapons has been diligently promoting the Treaty on the Prohibition of Nuclear Weapons—usually just called the nuclear ban treaty—since it was opened for signature on 20 September 2017. ICAN's Australian office has been busy trying to convince Australian federal politicians to pledge their support for signature and ratification. And it has achieved an astounding measure of success—astoundingly high in relation to Labor and Greens parliamentarians, astoundingly low in relation to Coalition parliamentarians. Over 70% of the current Labor parliamentary caucus has signed the pledge. Less than 2% of the current Coalition parliamentary caucus has done the same.

The treaty enters into force 90 days after 50 states have ratified it. Given that 122 states supported the final text of the treaty in July 2017, some might well have imagined that entry into force was a fait accompli and could be achieved in a matter of months.

It hasn't been. So far, 58 states have signed it, but only seven have ratified it. Those seven are Cuba, Guyana, the Holy See, Mexico, Palestine, Thailand and Venezuela. No nuclear-weapon state has signed. Nor has any country benefiting from an extended nuclear deterrence relationship with the United States.

Let's look more closely at what the parliamentary pledge requires of parliamentarians. The signatories undertake to do three things:

- 'warmly welcome' the adoption of the treaty
- 'share the deep concern expressed in the preamble'
- 'work for the signature and ratification of this landmark treaty by our respective countries'.¹

The first two obligations are relatively cost-free. Parliamentarians are free to 'warmly welcome' and to 'share deep concerns' to their hearts' content. Indeed, it's fit and proper that they do so. But the third obligation is more troublesome.

If Australia were to sign and ratify the nuclear ban treaty in the near term, it would do serious harm to its own strategic policy; put itself offside with its major ally; pull the rug out from under a large number of Western allies whose security rests more heavily than ours upon the continued role of nuclear weapons;

and find itself at odds with Japan, South Korea and India as it struggled to build new security partnerships in Asia.

Let's start with the difficulties here at home. Australia's security benefits from the fact that the US provides extended deterrence to Australia as part of the Australia–US alliance. That means potential aggressors that might contemplate using lethal force against Australia need to consider that the US might use its full spectrum of military capabilities—up to and including nuclear weapons—in response. This is a foundational element of Australia's strategic and defence policies, and allows Australia to spend much less on defence than if we had to deter attacks or coercion without the possibility of any such assistance.

Then there's the damage that signing and ratifying the ban treaty would do to our relationship with the US. Here, large equities are at stake because it's not clear that ANZUS would survive Australia's joining the ban treaty. Back in 1985, New Zealand told the US that only conventional weapons could be used in its defence. That didn't go so well. And Australia is a much more important ally for Washington—not just in terms of size but also in relation to potential alliance support in a great-power war.

Moreover, Australia–US defence cooperation would be directly compromised. Article 1(e) of the treaty is a catch-all clause that forbids a state party from 'assist[ing] ... in any way, anyone to engage in any activity prohibited to a State Party under this Treaty'.² Since the use or threatened use of nuclear weapons is such a prohibited activity, any contribution Australia might make to support either US central deterrence or US extended nuclear deterrence may well be characterised as illegal under the treaty, just as European NATO's support for the stationing and deployment of actual US nuclear weapons in Europe would be illegal under Article 1(g).

Questions about the possible role of the joint facilities would once more become central points of controversy. To quote the words of a former Australian defence minister:

For almost half a century Australia has made a significant contribution to United States' national security and global strategic stability by hosting and supporting some of the most sensitive and critical strategic capabilities. These include systems related to intelligence collection, ballistic missile early warning, submarine communications and satellite based communications.³

The joint facilities play many roles in support of both countries—including arms-control verification—but one of those roles is to support US strategic decision-making. I don't see how we'd restrict the roles to non-nuclear missions. And that's just one part of the problem. The naval communication station at North West Cape, for example, has been an Australian facility since 1993, but under current arrangements the US is granted access to and use of the facility until 2033. The station's capabilities include very low frequency transmissions—a communication channel for submerged submarines.

So relations with the US could be badly damaged by our becoming a party to the nuclear ban treaty. Our relations with other major US allies—in Europe and Northeast Asia—would also suffer. At a time of rising great-power nuclear threats from Russia, and growing Chinese conventional capabilities and coercive behaviour, our Western alliance partners wouldn't be best pleased by a sudden lurch in Australian strategic policy in favour of near-term nuclear disarmament.

India, which sees its own arsenal as an important contributor to future Asian stability, might not be any more understanding. With one single policy decision, Australia could damage its relations with both Washington and its major Asian partners.

It's not good news, therefore, that quite so many Labor parliamentarians—including big names like Anthony Albanese and Tanya Plibersek—have pledged their support for the nuclear ban treaty. Those pledges suggest a deep-level fracturing of the previous bipartisan consensus on some of the central planks of Australian strategic policy. Thankfully, there's some wiggle room because the pledge contains no reference to a date for fulfilment of the individual commitments. The parliamentarians have pledged to support Australian signature and ratification of the treaty, but they haven't said when.

If they think through the problems that signature and ratification will bring, they shouldn't be in any hurry to act upon those pledges. Nuclear disarmament is a worthy goal—but not soon.

Notes

- 1 'ICAN parliamentary pledge for the Treaty on the Prohibition of Nuclear Weapons', ICAN, August 2017, <http://www.icanw.org/wp-content/uploads/2017/08/Parliamentary-Pledge.pdf>.
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Relationships between highly asymmetric nuclear powers

10 April 2018

The current tensions between Washington and Pyongyang aren't just about history. Nor are they simply the result of personal frictions between Donald Trump and Kim Jong-un. At their core, they reflect the difficulties that typically attend adversarial relationships between two highly asymmetric nuclear powers.

Bernard Brodie, one of the doyens of deterrence thinking during the early days of the Cold War, canvassed some of the problems in this sort of relationship in his 1958 essay *The anatomy of deterrence*. There he considered how the Soviet Union might be strategically hampered by the emergence of a much inferior adversary which could, however, threaten nuclear damage to a small number of Soviet cities. The following extract is taken from his essay.

[D]eterrence effect in itself does not depend on superiority ... Let us assume that a menaced small nation could threaten the Soviet Union with only a single thermonuclear bomb, which, however, it could certainly deliver on Moscow if attacked. This retaliatory capability would be sufficient to give the Soviet government much pause ... If we think of five to ten H-bombs delivered on as many ... cities, the deterrence would no doubt be significantly greater ...

If we attempt to plot a curve denoting 'deterrence effect' as a function of the numbers of thermonuclear devices expected to fall on the aggressor's cities ... we can surmise that the curve begins at a rather high level of deterrence for the first such bomb, and that while it moves significantly higher as the number of bombs moves beyond one, it does so at a decreasing rate. At a relatively modest number (probably well short of a hundred) the curve is closely approaching the horizontal.¹

Let's bring that logic into the current setting. If Brodie's right, a North Korea equipped with 'a relatively modest number' of thermonuclear-tipped ICBMs can be almost as effective in deterring the much more amply equipped US as the US is in deterring the much smaller North Korea.

Brodie's assessment is a painful lesson in the truism that nuclear weapons are great equalisers. Sometimes that's a good thing, because smaller nuclear powers can be forces for good. Cases in which a smaller status quo power uses nuclear weapons to offset a larger revisionist power—France against the Soviet Union during the Cold War, for example—suggest that some asymmetric relationships can make a positive contribution to international stability.

Still, there the asymmetry wasn't great. Both France and the Soviet Union were members of the P5 of the UN Security Council, responsible for managing international crises on a regular basis.

But weapons that make *much* smaller powers with revisionist agendas 'equal' to great powers with status quo agendas look inherently problematic. A high percentage of recent analysis on the emerging deterrence relationship between Washington and Pyongyang has fixated upon the question of whether Kim Jong-un is rational and 'detractable'—that is, on whether the US can reliably deter North Korea.

But turn that question around. How much deterrence *of the US* does Kim believe he has now bought for himself? And what new freedom of manoeuvre does he think he now enjoys in Northeast Asia because of his capabilities?

One of the main threats that a smaller nuclear power poses for a larger one concerns those long-term effects that even a relatively limited nuclear exchange between the two might have on *other*, more important, nuclear balances. That threat was always at the core of French nuclear thinking—France couldn't hope to defeat the Soviet Union in an all-out nuclear exchange, but it could threaten to rip an arm off the Soviet Union and leave it a one-armed superpower against its nuclear peers.

That threat has to be a worry for Washington in the event that push ever comes to shove with a nuclear-armed North Korea. Of course, the US could defeat North Korea. But at what cost? A nuclear-damaged America would be relatively disadvantaged vis-à-vis Russia and China because it would be less well placed to protect both itself and its allies.

Well, some might argue, Kim Jong-un doesn't—yet—have any proven capabilities to target the continental US. True, his ICBM tests were flown on highly lofted trajectories. Still, intelligence estimates suggest such a capability is not far away.² That's what lends both urgency and importance to finding a solution to the North Korean nuclear problem.

A relationship of mutual nuclear vulnerability between one country with almost no equity in the international order and another with deep equity in the same order wouldn't be stabilising. Diplomacy might yet find a solution to that problem. But if it doesn't, we shouldn't assume that a comfortable, long-term nuclear deterrence relationship will miraculously unfold as a simple, benign alternative.

Notes

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Strengthening the nuclear order

25 February 2019

Nuclear weapons are once more a focus for public and political debate. Great-power competition has returned, leading to more fractious strategic relationships among the P5—the recognised nuclear-weapon states—and the competitive modernisation of nuclear arsenals. With the Intermediate-Range Nuclear Forces Treaty in trouble, and growing uncertainty about whether the US and Russia can agree to extend New START beyond its 2021 expiry date, great-power nuclear arms control is looking worryingly untethered. Some commentators are even suggesting that we might be moving into a post-arms-control era.

Nuclear deterrence—a doctrine intended to substitute threats of nuclear use for actual nuclear use—is under pressure from a range of sources. Those include the complexities of a more multipolar world, North Korea's sudden elevation to the ranks of the world's prospective ICBM powers, gradual improvements in ballistic-missile defences, and the attempt to delegitimise both nuclear weapons and nuclear deterrence by advocates of the Treaty on the Prohibition of Nuclear Weapons. Meanwhile, reports that Russia is increasingly interested in 'escalate to de-escalate' strategies suggest a wavering of the current norm against early nuclear use.

Technological developments are adding to the difficulties. New kinds of potential delivery vehicles are emerging, including hypersonic vehicles, air-launched ballistic missiles and long-range underwater drones. Improvements in the accuracy of long-range conventional strike capabilities and growing interest in low-yield nuclear warheads may be blurring the threshold between conventional and nuclear war. Developments in the cybersphere and space are bringing further layers of intrigue to balancing and war-fighting.

The challenge

The current nuclear order, at least as we've come to understand it since 1945, is fraying. That might not matter if a post-nuclear world were close, but the world's in no shape to make the sudden leap towards nuclear abolition. The political will even to attempt such a leap is, understandably, in short supply among those who believe that nuclear deterrence continues to contribute in important ways to both global stability and national security. Full nuclear disarmament—spectacularly difficult when cheating even in small numbers could be strategically significant—lies decades away. And, in the meantime, nuclear weapons are too important for us to rely on muddling through.

The task before us is simple; it's just not easy. We need to find new ways to strengthen the nuclear order for the years ahead. So far, our understanding of nuclear order has been based primarily upon William Walker's synopsis of that order. He described it as two interlinked systems: a managed system of deterrence and a managed system of abstinence. The first allows a carefully controlled form of power-balancing between the central nuclear players in the interests of global stability; the second enshrines a broader pattern of abstinence across the international community.¹

It was an order defined during the Cold War principally by the controlled power-balancing of the two superpowers, gradual solidification of international support for the Nuclear Non-Proliferation Treaty, and the breadth and credibility of the umbrella that the US extended to its allies. The superpowers

were, broadly speaking, separated by intercontinental distance, tolerant of existing anomalies in their different spheres of influence, and sufficiently well endowed with the resources necessary to address the command-and-control challenges of a large and complex nuclear arsenal. Perhaps most importantly of all, both knew well the terrible costs of great-power war.

But much has changed. Russia's now a smaller, revanchist power—embittered by its own fall from grace and more reliant on its nuclear weapons to maintain a claim to great-power status. The US has soured on its own liberal international ordering project, and that sourness is felt across the spectrum of its international engagement. Asia has become a more important driver in global politics, but brings to the global table little experience of formal arms control. True, it does have its own version of nuclear order based upon a principle of voluntary self-restraint. Unfortunately, that principle seems ill-suited to the task of reforging a stronger global order, and may prove inadequate even in relation to Asia's future regional nuclear order.

The NPT is also encountering headwinds. The treaty certainly reinforced the commitment to nuclear abstinence by the bulk of the world's non-nuclear states, but it also included an obligation on the existing nuclear-weapon states to disarm, making nuclear deterrence merely a way station on the path to a nuclear-free world. How long nuclear deterrence might legitimately last isn't settled by the NPT. The modernisation of existing arsenals certainly wasn't prohibited under the treaty. And, given the prominence of deterrence as a foundation stone of nuclear order in its own right, discarding it prematurely might do more harm than good. That's also true of extended nuclear deterrence—the doctrine under which the US offers the protection of its arsenal to its allies.

Quick wins

Unfortunately, few low-hanging fruit are available in strengthening the nuclear order. Signing and ratifying the nuclear ban treaty isn't an attractive option. It would mean voluntarily and unilaterally forsaking the protection of nuclear weapons without gaining anything in return. It would devalue the concept of power-balancing as an order-enhancer—and do so at the precise time when Western alliances are most in need of strategic modernisation. It would play merry havoc with the ANZUS alliance and the joint facilities. It would sour Australia's relations with a range of other countries—including Japan and India—that think nuclear weapons are critical to their own security. And it would weaken Australian security at a time when regional power balances are shifting profoundly.

Unlike the ban treaty, the old US–Russian arms-control agreements have the runs on the board in producing weapons reductions. So, at the abstract level, there might be a case for promoting one further round of US–Russian nuclear reductions (for example, perhaps to lower strategic nuclear warheads to 1,000 from the current level of 1,550). In practice, though, relations between Washington and Moscow are currently so chilly as to suggest that they'll be struggling even to agree on an extension of New START before it expires in 2021.

Similarly, with Kim Jong-un's unilateral moratorium on nuclear testing, it's probably timely to push for final signature and ratification of the Comprehensive Nuclear-Test-Ban Treaty by the eight outstanding Annex 2 countries (those 44 'nuclear-capable' states that have to sign and ratify before the treaty enters into force). Three of the eight—North Korea, India and Pakistan—haven't yet signed; the other five (China,

Egypt, Iran, Israel and the US) have signed but not ratified. If North Korea were to sign, pressure would grow on the South Asian countries to do the same.

The hard yards

Still, strengthening the nuclear order requires much more than US and Russian recommitment to existing arms-control agreements. Even if there's such goodwill, the world needs to encourage better engagement in the nuclear ordering project by the other nuclear players. And, with Asia's rise, we should be expecting Asian nuclear-weapon states to start bringing more to the table—if not more substantive warhead reductions, then certainly more agreements to enhance overall nuclear stability and improve crisis management.

The immediate need, of course, concerns North Korea. We don't know exactly how close North Korea is to having a fully capable thermonuclear-tipped ICBM. We do know that it's closer than we'd like it to be, which is why Kim's moratorium on nuclear testing and ICBM launches is important. Nuclear weapons are—because of their destructive power—great equalisers. The world has watched 'the bomb' slowly spread from superpowers to great powers, and subsequently to regional rivals. But the existence of nuclear-tipped ICBMs in the hands of a regime with little equity in the current global order would be deeply unsettling.

A full-court press is probably going to be needed to roll back North Korea's nuclear program. So it's an important early test of what the emerging Asian great powers—such as China and India—might bring to the table.

Breaking the rules

Australia has long been an important advocate of a range of nuclear ordering agreements, but we shouldn't take for granted that a stronger order is the inevitable product of today's nuclear uncertainties. A new period of nuclear disorder might lie in front of us. Not only might nuclear arms control founder at the bilateral level between the US and Russia, the NPT itself—the treaty underpinning the managed system of abstinence—might collapse. As the Trump administration's Nuclear Posture Review observed, we live in a world of geopolitical and technological uncertainty.² One of those geopolitical uncertainties involves the possibility of a 'proliferation cascade'—a period of rapid, successive, nuclear proliferation by states already well equipped to head down that path.

Australia, like the bulk of the world's states, last chose its nuclear 'identity' in the early 1970s, when we signed and ratified the NPT and put aside our own underdeveloped indigenous weapons program. Compared to some other countries, Australia isn't a repentant state. Still, when we ratified the NPT only the P5 countries had nuclear weapons. That number is now nine. Would Australian nuclear identity flip in a world that included almost double that number of nuclear-weapon states? Not automatically, no. Sheer numbers aren't a sufficiently compelling strategic driver. But some current status quo powers might proliferate—as a result of the perceived weakening, or overt withdrawal, of US extended nuclear deterrence, coupled with a simultaneous sense of escalated threat from an authoritarian, nuclear-armed, regional hegemonic power.

Those factors might well incite a deeply divisive debate in Australia about whether—and how—the country might appropriately respond to a sharp deterioration in our strategic environment. In our back pocket, we probably need a plan for strategic survival in a more competitive and disordered nuclear world.

Notes

This essay was published on *The Strategist* in the lead-up to the release of ASPI's *Agenda for change 2019: strategic choices for the next government*, in which it also appears.

- 1 William Walker, 'Nuclear order and disorder', *International Affairs*, 2000, 76(4): 703–724.
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Ugly stability: our nuclear future

8 April 2019

Co-authored with Aakriti Bachhawat

Back in the late 1990s, Ashley Tellis characterised South Asia's nuclear balance as 'ugly stability'—a condition, he believed, that would probably last for a decade and perhaps longer.

This peculiar form of stability derives substantially from the *inability* of both India and Pakistan to attain what may be desired political objectives through war. Consequently, premeditated conventional conflicts will remain absent for some time to come, though security competition will continue through subconventional violence waged with varying levels of intensity ... [T]his stability will be 'ugly' in that it entails a relatively high degree of subconventional violence on at least one side, perhaps both.¹

So, 2019's a long way from the late 1990s, but the concept of ugly stability is still applicable to South Asia. Indeed, in its broad dimensions, it seems to be increasingly relevant to the future global nuclear order as well.

Many readers might find that unsettling, especially those who like their nuclear orders finely wrought, as a managed system of deterrence interlinked with a managed system of abstinence, for example. Western publics typically undervalue deterrence and overvalue arms-control agreements, in part because they see those agreements as the principal barrier to nuclear war—hence their anxiety about disruption in the arms-control world. And, because most Western states are democracies, that anxiety translates into pressure on Western governments to 'fix' problems in nuclear arms control, even when those problems aren't theirs to fix.

That view's wrong, of course. Yes, arms-control agreements bring a level of detail and reassurance to nuclear relationships. And they might properly be seen as early-warning indicators of looming difficulties in those relationships—mainly the US–Russia nuclear relationship, because that's the foundation for much of the current arms-control architecture. Still, it isn't the management of nuclear deterrence that's the principal barrier to war, but deterrence itself. Similarly, it isn't the management of nuclear abstinence that stops proliferation, but abstinence itself—for most states, the simple judgement that proliferation isn't in their interests.

When managed stability falters, the result isn't unmanaged instability. Rather, it might be better described as unmanaged stability—or what Tellis would call ugly stability. And ugly stability has a value of its own: it works when other systems don't. The South Asian nuclear balance doesn't work by carefully measured arms-control agreements. Its 'stability' derives from other factors, including each side's constrained political objectives; the absence of easy, quick, conventional military options; the implausibility of successful nuclear decapitation strategies; and the expected horror of actual nuclear conflict.

For a world that seems to be witnessing the formal demise of the Intermediate-Range Nuclear Forces Treaty, and—perhaps—the early onset of a post-arms-control era, there's a measure of comfort to be found in ugly stability. It underlines the fact that nuclear deterrence, at its core, isn't a carefully crafted bargain but a swirl of fear and uncertainty about the imminent prospect of large-scale, escalating and uncapped destruction.

True, the measure of comfort to be found in ugly stability isn't great. India and Pakistan have made the best of the condition to keep the subcontinent safe for over a quarter of a century. But events over recent weeks have helped to underline the fact that the crude lumpiness of nuclear deterrence sometimes makes for difficult signalling.²

Moreover, context matters. Indian Prime Minister Modi is in the middle of an election campaign, making bargaining and accommodation even more challenging than usual. His chest-thumping after India's 'surgical strikes' in Pakistan-controlled Kashmir in response to an attack on India's military base in Uri in 2016 made it essential for him to authorise a more robust retaliation after the terrorist attack in Pulwama in February this year.³ Back then, Islamabad used plausible deniability to refute India's claims of having entered Pakistan-controlled Kashmir, thereby avoiding the need to respond. This time around, however, Pakistan's newly elected prime minister, Imran Khan, had to be seen to be acting, especially given the fact that India had conducted air strikes within undisputed Pakistani territory.

In an age of social media and 24/7 news channels, it's harder to control messaging—a fact that's been underlined by recent events. Both India and Pakistan were seeking a way out of the crisis but were boxed in by public expectations and past rhetoric. Ultimately, both fed their own narratives of victory to their citizens and stepped back from their escalation options. The ugliness of the relationship persists—in continuing ceasefire violations, among other things⁴—but stability prevails.

So we're not arguing that ugly stability is an ideal condition upon which to base the long-term future of the global nuclear order. Rather, it's a safety net that adds a layer of security to nuclear balances when the high-wire competitors overreach. And because of that safety net, we should be less nervous about either a fraying of the rope or the limited skills of the trapeze artists.

A faltering of arms control does not automatically mean nuclear war is more likely.⁵ Similarly, an escalating strategic competition between the great powers does not mean that a return to nuclear arms racing, reminiscent of the early days of the Cold War, is inevitable. Even in a world without the INF Treaty and New START, nuclear-armed states are unlikely to see benefit in either nuclear war or arms racing.

The downside of ugly stability is that between safety net and hard ground there are few things that might break any further fall. Domestic political transformation might be one such thing: fans of Tom Clancy's novel *Red storm rising* will remember that a quickening slide towards nuclear war is arrested by a military

coup in the Soviet Union. International intervention might be another: a mixture of exhortation and coercive pressure might be sufficient to de-escalate a nuclear conflict.

But even in those conditions—where the nuclear threshold may have been crossed—the most effective barrier to escalation would still be nuclear deterrence itself. Fear and uncertainty, the animating principles of deterrence, rise steeply as the prospects of unconstrained war increase. Therein lies the greatest incentive for war termination.

Notes

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Good posts are almost never the product of a single individual. At ASPI, it's standard practice for an author to circulate a draft internally for comments by other staff. Those comments frequently contribute to a stronger final argument. I am indebted to my colleagues for the time and thought they take to help produce a better product, in the face of time pressures and competing demands. I wish the publication constituted a more impressive testimony to my appreciation.

Moreover, posts themselves often begin life outside the office, frequently as mere conversations over a cup of coffee. Flashes of inspiration are typically the stimulus to any creative process, and that holds true in the blog world. A hat-tip to all who inspire, without whom the world would be a poorer place.

The Strategist has also benefited over the years from good editing. The current team of Patrick Walters, Brendan Nicholson, Larissa Joseph and Jack Norton is not just good, it's excellent. Larissa, in particular, has lavished upon this collection a true professional's eye for detail.

During the early weeks of this project, Aakriti Bachhawat assisted in helping to pull together the original draft of what the collection might include—a primal act of creation upon which all later stages depended.

My deepest thanks to all.

Abbreviations and acronyms

ANZUS Treaty	Australia, New Zealand, United States Security Treaty
AUSMIN	Australia–United States Ministerial Consultations
BRICS	Brazil, Russia, India, China and South Africa
CPSU	Communist Party of the Soviet Union
CSIS	Center for Strategic and International Studies
CVID	complete, verifiable, irreversible dismantlement
DFAT	Department of Foreign Affairs and Trade
DWP	defence white paper
ICAN	International Campaign to Abolish Nuclear Weapons
ICBM	intercontinental ballistic missile
INF	Treaty Intermediate-Range Nuclear Forces Treaty
NATO	North Atlantic Treaty Organization
NPT	Nuclear Non-Proliferation Treaty
P5	Permanent Five (China, France, Russia, the UK and the US: the five permanent members of the United Nations Security Council, and the only countries recognised by the Nuclear Non-Proliferation Treaty as lawful possessors of nuclear weapons)
P5+1	Permanent Five plus Germany
R&D	research and development
SALT	Strategic Arms Limitation Talks
START	Strategic Arms Reduction Treaty
WMD	weapon of mass destruction

WHAT'S YOUR STRATEGY?

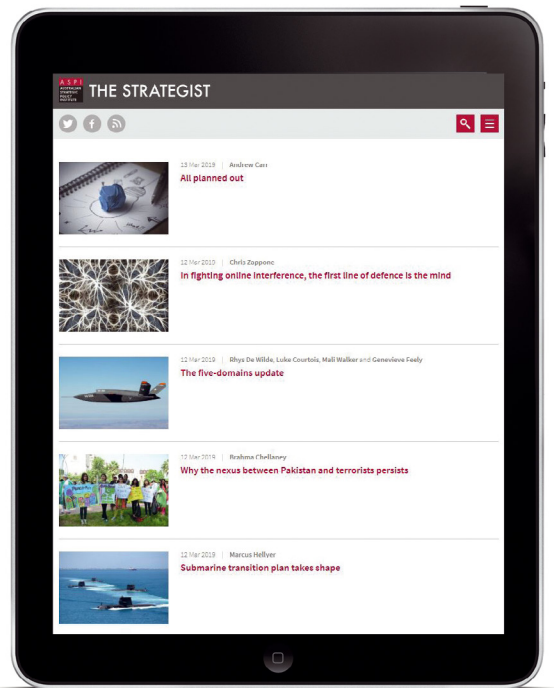


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Nuclear strategy in a changing world

Rod Lyon

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