a lowy interpreter
blog debate

WEATHERING CHANGE

the future of extended nuclear deterrence

edited by Rory Medcalf

the interpreter

LOWY INSTITUTE
FOR INTERNATIONAL POLICY

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the future of extended nuclear deterrence

a global debate from *The Interpreter*, weblog of the Lowy Institute for International Policy

edited by
Rory Medcalf

with contributions from
Nobumasa Akiyama, Duncan Brown, Richard C. Bush, Fiona Cunningham, Stephan Frühling, Raoul Heinrichs, Hyun-Wook Kim, Jeffrey Lewis, Thomas G. Mahnken, George Perkovich, Benjamin Schreer, Shen Dingli, Bruno Tertrais, Hirofumi Tosaki and Hugh White

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PO Box 102 Double Bay New South Wales 1360 Australia
www.longmedia.com.au
info@longmedia.com.au
Tel. (+61 2) 9362 8441

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Contents

Introduction

Nuclear-armed states are not the only countries whose security policy choices will determine whether progress can be made towards a world without nuclear weapons. Sooner or later, questions about extended deterrence must be addressed. For many years the extension of nuclear guarantees to non-nuclear allies has played a powerful role in maintaining their security and guarding against the risk that they might seek nuclear weapons. Peace, stability and non-proliferation have been reinforced. Amid changing strategic and political circumstances in the early 21st century, and following the 2010 US Nuclear Posture Review, it is timely to ask whether and how extended nuclear deterrence (END) might be adapted if these benefits are to endure.

The Lowy Institute, Australia's leading independent policy think tank, has a strong record of research, convening and awareness-raising on nuclear issues. Under our partnership with the Nuclear Security Project of the Nuclear Threat Initiative, we have spent the past 12 months focussing on the future of extended deterrence, particularly in Asia, and how it might interact with efforts to reduce nuclear dangers. In this we have worked closely with Asian partners, notably the Japan Institute of International Affairs, convening workshops in Sydney, Tokyo, Beijing and Seoul. That process will culminate in a major research publication later in 2011.

The present volume is the fruit of a companion project. Since 2007, the Lowy Institute has maintained a weblog, *The Interpreter* (www.lowyinterpreter.org), which has helped position the institute as one of the world's top ten think tanks in its use of social media to engage the public, according to research by the University of Pennsylvania. *The Interpreter* is also ranked by Technorati as one of the top 100 world politics blogs globally.

We decided to use this vehicle to invite global experts to debate the future of the nuclear umbrella, asking the provocative question 'Is extended nuclear deterrence dead'? A selection of the best responses is presented in these pages. We hope it will stimulate and inform the thinking of policy leaders and opinion makers, both at the Nuclear Security Project's May 2011 conference and beyond.

For their invaluable work, I thank the editor of *The Interpreter*, Sam Roggeveen, and his assistant Andrew Carr. Much credit is also due to my research associate Fiona Cunningham, including for the idea of this blog debate, and to my program associate Ashley Townshend, who suggested the publication and developed it in record time. Finally, I acknowledge the support of the Nuclear Security Project. I should also note that the views in this publication are entirely the authors' own and not those of the Lowy Institute or of the Nuclear Security Project.

Rory Medcalf
Director, International Security Program
Lowy Institute for International Policy

Sydney, May 2011

Is extended nuclear deterrence dead?

Rory Medcalf

These are confusing times in nuclear strategy.

The Obama Administration is promoting the vision of a world without nuclear weapons. At the same time, power politics and coercion are making a comeback, particularly in Asia, where repeated instances of Chinese assertiveness and the use of armed force by North Korea are unsettling US allies including South Korea, Japan and Australia. Half a world away, the North Atlantic Treaty Organisation (NATO) has struggled to reconcile nuclear disarmament imperatives with concerns about Russia in its revised strategic concept. In South Asia and elsewhere, fears of nuclear terrorism are rising. And Iran's atomic ambitions could rewrite deterrence calculations across the Middle East.

All of this points to a vital question, the answer to which will be critical to international stability in the years ahead: is the age of extended nuclear deterrence (END) coming to an end? For decades, the US has made the seemingly credible threat that it would use nuclear weapons to protect its allies against large-scale aggression—the so-called 'nuclear umbrella'. But how viable is such a strategy in a changing nuclear order and an altered strategic environment? And are there feasible, palatable alternatives?

Here at *The Interpreter*, we think it is time to foster a dynamic and truly global debate on this issue. To launch the exchange, we have invited contributions from four of the world's leading experts on nuclear arms control and strategy: George Perkovich of the Carnegie Endowment for International Peace, Bruno Tertrais of the Fondation pour la Recherche Stratégique, Shen Dingli of Fudan University in Shanghai, and Australia's Hugh White.

In the days and weeks ahead, their initial posts will be followed by other solicited contributions from prominent security thinkers and practitioners. We will also open up the debate to readers and give the original contributors an opportunity to reply and expand on their arguments. As the debate progresses, we will be interested in exploring not only the core analytical question of whether END is dead or alive, but also the policy options for the nations concerned, including those US allies who have sometimes entertained

nuclear options of their own. It should prove a fascinating, important and at times confronting conversation.

Rory Medcalf is the Director of the International Security Program at the Lowy Institute for International Policy

What is extended nuclear deterrence good for?

George Perkovich

As the unipolar era ends, the pro-Western imagination somehow remembers the Cold War as halcyon days for extended deterrence. In fact, extended deterrence was always problematic. It is not much more so today.

Extended deterrence is often conflated with extended nuclear deterrence. The two are not the same. I assume we are here debating the life or demise of extended nuclear deterrence. In that case, the key question is, 'What are we expecting US nuclear security guarantees to deter?'

US allies naturally wish that American policies and weapons will deter a wide range of possible threats. In Eastern Europe today, this could include threats of Russian military intervention in territorial disputes (à la Georgia), Russian energy blackmail or cyber attacks as Estonia experienced in 2007.

In East Asia, American allies and friends worry over China's growing aggregate power and the possibility of being pushed around over economic issues, control over natural resources and disputed islands, policy toward North Korea, and the security of cyber networks. South Korea and Japan understandably also fear North Korean aggression of various sorts.

In evaluating deterrence of these threats (by whatever means) we must not ask the US to do for others what it has not been able to do for itself. The US was unable to deter Afghanistan from enabling al Qaeda to undertake the 9/11 attacks. It did not deter Saddam Hussein from invading Kuwait in 1990, nor coerce Saddam to abide by UN resolutions in the run-up to the 2003 war. India's nuclear weapons did not deter Pakistan from the Kargil intervention in 1999.

In short, nuclear-armed states have been unable to deter a number of very unwanted challenges to their security and those of their allies. What they have been able to deter, generally, is large-scale aggression that would threaten their own existence or those of their protectorates. In other words, nuclear weapons deter only those threats against which it is credible to use nuclear weapons.

In cases where the potential aggressor wields nuclear weapons, this means that the threat must be sufficiently grave for the deterrer to risk escalation to nuclear war, with the potential result of mutual suicide. It is not credible to take

such mortal risks unless the alternative would also threaten one's existence or, in the case of allies, one's identity and viability as a great power.

Therefore, extended nuclear deterrence should only be relevant against threats of such magnitude that the possible use of nuclear weapons to deter or defeat them would be proportionate. Against lesser threats, other means of deterrence must be relied upon. In East Asia today, this means, for example, that nuclear weapons should not be expected to deter potential Chinese efforts to occupy disputed islands in the South and East China seas, or to deter the most probable forms of cyber disruption or political-economic bullying. Other means, including strengthened combined-allied conventional forces and operations, should be enhanced for these purposes.

The Democratic People's Republic of Korea (DPRK) is a particularly troubling case. What scale and type of aggression by Pyongyang would credibly justify and call for US nuclear retaliation (including pre-emptively)? The US can destroy North Korea's military and economy, albeit at enormous costs not only to North Korea but also to South Korea. But the underlying challenge then (and now) is to replace the government in North Korea by one that is civilised to its own people and others. Nuclear weapons offer little to this end.

In the nuclear age, revisionist states, insurgents and terrorists have learned to utilise asymmetric 'weapons' to fight more powerful nuclear-armed states. Nuclear weapons will remain for the foreseeable future in the background to deter existential-scale threats, but other means must occupy the foreground. Rather than wishing for nuclear weapons to do the job, or hand-wringing that they cannot, we should concentrate on developing credible strategies and capabilities to deter insidious new forms of aggression and subversion.

There is no material reason to think that US interest in moving gradually and multilaterally toward a world in which no-one possesses nuclear weapons should undermine extended nuclear deterrence. The US is emphatically clear that, as long as anyone has nuclear weapons, and the non-proliferation regime is not extremely robust, the US will retain nuclear weapons and a state-of-the-art nuclear infrastructure.

US interest in nuclear disarmament stems from the perception that a world without nuclear weapons would give it a greater advantage against others that might threaten it or its allies. The others—particularly China, Russia and North Korea—recognise this. They see the Obama agenda as a means

of strengthening the US advantage. Hence they (and Pakistan) are likely to impede nuclear disarmament. How does this weaken extended nuclear deterrence?

It is easy to raise questions about the viability of extended nuclear deterrence in a vacuum, forgetting that nuclear deterrence comes with the real risk that the weapons will be used. Serious policy-making should focus on how to redress insecurities and deter and prevent war without the catastrophic risks of nuclear proliferation and use. The US is committed to leading in this direction. It would welcome similarly serious efforts by other influential states to address these underlying political-security challenges.

George Perkovich is the Director of the Nuclear Policy Program at the Carnegie Endowment for International Peace

Extended deterrence: alive and changing

Bruno Tertrais

No country will ever run the risk of a nuclear attack for the sake of protecting one of its allies, General Charles de Gaulle once said, thus justifying the building of an independent French deterrent.

The credibility of the US 'nuclear umbrella' was the focus of considerable debate during the Cold War, and there is no reason why this debate will not continue. But extended Western deterrence is alive and well. Not only has it survived the end of the Cold War, but its scope has been expanded. In Europe, NATO has almost doubled in membership in the past 20 years, and the new members are keen to emphasise how much the US umbrella matters to them. (France itself now declares that, given growing European integration, its deterrent force also protects its neighbours.)

In Asia, North Korean provocations and China's military modernisation have led to a strong reaffirmation of US protection, and even to the creation of a mechanism for US–South Korean nuclear consultations. In the Gulf, the three Western nuclear powers have made new security commitments since 1990, either informally (in the case of the US) or through defence agreements (in the case of France and the UK). Recently, fears of an Iranian bomb have also led the US to hint at the extension of a 'defence umbrella' over the Arabian peninsula.

During the 2010 Nuclear Posture Review (NPR) process, the US Administration was particularly careful to listen to its key allies. The NPR report includes a strong reaffirmation of its nuclear umbrella, and discards the 'no-first-use' of nuclear weapons largely for extended deterrence reasons. Washington has also made it clear that the reason why it wants to maintain parity with Russia is that its allies would be wary of a perceived US 'nuclear inferiority'.

The usefulness of extended deterrence for non-proliferation can hardly be debated. A large body of historical evidence shows that it was the key to the renunciation of nuclear weapons by many Western countries. And if Iran was to cross the nuclear threshold, a strong reaffirmation of US guarantees will be helpful to prevent countries such as Turkey and Saudi Arabia looking for alternatives.

Extended deterrence is, however, changing. Due to technological progress, force reductions, as well as a growing allergy in many countries to

nuclear weapons, it increasingly relies on non-nuclear assets such as missile defence and long-range precision strikes. Conversely, due to the evolution of the strategic landscape, it is geared towards preventing nuclear and other weapons of mass destruction threats more than conventional invasion.

The fact that extended deterrence will rely more on non-nuclear means will not necessarily make it less credible. As long as a state possesses nuclear weapons, its adversary has to take into account the risk, however remote, that it could ultimately face nuclear retaliation. And an emphasis on non-nuclear capabilities may in fact increase its effectiveness—relying too much on nuclear weapons can lead adversaries and allies to doubt the protector's resolve, and he himself may be 'self-deterred'.

Likewise, the fact that extended deterrence relies less on in-theatre means does not necessarily affect its credibility; deterrence is fundamentally a psychological process.

However, this also means that extended deterrence will have to be even more carefully nurtured than in the past. This is a complex exercise since it has to be credible in the eyes of three parties: the protector, the protected and the adversary. There have been many examples of failures of extended deterrence in the past—the most egregious of which was the North Korean attack in 1950. But nowadays, the perception that Western countries are 'weak' is widespread. This can affect the value of deterrence in the eyes of both allies and adversaries.

This calls for careful calibration of statements and declarations regarding security commitments, adapting them to various regional contexts and domestic sensitivities. This also calls for caution when decisions to alter a military posture are made for financial, political or ideological reasons—both allies and adversaries are watching.

A topical example is Europe, where many consider that nuclear weapons could be replaced with missile defence and argue that what matters is a physical US military presence on the continent. But others believe that the withdrawal of US nuclear weapons could make the NATO deterrent less credible in the eyes of Russia or Iran, or encourage a Turkish nuclear program. (The withdrawal of US nuclear weapons from Northeast Asia in 1992, largely conceived as a goodwill gesture towards Pyongyang, did nothing to prevent North Korea from going nuclear.)

Finally, Western countries should remember that the way they manage their commitments in one part of the globe can have a much broader impact. End-game decisions regarding operations in Iraq and Afghanistan, for instance, will be watched very carefully by both friends and foes.

Bruno Tertrais is a Senior Research Fellow at the Fondation pour la Recherche Stratégique, Paris

Extended nuclear deterrence: fading fast

Shen Dingli

The answer to the question 'Is the age of extended deterrence over?' cannot be a clear one. It is neither a firm 'yes' nor a categorical 'no'.

To start with, nuclear deterrence has both succeeded and failed. On the successful side, the US kept the secret of Soviet participation in the Korean War from the public to contain the likelihood of crisis escalation that may have led to direct conflict with a nuclear Soviet Union. Also during the Korea War, China was deterred by the US nuclear arsenal, which partly explained China's acceptance of the armistice.

On the unsuccessful side, America, despite its possession of nuclear weapons, did not deter North Korea's attack in 1950 or that of the Vietcong in the 1960s–70s. China has even proclaimed a no-first-use policy, refusing to deter the US from selling weapons to Taiwan, though Beijing deems Taiwan a core national interest.

America's extended nuclear deterrence also has a mixed record. The credibility of US extended deterrence for its NATO allies has not been challenged, and it has assured nuclear non-proliferation among them. Nevertheless, America's virtual ally, Israel, has gone nuclear despite the US security commitment. During the 1970s, South Korea and Taiwan clandestinely launched their nuclear weapons programs for fear of US withdrawal from East Asia.

Recent trends seem to indicate the acceleration of the irrelevance of extended nuclear deterrence. If Pyongyang might not have been completely responsible for sinking the *Cheonan*, it was undeterred by US extended deterrence when it launched an artillery barrage against Yeonpyeong Island. The US didn't dispatch the USS *George Washington* to the West Sea/Yellow Sea in the wake of the *Cheonan* sinking. Even if the US did so after the artillery exchange in November 2010, it still didn't retaliate militarily against North Korea.

America mistakenly entered Iraq in 2003 under the pretext of Saddam's WMD build-up. However, Iran's persistent nuclear quest, regardless of various International Atomic Energy Agency and UN Security Council (UNSC) warnings, has ridiculed any international pressure, including US deterrence.

Israel is increasingly under pressure to launch a pre-emptive strike against Tehran so as not to burden US extended nuclear deterrence.

Beyond the seeming decline of extended nuclear deterrence, the aforementioned trend is also indicative of America's caution in wielding the nuclear option. What is at stake is not deterrence or extended deterrence, but security assurance per se. The US has actually not loosened its security commitment to its allies, but in order to maintain the credibility of its deterrent, America is now less willing to coerce its non-nuclear rivals while it has increasingly more non-nuclear tools in its policy kit. This was manifested in the Obama Administration's Nuclear Posture Review last year.

Both North Korea and Iran have understood this, to their benefit. Iran understands that its violation of various UNSC resolutions would at most incur a non-nuclear US response. Indeed, UN Secretary-General Ban Ki-moon is mediating a nuclear swap arrangement to lessen international concern, which could legitimise Iran's uranium enrichment. North Korea has also ventured into crises without inviting US military strikes, and it has presented its own conventional deterrence plus a looming nuclear deterrent. Deterrence is no longer a US gadget.

Mutual nuclear deterrence among major powers is indeed less relevant nowadays, in a globalising age. At a time of co-dependence, there are more incentives for inter-state compromise and reconciliation, while contingencies which require a nuclear showdown are implausible—hence the decline of nuclear deterrence among major powers, and extended nuclear deterrence backed by various non-nuclear options.

Shen Dingli is a Professor and Executive Dean of the Institute of International Studies at Fudan University

Extended deterrence: a game of bluff

Hugh White

It is best to start thinking about how extended nuclear deterrence might work in future by looking back at its Cold War origins. It is, of course, an American concept. America deliberately promoted expectations that it would respond with nuclear weapons to a Soviet attack on its allies in Europe and Asia. This policy had two aims: to deter the Soviets from attacking US allies, and to keep the allies loyal by reducing their incentive to build their own nuclear forces.

For END to work, America needed both the evident nuclear capability to strike the Soviets hard enough, and the evident willingness to use that capability if its allies were attacked. The capability bit was never in doubt, but it proved harder to persuade both Moscow and America's allies that it would actually use its nuclear forces to defend others.

The proportionality of a nuclear response to a conventional attack was one problem, but the real question concerned costs to the US once the Soviets had the ability to strike back. Would Washington risk nuclear retaliation against the US itself to defend an ally an ocean away?

Much of US nuclear strategy in the Cold War was devoted to persuading both friends and foes that it would. Ultimately, the US succeeded because it convinced others that it saw the loss of a European or Asian ally as posing a direct threat to the US, because they feared that would lead to Soviet domination of Eurasia, which would make Moscow strong enough to overmatch and dictate to the US.

What does this tell us about END over the next few decades? The capability element seems to me pretty clear. The US can easily maintain nuclear forces able to devastate any adversary, and—speeches in Prague notwithstanding—I think there is little doubt that it will do so. But America's ability to credibly threaten nuclear attack to defend other countries is much less assured. It depends on whether Washington can persuade others—adversaries and allies alike—that it would be willing to go ahead and launch a nuclear attack if its bluff was called.

There is no reason to doubt American willingness to use nuclear forces against powers that cannot retaliate directly against the US, at least in relation to nuclear attacks when proportionality is not an issue. It is, for example, entirely credible that Washington would launch a nuclear attack against

Pyongyang or Tehran if either of them used nuclear forces against a US ally, because neither have (for the time being) an assured capacity for nuclear retaliation against the US.

But these are not the tough cases. The real question about the future of END is whether the US can credibly threaten nuclear attack against an adversary that could retaliate against the US—which for present purposes means Russia or China.

Take Europe first. If Moscow launches a conventional invasion of a NATO ally—say Latvia or Estonia—could America credibly threaten nuclear attack to force Russia to withdraw? Could it persuade Moscow that the independence of the Baltic States is so important to America that it would accept nuclear attack on the US to preserve it? That seems to me very doubtful, because Russia today does not have the potential to dominate Eurasia the way it did in the Cold War. The stakes for America are simply not as high—and not high enough.

What of China? As General Xiong once asked, is Taiwan's independence worth Los Angeles? More broadly, is anything on the western side of the Pacific important enough to Washington to convince Beijing that America would accept nuclear attack on its homeland to defend it? Even Tokyo?

This is the core question for the future of END: what is so important to Americans today that they are willing to suffer nuclear attack to defend it? And can the US persuade friends and allies that it is willing to make this sacrifice? Many would suggest the maintenance of a US-led world order is important enough, but I doubt that, especially when the non-military challenges to that order are so strong anyway.

I think the costs of nuclear attack are so high that nothing except the defence of America's own territory and independence would justify them. In the Cold War, when it seemed one power could dominate Eurasia, America's own security appeared to be at risk from a Eurasian hegemon. Today, with at least two and maybe four major Eurasian powers, that risk seems very remote.

So against any power capable of delivering nuclear weapons onto American soil, END is an anachronism. Neither America nor its allies yet accept this. The sooner they do the better for everyone.

Hugh White is a Professor of Strategic Studies at the Australian National University and a Visiting Fellow at the Lowy Institute for International Policy

Extended deterrence is alive and well

Stephan Frühling and Benjamin Schreer

Previous entries in *The Interpreter*'s debate on the future of extended nuclear deterrence make a valuable contribution to the discussion about this important aspect of Asia's security order. Both Hugh White and Shen Dingli see US willingness and ability to provide assurance to its allies as being in decline.

Hugh's deliberate mirror-imaging follows an established approach to the theory on deterrence. There is a long tradition of analysts using it to argue for their policy prescriptions, not least Nobel prize winner Thomas Schelling.

But as Bruno Tertrais points out, deterrence is a psychological phenomenon. Therefore, judgments about its viability must ultimately rest on empirical evidence of real-life attitudes and policies. And to us, the evidence points to a more positive view of the viability of US END in East Asia.

We must be careful not to ascribe to END a greater remit than it really has. George Perkovich remarks that END is only suited to dealing with the possibility of a major, existential threat. Skirmishes on the Korean peninsula are nothing new, and do not support the argument that END, or even extended deterrence in general, is failing.

It is also simply not true that NATO today is threatening nuclear retaliation for a Russian attack in the Baltics. Ever since the adoption of Flexible Response in 1968, NATO has deliberately developed the ability to respond conventionally against a major but limited Russian conventional attack. The 'threat that leaves something to chance' is still there, but NATO does not rely on it.

And END has never been, and cannot be, a fail-proof panacea even against major war. Nevertheless, even a small reduction in the likelihood of major war would make it a valuable part of the global and Asian security order.

In hindsight, the Cold War can easily seem more straightforward than it really was. Care is needed when using it as a quarry for arguments about future policies in Asia. The sources of US commitment to the defence of Europe, for example, were much more varied than is suggested by a purely realist perspective: a good case can be made that, from the late 1950s, outright conquest of Western Europe would have been a poisoned chalice for the Soviet Union. The willingness of the US to defend Europe even at the risk of nuclear attack on America rested not only on national interest, but also on common

values, shared history and personal relationships. And extended deterrence was much stronger, and more credible, for it.

As long as the US remains a nuclear power, END will be an inseparable, even if implicit, part of its alliance relationships. And we do not see any US policy, or that of any major ally or potential adversary, indicating that the strength of the decades-old US alliance relationships in East Asia has been fundamentally weakened.

That is not to say that extended deterrence relationships do not evolve. But at a time of changing great power relativities, an increased attention to END in official circles is a sign of vitality, rather than of decline. As long as there was no prospect of a major threat, there was also no need for practical and visible nuclear cooperation. To us, the increasingly formalised dialogues about nuclear matters among the US, Japan and South Korea is therefore a good sign.

The debate about extended deterrence is as old as nuclear weapons themselves. As in the past, its intellectual attraction arises in large part from the tension between arguments about how the world should be in theory, and how it is in practice. At its core, END remains a leap of faith. But as long as all those decision-makers who matter are prepared to make that leap, END remains viable. And we see no empirical reason to doubt that this will not, for the foreseeable future, be the case for American END in East Asia.

Stephan Frühling is a Lecturer in the Strategic and Defence Studies Centre at the Australian National University

Benjamin Schreer is a Senior Lecturer in the Strategic and Defence Studies Centre at the Australian National University

Extended nuclear deterrence at work

Bruno Tertrais

Shen Dingli and Hugh White make valuable points in their contributions to the debate on extended deterrence opened by *The Interpreter*. However, they also construct strawmen, which limit the value of their arguments.

Shen Dingli mentions the 1950 invasion of South Korea; but at that time, there was no US extended deterrent to South Korea. The bilateral treaty was signed in 1953, after the war, in order to prevent a resumption of hostilities. His other example is the Vietcong's war against Saigon; but likewise, at that time South Vietnam was not covered by an explicit defence commitment which promised retaliation against the North in case of aggression. And the Vietnam War was very different from the Korean one: it was more a slow-motion escalation than a full-scale state attack.

Finally, the case of Iran's 'persistent nuclear quest' is irrelevant to extended deterrence. It is true that 'Iran's violations would at most incur a non-nuclear US response', but so what? That has nothing to do with extended deterrence. For sure, one can argue that Washington and the other four permanent members of the UN Security Council have so far failed to deter Iran from continuing its nuclear march, and that Tehran's nuclearisation would have far-reaching consequences for US extended deterrence in the region. But that is a completely different debate.

Shen Dingli's contention that extended deterrence did not prevent the bombing of Yeonpyeong is much more relevant and interesting.

It could indeed be argued that Pyongyang was testing the limits of US protection of Seoul. However, another intriguing possibility should be raised: that North Korea was very careful to strike a 'disputed' area, one which was—at least from its point of view—not part of the territory covered by the US umbrella. In so doing, it may have acted like Egypt and Syria did in 1973: facing a nuclear-armed adversary, they were very careful not to attack Israel on its 1948 borders.

Hugh White raises an extremely important question: he wonders if Washington would threaten nuclear war for the sake of the Baltic states, since the risk of 'losing Europe' would be limited. In other words, the stakes would be much lower than during the Cold War. But, as in most discussions about deterrence, one has to consider the problem the other way round: would

Moscow take the risk of invading the Baltic states, given that it would face three nuclear-armed adversaries and risk a military escalation that could, ultimately, end up in a nuclear exchange?

My answer is 'no'. It may be precisely because Georgia was not under NATO or US protection that Russia considered it could take a chance in 2008. (Incidentally, here again we see an intervention on what was arguably a disputed area: the Abkhazian and South Ossetian territories. The Western reaction could very well be what stopped Moscow from going further.)

White also quotes with appreciation the reported 1996 statement by a Chinese official, according to which the US cares more about Los Angeles than it does about Taiwan. However, during a crisis in the Taiwan Straits, the 'deterrence dialogue' would not stop there. The question is: what would Washington tell Beijing if China threatened to escalate the conflict to the US homeland? My guess: the US President would say 'try me'.

In other words, the credibility of US extended deterrence to Taiwan depends not on the relative values of Taiwan and Los Angeles for Washington, but on the respective beliefs of Chinese and American officials about the sequence of a US–China nuclear war. A classic deterrence issue.

Shen Dingli makes a different but related point when he states that globalisation and interdependence have made nuclear deterrence among major powers less relevant than it used to be. That may be true, and there is something like a 'financial balance of terror' between Washington and Beijing. But I would caution against definitive conclusions: the First World War erupted at a time of (then) unprecedented economic interdependence between the major European powers of the time. This did not trump political passions and the strength of ideologies.

UPDATE: I described in an earlier post the 1950 North Korean attack as a 'failure of extended deterrence'. I should clarify what I meant. There was no formal extended deterrence to South Korea at that time. But by stating that the Korean peninsula was not part of the defensive perimeter of the US, Washington signalled explicitly to North Korea and its allies the absence of such a deterrent and gave a green light to the invasion.

Bruno Tertrais is a Senior Research Fellow at the Fondation pour la Recherche Stratégique, Paris

From extended deterrence to core deterrence

Jeffrey Lewis

The place to start any discussion about the future of extended deterrence—which is essentially an American phenomenon—is with a heresy: there is no such thing as the 'nuclear umbrella'.

Yes, the US has security commitments. For example, the Security Treaty between Australia, New Zealand and the US (ANZUS Treaty) committed the parties to 'act to meet the common danger' from an armed attack 'in the Pacific Area on any of the Parties'. And, yes, the US also has a very large arsenal of nuclear weapons that is second to none.

But there is no specific commitment to use any of those nuclear weapons in defence of any ally. The ANZUS Treaty and other US defence agreements do not commit the US to use nuclear weapons. The nuclear umbrella is, at best, an inference. It is, in certain cases, a very reasonable inference, of course. And, if I were Kim Jong-il, I wouldn't push it.

One way to think about much of the history of extended deterrence is as a kind of conjuring trick or alchemy—an effort to make real this commitment that is merely implied by the dual reality of US security commitments and the existence of nuclear weapons.

In Europe, this trick took the form of planning activities and 'nuclear sharing' arrangements in which European pilots in so-called 'dual capable' aircraft trained to drop American nuclear bombs. In other places, like Japan (until 1972) and South Korea (until 1991), the commitment was implied by US nuclear weapons stationed on their territories.

With the withdrawal of US nuclear weapons from South Korea in 1991, there are no US nuclear weapons forward deployed in the Asia–Pacific. Instead, American officials have largely pointed to specific capabilities in the American arsenal that are said to be maintained for the unique task of extended deterrence, on the grounds that if we are willing to spend money, we must be serious.

So, for example, in 2001, the Bush Administration told Japan that the US was retaining the option to deploy nuclear-armed Tomahawk missiles (which were sitting in storage) on US attack submarines just to show we were serious about defending Japan.

The problem with this approach is that US conventional and nuclear capabilities continue to evolve—relying on hardware commits us to those capabilities long past their obsolescence. The US would not, under any conceivable circumstance, have redeployed the nuclear Tomahawk. All along, the Navy intended to retire the system in 2013.

In 2010, the Obama Administration had to choose between explaining to Tokyo that, perhaps, American officials hadn't been entirely truthful in 2002 and the system would be retired, or spending money the Navy didn't have to maintain the system in storage. Fortunately, the Administration decided to proceed with the retirement of the nuclear Tomahawk. It calculated, correctly, that consultations were much more important than the nuclear Tomahawk.

Unfortunately, the 2010 Nuclear Posture Review also continued the short-sighted practice of pointing to one shiny piece of hardware to replace another. This time, the US asserted that its commitment to extended deterrence was demonstrated by the effort to make the Joint Strike Fighter (JSF) nuclear-capable (and extend the life of the B61 nuclear gravity bomb it would carry) and maintain the capability to forward deploy US bombers, like the B2, particularly in Guam.

These are, however, irrelevant capabilities that may not survive the current budget austerity. There are no military missions for the B61s deployed in Europe—one NATO official admitted to me that 'we would never drop a B61 off the wing of an airplane'—and the Air Force does not want to spend money giving the JSF an obsolete nuclear capability (nor do our European partners seem keen to modernise their own 'dual capable' aircraft).

Nor would the US forward deploy nuclear-armed B2s, either to Guam or elsewhere (conventionally armed bombers are another matter). The B2 can reach targets from North Korea to Iran directly from Missouri, which is what the US did in the early stages of operations against Yugoslavia, Afghanistan and Iraq.

Either this Administration or the next is going to end up explaining that the 2010 Nuclear Posture Review, in its own way, was not entirely truthful.

Perhaps the solution is to stop talking about extended deterrence as though it were a separate mission. Instead, we should talk about core deterrence—the central mission of nuclear weapons to deter nuclear attacks against the US, our forces abroad, and our allies and partners. One advantage to talking about

core deterrence is that it forces us to set aside the hardware and focus on the real question: how do we demonstrate that an ally is part of the core?

On the narrow subject of nuclear weapons, this means emphasising the consultation and joint planning that binds countries together. But more broadly, changing our language reflects the reality that the credibility of the 'nuclear umbrella' is really just a manifestation of the credibility of our shared interests and values. Forging an alliance on this basis isn't quite as easy as pointing to a shiny new piece of hardware, of course, but it is likely to endure long after this bomb or that missile has gone to rust.

Jeffrey Lewis is the Director of the East Asia Non-proliferation Program at the James Martin Center for Non-proliferation Studies at the Monterey Institute for International Studies, and the Editor of *Arms Control Wonk*

Mind the gap: extended nuclear deterrence and the rise of conventional crises

Nobumasa Akiyama

As Bruno Tertrais writes, deterrence is a psychological process. The ability to inflict unbearable damage and the will to use such a capability are not sufficient to constitute the deterrent. Such capability and will must be recognised by adversaries as well as the allies who are provided extended deterrence. Thus capability, will and perception are the three essential elements for maintaining the credibility of extended deterrence.

It is true that the formula for a credible extended deterrence has become much more complicated. It is especially true in East Asia. Here I would argue two factors among others.

First, the nature of security threats is changing, and thus the roles of deterrence and extended deterrence have been changing. In East Asia, it is highly unlikely that the US would use nuclear forces to retaliate against a North Korean insurgent attack or a Chinese invasion of small islands under dispute in the South and East China seas, for reasons of proportionality. US nuclear force structure seems to be moving away from the idea of massive retaliation against such small attacks.

Even if the nuclear element of extended deterrence were strengthened, the credibility of extended deterrence would not increase so long as adversaries did not consider nuclear retaliation against relatively small-scale aggression plausible. If potential adversaries perceive that the US would not retaliate with nuclear weapons, nuclear deterrence may not work. But it should not be considered a failure of US extended 'nuclear' deterrence. Rather, it is typical of the 'stability–instability paradox'. So for strategic stability, and increased security of US allies in the region, it is not sufficient that alliances only strengthen the nuclear part of extended deterrence.

Although the role of nuclear weapons in extended deterrence will not vanish, other elements of deterrence and extended deterrence are increasingly important to maintain credibility by assuring allies and adversaries in various crisis scenarios. Since the role of deterrence is to reduce the risk of conventional aggression as well as nuclear exchange, extended deterrence

should pursue the best mix of nuclear, non-nuclear (conventional) forces and political means.

Furthermore, as Shen Dingli points out, there are various interpretations of the effectiveness of extended nuclear deterrence. This illustrates that the perception element among the three elements of credible extended nuclear deterrence needs to be further considered.

Second, asymmetry between the US and China in force structure and strategic objectives makes it complicated to establish strategic stability in East Asia. While the emphasis of US nuclear forces shifts towards long-range strategic weapons, the majority of Chinese nuclear forces remain short- and medium-range (although China has been developing its long-range capabilities). US arms control policy values a balance of forces as well as transparency and verification, while China puts more emphasis on confidence-building measures such as no-first-use and the negative security assurance, both of which are difficult to verify.

During the Cold War, strategic stability between the US and Russia converged into a balance in the number of strategic nuclear weapons, and was consolidated through arms control treaties by the concept of mutually assured destruction. The two countries developed transparency and verification measures to maintain strategic stability. In such a relationship, the US and Russia admitted that they were both in a mutually vulnerable situation, and mutually confirmed a kind of 'pro forma' standardised strategic stability.

In a time when we are experiencing a paradigm shift regarding the role of nuclear weapons in international security and relationships among nuclear-armed states, the traditional nuclear deterrence logic that was built upon the history of the US–Soviet (Russian) confrontation does not necessarily guarantee the legitimacy of nuclear weapons or nuclear deterrence. Rather, the necessity of structuring a new logic of 'strategic stability' is increasing. There is a need for strategic dialogue to bring different arms control philosophies together into a shared vision, involving both nuclear-weapons states and their allies.

Nobumasa Akiyama is an Associate Professor at Hitotsubashi University and an Adjunct Fellow at the Japan Institute of International Affairs

Japan still relies on extended deterrence

Hirofumi Tosaki

It is quite difficult to form a definitive answer to the question of whether the age of extended nuclear deterrence is coming to an end, since END is inherently complex, and its complexity is increasing after the Cold War. But my answer is 'no' for the foreseeable future, unless the security situation, or US nuclear policies, or Northeast Asian policies, change dramatically. Take Japan as an example.

During the Cold War, what Japan ultimately expected END to do was deter threats posed by the Soviet Union to Japan's national survival as a liberal democratic country. Currently, no such 'existential threat' exists. However, Japan has heightened concerns about challenges to its national interest, such as issues of territory, maritime security, regional and international order, and possible attempts by other countries possessing nuclear forces to change the status quo using their military powers.

In such a security environment, Japan, which maintains an 'exclusively defensive defence' policy and does not possess any capability to retaliate against other countries' territory, expects US END to continue to play an important role in deterring a wide range of possible challenges to its national interest.

Japan has been concerned about the credibility of US END. There are possibilities of the US being deterred, of the stability–instability paradox increasing or even of Japan facing abandonment. This is because of the asymmetric scale of interests between the US and a certain adversary in the region, and that particular adversary's development of asymmetric capabilities, especially its acquisition or reinforcement of nuclear retaliatory capabilities against US forces and its homeland. However, this does not mean that END is becoming anachronistic or irrelevant.

As Bruno Tertrais suggests, it is inconceivable that an adversary, if rational, would fail to consider the possibility of US nuclear retaliation, even if it possessed a reliable second-strike capability, when it comes to conducting even a limited military option against Japan.

Of course, we should not place exaggerated hopes on END, as US allies such as Japan have occasionally done. Even if the US maintains a robust defence commitment, including the provision of END, an adversary may conduct a low-

intensity military option under deliberate consideration, or by miscalculation, misperception, overestimation of its capabilities, or even underestimation of US resolve. END is not a panacea, and we need to keep contemplating the roles and limits of END in a realistic manner.

END is indeed significant, but it is just one of various means for guaranteeing an ally's security and mitigating threats. Rather than just relying on END, it is imperative for Japan to reinforce its efforts, under close coordination and cooperation with the US, to construct stronger conventional capabilities—including addressing anti-access or area denial capabilities, developing missile defence and sharing roles, burdens and capabilities—for adequately deterring the low-intensity, limited challenges that Japan may face, as well as denying an adversary's escalation or achievement of objectives.

Such efforts will contribute to further enhancing Japan's own deterrent capability, the Japan–US alliance, and the credibility of US END.

Finally, END will become less and less imperative where military challenges or threats have been mitigated or have vanished. In achieving this goal, the importance of enduring efforts toward deepening strategic dialogues, developing transparency and confidence-building measures, creating a communication mechanism in case tension heightens, and promoting arms control and non-proliferation are steadily but surely increasing in Northeast Asia.

Hirofumi Tosaki is a Senior Research Fellow at the Center for Promotion of Disarmament and Non-Proliferation at the Japan Institute of International Affairs

South Korea still needs extended deterrence

Hyun-Wook Kim

Is extended nuclear deterrence dead? It is not easy to answer this question, but my answer is that it is still effective and cannot be ignored.

The first argument concerns providing assurance to allies. South Korea has always been very sensitive to changes in US security policy. After the end of the Korean War, Seoul was shocked by the decrease of US forces in the region, forcing the US to introduce tactical nuclear weapons to South Korean territory. When President Nixon withdrew US forces from South Korea in the 1970s, the South Korean president attempted to develop a domestic nuclear weapons capability. And most recently, when the US Nuclear Posture Review identified a reduced role for nuclear weapons in providing extended deterrence to allies, the response of South Korean elites was very sensitive. Along with the recent North Korean military provocations, voices even emerged arguing that US tactical nuclear weapons should be reintroduced to South Korea.

As mentioned by Bruno Tertrais, the psychological impact that nuclear weapons possess is very significant. Everybody knows that the actual use of nuclear weapons is an uncommon thing unless it pertains to vital or existential interests of states. But the case of the two Koreas belongs to this category.

Why would North Korea pursue nuclear weapons? From the perspective of Western countries, it may be as diplomatic and domestic bargaining chips. But the North Korean position is that its security is tremendously endangered by the US, and that this vital danger pushes the North to develop nuclear weapons. On the Korean peninsula, nuclear weapons are closely linked to vital interests. Living with North Korea as an imminent danger, South Korean vital interests are also under threat, which necessitates the sincere provision of US extended nuclear deterrence.

What I mean by 'sincere' is not just verbal promises but real action by the US. After the first North Korean nuclear test in 2006, more than 67% of South Koreans approved the idea of developing South Korea's own nuclear weapons. With the imminent threat of North Korea, South Korea did not feel secure with the provision of extended nuclear deterrence from the US, which is so remote from South Korea. So the problem does not lie in whether extended nuclear

deterrence is needed or not, but whether extended nuclear deterrence can be provided in assured and valid ways.

The second argument for extended nuclear deterrence concerns the credibility of deterring North Korea. The probability that the North would actually use nuclear weapons is very minimal, and most of the skirmishes in the Korean peninsula are limited to the small-scale aggressions like the *Cheonan* ship sinking and Yeonpyeong Island military attack. In this vein, George Perkovich argued that the role of non-nuclear deterrence is significant. But still, in this case, the role of nuclear deterrence cannot be ignored.

Recent North Korean military provocations prove that US extended deterrence has failed. Despite ongoing US promulgations about its solid extended deterrence provision to South Korea, North Korea has continued its military provocations because the North knows that the US would not be willing to retaliate: the US does not want small skirmishes to escalate into large-scale warfare. This implies that the US and South Korea are deterred by the North.

This stalemate necessitates the role of nuclear weapons. All the partners within and surrounding the Korean peninsula are well aware that the risk of using nuclear weapons is very minimal. But it is more about psychological effect and a game of bluff. It is such a game of bluff that made North Korea restless when the US nuclear-powered aircraft carrier *George Washington* participated in the US–South Korea military exercises near North Korea. Actual use of nuclear weapons is unlikely, but it still retains a psychological deterrent effect.

Cold War strategic stability was maintained by the nuclear strategies of the US and Soviet Union based upon their virtual use of nuclear weapons. Now, it rests more on psychological, if not symbolic, effect.

Hyun-Wook Kim is a Professor at the Institute of Foreign Affairs and National Security, Seoul

Trading San Francisco for Sydney

Raoul Heinrichs

In the late 1960s and early 1970s, Australian strategic policy underwent two transformations. Conventionally, fears about the concurrent retrenchment of British and American power led Canberra—for the first time in its history—to begin shedding its strategic dependence in favour of a more self-reliant defence policy.

In the nuclear realm, things went in the exact opposite direction. Whereas Canberra had spent parts of the 1960s in active, if sporadic, pursuit of its nuclear ambitions—first by lobbying the British to supply ready-made nuclear weapons, later by devising plans for an indigenous uranium enrichment capability—by the early 1970s Australia had reversed course. With a change of government and the advent of détente and a global arms control regime, nuclear plans were shelved, the Nuclear Non-proliferation Treaty (NPT) ratified and Canberra's place under the US nuclear umbrella reoccupied and reserved indefinitely.

The legacy of this episode is an enduring tension in Australian strategic policy. On the one hand, Canberra is committed to defence self-reliance, defined by the 2009 White Paper as the ability to 'deter and defeat armed attacks on Australia … without relying on the combat or combat support forces of other countries'. Yet against the threat of nuclear weapons and ballistic missiles, the most destructive weapons of all, the operational employment of which could have a devastating effect without warning and in a single strike, Australia remains entirely dependent on the US for extended nuclear deterrence.

Is this a viable strategy? Is it prudent? Or is END an article of faith, as some of Australia's best strategists have suggested, fated to obsolescence by the ongoing transformation of the regional strategic order and the fluid nuclear landscape this entails?

There are a number of reasons to be pessimistic. To begin with, Australia's nuclear dilemma reflects a broader problem in its alliance relations with the US. The dual risks of abandonment and entrapment, common to all alliances, sharpen as the distribution of world power shifts, with important implications for the credibility of America's nuclear umbrella.

The risks of entrapment arise in two forms. At a general level, Canberra's strategic dependence on Washington, including for END, circumscribes its ability to dissent from American policies that may not accord with Australian interests. Cognisant of its privileged place under the US nuclear umbrella—and of its limited range of alternatives, should END be withdrawn in the event of Australian non-compliance (à la New Zealand circa 1984–1987)—Canberra could find itself dragged into a costly war alongside the US that its fortuitous strategic geography might otherwise allow it to avoid.

More directly, the joint facilities that Australia hosts as a quid pro quo for US nuclear assurances—critical as they are to America's intelligence, surveillance and reconnaissance network—could present as valuable targets in major war that, by virtue of their distance from Northeast Asia, only nuclear-tipped intercontinental ballistic missiles may be reliably assured of destroying.

This may sound rather fantastic, yet it's not a consideration that Australian defence planners can automatically discount. Moreover, there is a historical basis to such concerns. As former defence minister Kim Beazley once noted in the context of the Cold War, 'we accepted that the joint facilities were probably targets, but we accepted the risk of that for what we saw as the benefits of global stability'.

These concerns notwithstanding, it is the risks associated with abandonment that are the most acute. Credible nuclear deterrence operates on the basis of a defending state's threat—through some combination of explicit pronouncements and the deployment of nuclear capabilities—to impose intolerable costs on an attacker, thereby preventing the attacker from using nuclear weapons against the defender's ally. By contrast to conventional deterrence, where risks are generally limited, nuclear deterrence relies on the defender—in this case, the US—conveying a willingness to sacrifice large swathes of its population on behalf of an ally. In this context, Australia might be seen as an ally of non-vital, possibly even marginal, strategic interest. The question for Australian defence planners is: would the US government really trade San Francisco for Sydney?

Indeed, if Canberra's broader quest for self-reliance reflects enduring concerns about the potential limits of Washington's willingness or ability to furnish assistance in a strategic crisis, there is no compelling logical reason why, with the balance of power shifting away from US primacy, those concerns

should be so sharply limited to conventional threats. If anything, Australian defence planners should expect Washington to act with greater caution and more reticence in a nuclear crisis, however unlikely one might be, when the costs and risks to itself will inevitably be much greater.

Unfortunately, however, the traditional impetus for change in Australian strategic policy is crisis, or at least perceptions of crisis, at which point it's usually too late to do anything other than 'muddle through'. This is likely to be doubly true of nuclear issues, which, given the widespread aversion to even discussing them in Australia, remain largely beyond the realm of acceptable political discourse. So don't expect any movement for at least a couple of decades.

In the meantime, is END dead? Let's hope we never have to find out.

Raoul Heinrichs is the Arthur Tange Doctoral Scholar at the Australian National University and a former Research Associate at the Lowy Institute for International Policy

US extended deterrence has weakened

Shen Dingli

Some have argued that nuclear deterrence is not failing, since it is for deterring big events—such as threats to national survival. This claim may never be proven, as no state on this planet would initiate a nuclear strike against America (North Korea and Iran would not, even if they could), not because they are deterred but because they have no need.

America's longstanding nuclear deterrence posture, including extended deterrence, has three assumptions of circumstances: if American territory, its overseas military presence or allies are attacked by a non-nuclear rival in an alliance with a nuclear power, the US would resort to the first use of nuclear weapons.

But even given extended nuclear deterrence, who really believes that the US would shoot a nuclear weapon unconditionally in defence of an ally if that ally was being attacked by a non-nuclear rival that is in alliance with a nuclear-weapons state? The US, after a long domestic debate, has officially ended this policy and this type of extended nuclear deterrence. The Obama Administration's Nuclear Posture Review of 2010 stated clearly that the US would not use nuclear weapons against non-nuclear-weapons states that are also NPT members, assuming they meet the NPT's requirements (Iran could be an exception).

This is a much commended, progressive nuclear policy, reducing the role of nuclear weapons in international politics. But there is a dilemma: the more the US stresses deterrence and extended deterrence, the more its allies may feel assured and less likely to pursue their own nuclear weapons. At the same time, it is more likely that some other countries will feel the importance of acquiring nuclear weapons for deterrence and therefore seek their own nuclear path. Everyone has to weigh the balance between the security provided by the nuclear umbrella and the insecurity created as a result of nuclear proliferation.

Obama's policy has reduced the role of nuclear weapons in America's national security strategy, so as to create a situation more conducive to non-proliferation. Obviously this has an impact on extended nuclear deterrence—the US now is clear that it would not protect its allies with nuclear weapons against non-nuclear attack, possibly with Iran as an exception. Its current

nuclear doctrine has deviated from traditional extended nuclear deterrence—if an aforementioned non-nuclear state rival now brings harm to America or its ally, as long as it is in good standing with the NPT, the US has promised not to retaliate with nuclear weapons.

This may sound frustrating to some but one has to remember that every coin has two sides—America wants to bring more security to itself and its allies in an age of proliferation. It has to commit less to its nuclear umbrella and to its friends, though it could still assure its allies through other means in the future.

Whether one likes such a change or not, this is Obama's position. So how can we say nuclear extended deterrence has not declined?

Shen Dingli is a Professor and Executive Dean of the Institute of International Studies, Fudan University

Will America keep its nuclear promises?

Hugh White

To take this debate further we need to get a bit clearer about what we are debating. Are we discussing whether we want END to survive, or whether we expect it to survive? Many of the posts we have seen so far argue that END is a good thing that we should want to preserve if we can. Some comments on my earlier post seem to imply I think the opposite.

Let me be clear: I think END has been an extremely successful and beneficial policy, and I wish it could last forever. No debate there.

But can it survive? This is a very different and to me much more pressing question, because, as I argued in my earlier post, the conditions under which END has worked until now are changing. I think END is unlikely to survive these changes, because I see it as a complex, delicate thing, and the conditions required for its survival are specific and demanding. This is the underlying point on which I differ from many of the excellent posts in this debate so far. In what follows I will respond primarily to Bruno Tertrais' second post, and to my colleagues Stephan Frühling and Benjamin Schreer.

For them, END is very simple. America promises it will come to an ally's aid if it is attacked, and the ally is happy to have that assurance. The ally need not be sure that the US would honour its promise in a crisis, because what matters is the effect on the supposed adversary, who cannot be sure the Americans will not honour their promise, and will be deterred by the possibility that it might. This account of END makes it seem as if it delivers big benefits for little cost. Why shouldn't it last?

But I do not think END is that simple, and especially not in the cases where it matters most. It is complicated because of the substantial costs that both the US and its ally must incur in sustaining END. These costs mean that END will only survive if it delivers justifiable benefits to both sides. That is what I doubt.

What are these costs? Let's start with the ally. Being a US ally and accepting END carries several kinds of costs. The most important of these is the need to forgo other ways to protect oneself—what one might call strategic opportunity cost. These costs are quite low for a relatively weak yet secure country such as Australia. But for a strong ally in a risky position—in other words, for the most

important allies—the strategic opportunity cost can be substantial. Strong allies have other options, and for allies at risk, the imperative to find the most effective defence is strong, so the costs of sticking with a suboptimal policy are high.

Now consider America's most important ally today. END is not a free good for Japan. Preserving END costs Japan the option of developing its own nuclear forces. The future of END for Japan depends not simply on whether Japan believes it benefits from America's promise, but whether it believes accepting END provides Japan with more security than the alternative. This is a pressing question for Japan today, not just because its fears of China are growing, but because Tokyo's confidence that America's promises will stick are fading.

The reason is that END carries costs to the US as well. As I said in my earlier post, these costs are low when the adversary cannot retaliate against the US. But against an adversary capable of nuclear attack on American soil, the costs are considerable. It is easy to underestimate the costs of END imposed by the risk of retaliation if we discount the risk that a crisis involving a US ally would escalate to a nuclear exchange. But should we do that?

To explore this we need to look quickly at the relationship between END and its close cousin, extended conventional deterrence (ECD). Several posts in this debate have touched on the connection between END and ECD, but I'm not sure we are clear about it. At first glance it seems simple enough: in both cases the US promises to protect its allies, and the only difference is the kind of forces it is prepared to use. Much is made of the effectiveness of conventional US forces to protect allies, which carries the optimistic implication that the costs to the US of this kind of extended deterrence are low. Indeed optimists about the durability of END tend to blur the distinction between END and ECD, viewing them as two sides of the same coin and suggesting that END is really not much more risky than ECD for the US.

I do not agree with this. First, how distinct are ECD and END in practice? Much depends on the context. It is easy to exclude the possibility of nuclear use by the US against a non-nuclear adversary that does not have clear conventional superiority. But against an adversary which has either the capacity to prevail against US and allied conventional forces, or has nuclear weapons, or both, then excluding a nuclear response would drastically weaken the value of US promises of support. So against these adversaries—the ones

that matter, in other words—any extended deterrence must be nuclear to be effective.

Second, the threshold at which the nuclear element of extended deterrence comes into play in a crisis would be much lower than people may think. Several posts in this debate seem to suggest that the US could respond to conventional threats with conventional forces, and hence fulfil its promises to allies, without running the risks of nuclear war. This is because the threat of US nuclear retaliation would deter the Russians from threatening nuclear action in response to US conventional operations.

My hunch is that, on the contrary, there is a real risk of escalation to a nuclear exchange in any conventional clash between two nuclear powers, as long as there is asymmetry in their calculations of cost and risk. In particular, geography imposes structural asymmetries of interest between the US and its Eurasian competitors which would profoundly affect calculations in a crisis.

For example, in a crisis between the US and Russia over a Baltic state, the risks might be symmetrical but interests are not. The Baltics matter a lot more to Russia than they do to America. This does not mean Russia would be prepared to accept a nuclear attack to get hold of Estonia (for example). But it does mean Moscow would probably calculate that the US would not be willing to risk nuclear attack to save Estonia. So, assuming the Russians believed they could prevail in a conventional attack on Estonia, they might well calculate that the US would not be willing to escalate from conventional to nuclear warfare to stop them. And the Estonians might well think so too.

Now back to Japan. It is entirely credible that the US would retaliate with nuclear forces to any direct nuclear attack on Japan, so this element of END remains intact. But that is not enough for Japan to feel secure, especially from China, because it leaves open the credibility of US undertakings in the event of a conventional crisis.

Consider a Chinese conventional attack on Japan's Ryukyu Islands. America's formidable sea denial capability would be able to interdict Chinese seaborne forces, but China could threaten substantial conventional retaliation against US interests, so the costs to the US of supporting Japan in this situation would be very high. The question would arise whether the Ryukyus were worth it. But say firmness prevailed in Washington, and the air–sea battle swung into

action. China might then threaten nuclear escalation if the US persisted—initially perhaps against Guam.

America would of course threaten nuclear retaliation against China. But while the risks are broadly symmetrical, the interests are not: China cares more about the Ryukyus than the US does. It is the Cuban Missile Crisis in reverse. So American decision-makers might well decide that China's threats must be taken seriously. They would then ask themselves whether the Ryukyus are worth LA, just as General Xiong suggested. The answer is not a forgone conclusion.

This is very important for Japanese decision-makers weighing the costs and risks of different options for Japan over the next decade or two. Going nuclear would carry huge costs for Japan, but relying on END carries big risks.

END evolved during the specific circumstances of the Cold War when, for reasons I sketched in my earlier post, American interests in Europe and Asia were as great as those of the Europeans and Asians themselves. Today this is no longer true, because neither China nor Russia today poses the kind of threat to America that the Soviets once posed. It is this widening asymmetry of interest between America and its Eurasian allies that undermines END.

Hugh White is a Professor of Strategic Studies at the Australian National University and a Visiting Fellow at the Lowy Institute for International Policy

Extended deterrence: the East Asia challenge

Richard C. Bush

Extended deterrence is complicated, because it is all about the credibility of threats.

Take the security problems posed by North Korea as an example. If the DPRK is considering the use of force to reunify the peninsula, it is less likely to act on those plans if it is certain the US will carry out its threat to retaliate. Pyongyang is more likely to attack (and less likely to be deterred) if it concludes that the threats are idle—either because Washington does not signal clearly or because North Korea underestimates US resolve due to its faulty perception.

South Korea must have a high degree of confidence in Washington's defence pledge as well. Otherwise it faces a stark choice between appeasement and an independent defence policy.

Extended nuclear deterrence is even more complicated, because credibility is but a gossamer thread. The Republic of Korea's (ROK) insistence that the United States pledge to defend it with nuclear weapons, if necessary, imposes a serious obligation on Washington. If North Korea acquires its own nuclear weapons and the ability to deliver them to US territory, that increases the risk Washington would face in threatening to retaliate against the DPRK.

That is, an adversary's ability to retaliate on the American homeland can reduce the credibility of the US nuclear umbrella for both allies and adversaries alike—which, I am sure, is one reason China acquired nuclear weapons and the means to deliver them and why North Korea is feverishly trying to do so.

Deterrence on the Korean peninsula is even more complicated because it works in different ways at different levels. The full spectrum of US and ROK power deters a full-scale invasion by North Korea. But the DPRK's forward-deployed conventional forces and their capacity to wreak extensive damage in the densely populated Seoul metropolitan area have generally led Seoul and Washington to be very cautious about using conventional force against the North. Pyongyang, therefore, has seen only modest risk in undertaking provocative military actions against the South, such as the sinking of the ROK Navy's *Cheonan* in March 2010 and the shelling of Yeonpyeong Island eight months later.

One reason Pyongyang has taken these reckless actions, it seems, is a belief that China is willing to tolerate them. At both levels, the situation is now taking a serious turn. In order to promote both deterrence and domestic solidarity, Seoul has decided that it will retaliate 'kinetically' against future DPRK conventional provocations. That, of course, raises the danger that North Korea will not simply absorb the punishment but will retaliate itself. Controlling escalation would become a serious challenge. The chances increase that the US and China—the backers of the two Koreas—would become parties to a widening conflict. What is their stomach for a fight? What is their stomach for not fighting and bearing the costs of backing down?

At the strategic level, it appears to be only a matter of time before the DPRK is able to hit the continental US with a nuclear weapon. In January, in Beijing, Defense Secretary Robert Gates said, 'With the North Koreans' continuing development of nuclear weapons, and their development of intercontinental ballistic missiles, North Korea is becoming a direct threat to the United States'.

Which raises the question, would the US be willing to lose San Francisco as a price for protecting Seoul? Would the government and people of South Korea and the regime in Pyongyang believe Washington would make that sacrifice? Based on what facts and logic would they make that judgment? If they are not convinced, will they opt for their own nuclear deterrent? (A recent poll suggested that the South Korean public is split down the middle on a nuclear option.)

To strengthen deterrence, Washington and Seoul are employing a 'bank shot'. They seek to persuade China that it is not in its interests to allow North Korea to define the security environment in Northeast Asia, either at the level of conventional provocations (with the danger of escalation) or at the strategic level (with the prospect of regional destabilisation). Beijing, of course, is not able to dictate Pyongyang's security policy, but it does have points of influence: the degree of its support for the succession to Kim Jong-il, whether it constrains vital North Korean trade that flows through China, and so on. Moreover, it cannot idly ignore the consequences for China's national security as a result of the measures that the ROK and the US take to strengthen deterrence.

That is the leverage that Seoul and Washington now seek to exercise, with the hope that China will restrain its North Korean partner, not as a favour to

them but to better secure China. If successful, this effort will help guarantee that American extended deterrence pledges will never have to be honoured.

Richard C. Bush is the Director of the Center for Northeast Asian Policy Studies at the Brookings Institution

Extended nuclear deterrence in a new landscape

Thomas G. Mahnken and Duncan Brown

As many of the posts in *The Interpreter* debate have noted, extended nuclear deterrence is under increasing strain. To a large degree, this has been driven by a greatly changed nuclear landscape.

First, nuclear weapons have spread. Whereas for decades nuclear weapons were the exclusive property of a handful of powerful, advanced states, today the ranks of nuclear powers include the backward (North Korea) and the unstable (Pakistan).

Today more than ever, it is the weak rather than the strong that seek nuclear arms.

Second, the relationship between nuclear and conventional weapons has also changed, both for the US and for others, including potential adversaries.

During the Cold War, the US looked to nuclear weapons to offset the size and strength of the Red Army. Specifically, we relied upon nuclear weapons to deter a Soviet invasion of Western Europe, and conventional attacks on other allies.

These days, it is the US that possesses conventional superiority over the full range of adversaries. US conventional superiority provides not only a powerful deterrent, but also a motivation for others to acquire nuclear weapons.

Indeed, it is the potency of Washington's conventional arsenal, rather than its nuclear stockpile, that provides the greater motivation for states that are hostile to the US to acquire nuclear weapons.

Third, there is an imbalance in political stakes between the US and potential adversaries. During the Cold War, the Soviet Union's nuclear arsenal represented an existential threat to the US and its allies. Today we have limited stakes in many potential conflicts: a nuclear blast in a major US city would inflict horrendous casualties; it would not destroy the US.

By contrast, future adversaries are likely to see a conflict with the US as a threat to their survival. A war on the Korean peninsula would not put at risk the existence of the US, even if Pyongyang were to field an ICBM; it would, however, jeopardise Kim Jong-il's regime and the North Korean state.

Nor would a nuclear Iran pose an existential threat to the US. Tehran's clerics could, however, judge that a war with the US could lead to their ouster.

Washington's opponents thus have a strong motivation to protect their rule by escalating future confrontations to nuclear treats at an early stage.

Fourth, technology has changed the nuclear landscape, blurring traditional distinctions between conventional and nuclear arms. Whereas commentators on the left have for years feared that fielding more discriminate nuclear weapons would 'conventionalise' them, in fact conventional arms now approach the effectiveness of nuclear weapons.

Soviet military theorists writing in the late 1970s were among the first to observe that precision-guided munitions (PGMs) were being fielded with an effectiveness nearing that of small tactical nuclear weapons.

Conventional PGMs are today capable of destroying a wide range of targets that until recently would have required nuclear weapons. In addition, the deployment of ballistic missile defences now offers the prospect of defending the US, our forces, and our allies against missile attack.

The changed nuclear environment, in turn, suggests that nuclear weapons could be employed in a broader set of circumstances than in the past. The recently published report of The Johns Hopkins University Nuclear Futures Project explores some of these scenarios. They include nuclear use arising out of the implosion of North Korea, a conflict across the Taiwan Strait, a failed Israeli pre-emptive strike against a nuclear Iran, the collapse of Pakistan, or a terrorist attack on the US.

A number of these plausible scenarios could call into question US END guarantees. A conflict with North Korea or China, and prospectively with a nuclear Iran, could escalate to involve nuclear strikes on US bases in allied territory, or even (in the case of China) on sovereign US territory such as Guam.

A nuclear strike on Japan arising out of the collapse of the regime in Pyongyang or a conflict across the Taiwan Strait would lay bare the dilemma that underpins END: extending nuclear guarantees is meant to lessen the pressure on an ally to acquire nuclear weapons, but in so doing, the US puts at risk its own security on behalf of an ally.

According to the US–Japan defence treaty, Washington is committed to the defence of Japan; to not do so would mark the end of the alliance. However, a retaliatory strike would invite further nuclear attacks on Japan and potentially against the United States.

In other cases, it is possible to envision other states seeking END guarantees. Should Iran go nuclear, other states in the Gulf region might seek END guarantees from the US. The Gulf Cooperation Council states would be increasingly vulnerable to Iranian coercion. Iraq, an Arab state with a Shi'a majority on Iran's borders, would be particularly uncomfortable in Iran's nuclear shadow.

Compounding the challenge of the US maintaining END is its decreasing means of doing so. The US has traditionally underwritten its END guarantees with forward-based forces. However, Washington has decreased markedly the size of its theatre nuclear forces since the end of the Cold War. According to the Pentagon, the number of non-strategic US nuclear warheads declined by approximately 90% from 1991 to 2009.

If END is to endure, then the US and its allies will need to work harder at maintaining and bolstering it. This may involve declaratory policy, but will also likely require changes in force posture to increase the credibility of extended deterrence. This debate is a good way to foster such a dialogue.

Thomas G. Mahnken is a Professor of Strategy at the US Naval War College

Duncan Brown is a National Security Fellow at the Applied Physics Lab at The Johns Hopkins University

Proportionality and extended deterrence

Fiona Cunningham

Discussions about nuclear strategy have an unfortunate tendency to insulate themselves from the broader strategic context in which nuclear weapons exist.

The Interpreter's debate on the future of extended nuclear deterrence (END) has by and large avoided that pitfall. But, I wanted to look at a simple concept—proportionality—that dictates which military tools (conventional or nuclear) will be picked out of the extended deterrence toolbox when an ally is threatened.

The concept of proportionality is central to decision-makers' calculations to use or threaten nuclear weapons. The use of nuclear weapons is a proportionate response if a security threat posed by an adversary is grave enough. If it is not, then conventional weapons or even diplomatic means might be used.

Although one of the central principles of the law of armed conflict, proportionality is not an objective calculation, as some—international lawyers in particular—believe. It depends entirely on how decision-makers perceive their security interests.

Even where nuclear weapons are reserved for existential threats, what may constitute such a threat is hardly a settled (or short) list of possible events. The 2010 US Nuclear Posture Review used an even broader formulation, stating that the US would use its nuclear weapons to defend its 'vital interests'.

This is, of course, all common sense, but it does bring one of the major difficulties with END into sharp focus—it complicates calculations of proportionality.

Bringing a third party into a nuclear relationship means that it is no longer just two states who are forced to recognise each others' red lines. Allies often perceive threats differently and responding in a proportionate way for one ally may be viewed as an over- or under-reaction by the other.

It is not uncommon for an adversary to find and exploit this gap, where it can successfully compromise the security of one ally without provoking action by the other ally.

Differing perceptions of proportionality also explain the double-edged sword of entrapment and abandonment that a beneficiary of END typically fears—both involve a disproportionate response by the provider of END to the security threat.

Before we dump END, we need to think carefully about whether divergent post–Cold War threat perceptions among the provider of END and its beneficiaries kill it or not.

Where threat perceptions align as closely as they did for the US and Europe during the Cold War, END was more effective as it offered the Soviets few gaps to exploit. Fast forward to 2010, and we see the North Koreans exploiting a gap in shelling Yeonpyeong Island.

North Korea knew the attack would harm South Korea, but that a US military response would be very unlikely. While the South Korean Defence Minister initially mooted the redeployment of tactical nuclear weapons on the peninsula (he lost his job soon after), the US responded by sending a carrier into the Yellow Sea for military exercises. From either country's perspective, the other reacted disproportionately, just as the North Koreans would have anticipated.

If such differences emerge between provider and beneficiary that an adversary can poke holes in both the nuclear umbrella specifically and extended deterrence more broadly, how can END be anything but an abject failure, as Hyun-Wook Kim concluded? This question touches on a number of strategic dilemmas.

One of these is how we judge whether extended deterrence succeeds—is it only where the beneficiary is fully satisfied with the result, or can it succeed where the result is some sort of compromise? How does a concept such as deterrence, which requires mutual understanding, function where it involves three countries with three different perceptions of interest? Should extended deterrence respond to 'sabre rattling' or be reserved for major threats? There are no right or wrong answers to these dilemmas, but the choice of answer determines whether one sees events like Yeonpyeong as failures, or symptomatic of the limited, imprecise but still functional nature of END.

Two brief arguments in favour of extended deterrence can be drawn out of these dilemmas, though in the Korean case they moderated rather than prevented the 'failure' (from a South Korean perspective) of extended deterrence.

First, if the alliance relationship creates an opportunity to negotiate a response that is satisfactory in both parties' opinions, bringing their calculations of proportionality closer together, then it is a plus for regional security. While the real test of this will come when the US–ROK Extended Deterrence Policy Committee has had time to work out how certain North Korean contingencies

will be met, avoiding some of the more assertive options mooted in Seoul last October likely saved a fair few Korean lives.

Second, as a provider of END to multiple countries, Washington's actions are closely monitored by both allies and adversaries the world over. Maintaining its credibility to others would play no small role in its calculations of a proportionate response, giving the beneficiary of extended deterrence more clout in negotiating a response than it would otherwise have.

But two other arguments weigh in heavily against extended deterrence. First, as the Korean peninsula situation illustrates, nuclear deterrence is usually irrelevant to crisis situations that invoke the alliance. At times, any military response at all is inappropriate, even if it would be proportionate, because of the specific risks it would create in such volatile circumstances.

Second, the likelihood of an extended deterrence failure is even higher if the provider is on an adversary's nuclear targeting list. Proportionality calculations are suddenly muddied by the desire to avoid bringing the conflict home.

Thomas G. Mahnken and Duncan Brown seem to suggest that the US would suffer but ultimately prevail in a conflict with an adversary who could deliver nuclear weapons to US soil, an argument somewhat reminiscent of Mao's comments about China's ability to absorb a nuclear attack.

I am sceptical that a president of a democracy would take such a clinical approach to the lives of large numbers of citizens in an extended deterrence situation. Risking the blood of your citizens to protect or retaliate on behalf of your ally is an exceptionally high stakes game that is difficult to imagine today, but may well arise in the future, for example across the Taiwan Straits.

In these situations, trying to calculate a proportionate response soon reveals why END can be both a terrific success and a disastrous failure. The hard cases all depend on whether individual decision-makers are willing to let their fingers hover over the red button, and whether they think their adversary is equally willing.

Prudence dictates that we treat END as alive and well. Doing so will reduce the risk that it will ever need to be tested.

Fiona Cunningham is a Research Associate at the Lowy Institute for International Policy

Ending the END debate: weathering change

Rory Medcalf

The world's strategic, political and nuclear landscape is changing, and the United States and its allies must adapt: that is the chief point of agreement among all of the contributors to our blog debate on extended nuclear deterrence.

But the fundamental question is how? Here the experts in our global debate part company.

Should the priority be on reinforcing the credibility of extended nuclear deterrence guarantees through alliance consultations, or perhaps changes to arsenals, deployments and declaratory policy? Should the focus be on enhancing non-nuclear extended deterrence, such as conventional strike and missile defences? Should allies contribute more to their own security? Or could diplomacy play a larger role in easing the mistrust that feeds the need for deterrence?

These are among the questions that have recurred throughout our debate. I will offer my own interpretation of key points from the discussion, before concluding with some thoughts on where this leaves policymakers.

George Perkovich rightly identifies nuclear weapons as useful only against existential threats. But he also suggests that one reason the Obama Administration's pursuit of nuclear disarmament makes sense is because the conventional military balance favours America. I am not so sure—at least in those parts of Asia most affected by rising Chinese power. And the uncertainty that this power shift provokes among Washington's Asian allies largely explains why they are hewing closer to END at the very time when the United States is reducing reliance on nuclear weapons. This point informs the arguments of Thomas G. Mahnken and Duncan Brown, who call for dialogue about adapting END, not downgrading it. Still, Tokyo, Seoul and Canberra might take comfort in Perkovich's reminder that US policy is for some form of END to be around for as long as nuclear arsenals exist.

Bruno Tertrais notes the non-proliferation benefits of END and argues that it is 'alive and changing'. But he also acknowledges that a greater reliance on non-nuclear forces need not make extended deterrence less credible; indeed, having a range of non-nuclear capabilities might make an adversary less likely to think that the wielder of the nuclear umbrella might end up 'self-deterred'

by a brutal choice between all-out nuclear war or backing down. Interestingly, despite his general advocacy of END, Tertrais recognises it as relying more on the psychology of leaders than the proximity of weapons—an argument against those, for instance in Europe or South Korea, who support tactical nuclear deployments.

Shen Dingli argues that recent trends and events suggest that END is moving towards 'irrelevance'. He suggests that events in North Asia in 2010—the sinking of the *Cheonan* and the shelling of Yeonpyeong Island—amount to a failure of END. Yet, as others such as Nobumasa Akiyama argue, this could simply be the stability–instability paradox in action. In a sense, these events might even show END as working: after all, both Seoul and Washington tempered their responses with a clear sense of proportionality. And, as some other contributors note, the various consultative dialogues on END involving Washington, Seoul and Tokyo could be a sign of its stable adaptation.

The vital ingredient of proportionality informs the views of many other contributors, notably Hugh White and Fiona Cunningham. But they reach rather different conclusions. White asks whether the United States really would use nuclear weapons to defend an ally in circumstances where a nuclear adversary could strike American territory, and moreover where critical American interests were not at stake. This leads him to conclude that in most circumstances END is becoming 'an anachronism'. He does not say much about what might take its place, although his second post suggests reasons why an ally like Japan might come to want nuclear weapons of its own. This point is alluded to also by Raoul Heinrichs, who also offers a view on the Australian context.

Stephan Frühling, Benjamin Schreer and, in his second post, Tertrais remind us that the psychology of the prospective adversary is at least as important as that of the nation wielding the nuclear umbrella, or indeed of its threatened ally. For this reason, they argue, END remains likely to reduce risks of war. One issue that is not explored much further in the debate, yet which cannot be overlooked, is whether the potentially catastrophic consequences of nuclear escalation are worth that reduced likelihood of conflict.

Jeffrey Lewis grabs our attention by proclaiming there is no such thing as the nuclear umbrella; even as a metaphor, it would seem, this term can be misleading. There are alliances, he says, and there are nuclear weapons, but

the link between them is an inference, albeit a reasonable one. From here, he argues that the credibility of END should be linked, not to numbers or forward-deployed capabilities, but to the strength of allies' consultation and joint planning, as well as their shared interests and values.

Such ideas may remain difficult to sell in some parts of Seoul and Tokyo. Hyun-Wook Kim argues that END remains important and generally effective, and refers to the prominent calls in South Korea for the return of US tactical nuclear weapons to the peninsula. He also asserts, however, that the *Cheonan* and Yeonpyeong attacks by North Korea 'prove that US extended deterrence has failed'. These events feature widely in our debate, but their meaning remains contested. Kim sees them as a reason for more deterrence; Shen as reason for less.

Japanese experts Nobumasa Akiyama and Hirofumi Tosaki both point broadly to the continued relevance of END but also to its limits. They focus on how the Asian threat environment is changing, and how the US and its allies thus need to strengthen their non-nuclear deterrent capabilities. They also suggest a need to look for a new basis of strategic stability, notably between the United States and China, with a role for diplomacy and confidence-building measures in reducing mutual threat perceptions. Richard C. Bush takes this point further, emphasising the need to persuade Beijing that restraining North Korea's nuclear weapons ambitions and belligerent behaviour is in China's interests, given that this would reduce the need for the US, South Korea and Japan to strengthen their capabilities and alliances.

One striking thread throughout the discussion is how much psychology and perception will matter in determining whether the nuclear umbrella—or, if one prefers, an inclusive form of core deterrence—can weather the strategic turbulence that may well lie ahead. In the end, as Fiona Cunningham and several other contributors imply, it could be an act of choice—an open affirmation of belief in END—that helps reduce the likelihood that it will ever need to be tested.

Extended nuclear deterrence is not dead. But for its positive effects to stay the same, it will have to change. As global efforts to reduce nuclear dangers continue, END will inevitably be examined as a source both of stability and of less desirable effects. Moreover, nations that consider themselves protected by US nuclear guarantees have to address questions about their own credibility as

advocates of nuclear non-proliferation and disarmament. In a world of diverse and changing threats, their continued embrace of END is understandable. But they would do well to consider how END might most safely be refined for 21st-century circumstances. For a start, this might involve allies agreeing that a practical and moral nuclear umbrella can function only against existential threats, along with their renewed willingness to contribute more towards non-nuclear defence.

Rory Medcalf is the Director of the International Security Program at the Lowy Institute for International Policy