



# Nuclear-Conventional Entanglement in Northeast Asia: The Case for Crisis Management Interoperability

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**Cover Photo:** A launch of the Russian Iskander-M, which can carry a tactical nuclear warhead, at the Kapustin Yar proving ground in March 2018. [Wikimedia Commons](#).



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## ABSTRACT

The dangers associated with the entanglement of nuclear and conventional forces have become an area of increasing concern. In this article, I survey the growing nuclear-conventional entanglement risks in Northeast Asia as well as the ways that entanglement is driving a new era of nuclear arms racing in response. In order to better manage the risks of nuclear crises occurring, I outline the need for a greater emphasis on assurance policies to match the current focus on making deterrent threats. Given the high chance of such crisis nevertheless occurring in Northeast Asia in the years ahead, I make the case for developing what I call ‘crisis management interoperability’ between allies armed with nuclear and strategic non-nuclear weapons. Such interoperability is aimed at ensuring that the difficult task of crisis signalling is not further complicated by alliances with entangled nuclear and conventional forces.

## KEYWORDS

Nuclear-conventional entanglement; crisis management; arms race; deterrence; assurance



## INTRODUCTION

The global nuclear order is undergoing an important transition towards a Third Nuclear Age in which the entanglement of conventional and nuclear forces is creating new dangers of crisis escalation (Acton 2018; Futter and Zala 2021; Logan 2023a; Hiim, Fravel, and Trøan 2023). Nuclear-armed states are building up their capabilities and bolstering these with a suite of non-nuclear capabilities with strategic effect.

In addition, non-nuclear armed US allies are also beginning to acquire conventional capabilities with the ability to impact on nuclear balances when these forces are combined with those of the United States. This makes the dynamics of a nuclear crisis in regions such as Northeast Asia – home to multiple US allies with such weapons in addition to extended nuclear deterrence guarantees – far more complicated than most scholars, analysts, or policy makers appreciate. Given that studies (Huth and Russett 1988: 30; see also, Rovner 2017: 697 Taylor 2018;) have shown that “most of the plausible scenarios for the initiation of nuclear war begin with the escalation of an extended deterrence crisis that started at the conventional level”, the new layers of complexity added to nuclear-conventional entanglement by alliance relationships are important to explore today, before any new crisis erupts.

In this article, I survey the nuclear-conventional entanglement risks in Northeast Asia as well as the ways that this growing entanglement is driving a new era of nuclear arms racing in response. I then discuss two areas of risk reduction that can be explored to lower the chances of crises occurring as well as peacefully manage those crises that nevertheless occur. In particular, I make the case for developing what I call ‘crisis management interoperability’ between allies. I also discuss the need to refocus current efforts from a pure focus on deterrent threats to a more balanced approach which addresses the more difficult task of providing the assurances that are critical to a successful deterrence strategy.

## NUCLEAR-CONVENTIONAL ENTANGLEMENT RISKS IN NORTHEAST ASIA

Technological and political developments over the last few decades have brought us to a point where the global nuclear order is changing from being “based on the assumption that developments in nuclear weapons are the primary driver of stability and instability, to one in which non-nuclear capabilities play an equally, if not more important role” (Futter and Zala 2021: 258). Nuclear and conventional capabilities are becoming increasingly entangled in at least three ways: first in terms of the co-location of forces and their reliance on dual (nuclear and conventional) use support systems; second, in terms of the actors involved – all of the major nuclear powers are also at the forefront of the “emerging technology” race underway in conventional weapons developments; and third, in that a number of US allies who continue to rely on an extended nuclear deterrence guarantee from Washington are now also arming themselves with conventional capabilities that can have nuclear counterforce missions.

Nuclear-conventional entanglement is not a new problem (Posen 1991). For example, nuclear and conventional forces have long relied on common satellite and communications facilities and many delivery systems are dual-use in that they can carry both conventional and nuclear warheads. Entanglement can be used strategically to deter an attack on a state’s otherwise vulnerable conventional forces, but it can also lead to inadvertent escalation from conventional to nuclear war. If an attack designed to degrade an adversary’s conventional forces also compromises their nuclear



forces in some way, this can incentivise the early use of nuclear weapons by creating a ‘use or lose them’ situation (whether real or perceived). Entanglement can be reversed, but doing so effectively requires a recognition of the strategic importance of specific conventional capabilities and is far from straightforward in practice (Logan 2023; Wilson and Rumbaugh 2024).

The role of conventional weapons that can be used to compromise an adversary’s nuclear forces – or strategic non-nuclear weapons (SNNW) – and the political conditions which have led to their deployment, are placing extra pressures on already fragile nuclear deterrence relationships. This trend is at the heart of a shift to what has become referred to as a ‘Third Nuclear Age’ (Smetana 2018; Naylor 2019; Cooper 2021; Futter and Zala 2021; Crilley 2023). SNNW include conventionally-armed precision-strike missiles, missile defence systems, anti-satellite and anti-submarine warfare capabilities, and supporting systems and platforms such as advanced remote sensing and cyber and AI platforms.

These capabilities are all unencumbered by the political and moral restraints associated with the nuclear taboo making them seem more ‘usable’ in crisis situations (Tannenwald 2007).<sup>1</sup> Unlike a nuclear weapon, their use does not directly result in large numbers of casualties (for example, the use of an anti-satellite weapon or launching a salvo of missile defence interceptors is unlikely to directly result in a single casualty). Therefore, while their use – or even the perception that their use is imminent – against nuclear forces and their command-and-control systems can make a nuclear war more likely, there is no normative taboo to restrain a decision maker equivalent to that of the nuclear taboo. SNNW are not only more easily used than nuclear weapons, but they are also now able to threaten dual use capabilities. Targeting such capabilities (eg. satellites and ground-based radars used for both conventional and nuclear early warning) during a crisis in order to degrade an adversary’s conventional forces now represents one of the most likely and most dangerous pathways to inadvertent nuclear escalation (Talmadge 2017; Acton 2018; Hiim, Bowers 2022; Hiim, Fravel and Trøan 2023).

None of the SNNW currently available to states can reliably destroy even a small nuclear arsenal today. But rapid advances in the technologies in recent years, and the prospect of their combined use (in which, for example a missile defence system need only defend against a retaliatory force that has been greatly depleted and compromised in a first strike) have ensured that all nuclear-armed states are less confident than they once were in the survivability of their forces in the future. Put simply, due to technological breakthroughs in remote sensing, missile accuracy, autonomous weapons systems, and defensive systems, nuclear forces are both more vulnerable to attack, and less reliable for purposes of retaliation.<sup>2</sup> While less reliable might be reliable enough for now given the immense destructiveness of nuclear weapons and the still early stages of development and

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1 While some have questioned the durability of the nuclear taboo (Gibbons and Lieber 2019), a pre-emptive SNNW attack during a crisis is still more likely than a nuclear one if we assume that the nuclear taboo holds at least some sway over decision makers. Most decision makers would likely be reluctant to be the first to use nuclear weapons in war since 1945. Yet a Prime Minister or President whose nation is amidst a major conventional war against a nuclear-armed adversary who perceives that nuclear escalation is possible (let alone likely) would almost certainly, at the very least, consider a counterforce strike that need only employ SNNW.

2 For analysis of advances in remote sensing and missile accuracy see, Lieber and Press (2020) and Bowers (2022).



deployment of some SNNW technologies (as well as the continuing difficulties associated with reliable missile defence), it is the shadow of the future that is driving nuclear decisions today (Zala 2019). This is unsurprising. The utility of a nuclear weapons capability, whether for warfighting or deterrence, is entirely reliant on its survivability.<sup>3</sup> Therefore, nuclear-armed states have always had low thresholds in their risk assessments when facing adversaries developing new weapons technologies. As former US Defence Secretary, Robert McNamara (1986: 53), recalled after leaving office, “While serving as Secretary, I was repeatedly forced to make decisions about the forces we would begin to build today to balance Soviet forces that *we believed might exist tomorrow*” (emphasis added). States do not require high confidence in their adversary’s counterforce capabilities to be incentivised to counter them.

While the presence of some SNNW in the global nuclear order is not new (eg. the US–Soviet Cold War saw the development of missile defences as well as anti-submarine and anti-satellite weapons), what is different today is their widespread development and deployment among the nuclear-armed states. This is due to a combination of technological breakthroughs in various areas as well as a changed political environment in which the development of counterforce capabilities face fewer hurdles than in the past. Arguments in favour of, and policies that result in, mutual vulnerability as the cornerstone of deterrence stability have been replaced by vague notions of ‘nuanced’, ‘complex’, and ‘integrated’ deterrence that are facilitating an ever-growing deployment of SNNW capable of counterforce missions (Peters, Anderson and Menke 2018; Obering III and Heinrichs 2019; White House 2022a; Wirtz and Larsen 2023).



YONGSAN GARRISON, SEOUL, South Korea -- U.S. Forces Korea continued its progress in fulfilling the Republic of Korea - U.S. Alliance decision to install a Terminal High Altitude Area Defense (THAAD) on the Korean Peninsula as the first elements of the THAAD system arrived in the ROK. Flickr

3 The lion’s share of contemporary scholarship on this focusses on the survivability or otherwise of China’s nuclear arsenal vis-à-vis US nuclear, and increasingly, conventional, counterforce capabilities. See, Cunningham and Fravel (2015); Wu (2020); Hiim, Fravel, and Trøan (2023).



In Northeast Asia, SNNW are being developed and deployed across the nuclear-armed states (China and North Korea), states with a strategic presence in the region (the United States, Russia and India), and by a number of non-nuclear armed US allies (Japan, and to a lesser extent, South Korea). Not all are developing or acquiring all forms of SNNW. For example, South Korea is primarily relying on missile defence (eg. the US THAAD system) – although even this is being complimented by its own so-called “three-axis system” of defense relies on both offensive and defensive conventional capabilities with potential counterforce implications, at least for North Korea (Bowers and Hiim 2021). From upgrading its satellite capabilities, to collaboration with the United States on missile defence, to improving both its surface missile and anti-submarine capabilities for operation in the Yellow and East China Seas, Japan has sought qualitative improvements in its military stocks to counter perceived threats from North Korea and China. The three nuclear-armed great powers in the region (China, Russia, USA) are developing capabilities across the entire suite of SNNW.<sup>4</sup>

## NUCLEAR RESPONSES: STRATEGIC AND TACTICAL

Against this backdrop, states are modernising their nuclear forces by way of countering the perceived (accurately or otherwise) advantages of their adversaries. For some in Northeast Asia, the primary nuclear responses to these developments are at the strategic level. For example, China is both working on a new generation of quieter nuclear submarines as well as dramatically expanding the number of ICBM silos it has. Both options are aimed at making its arsenal harder to target in a first-strike. While the new Type 096 submarines will likely still be relatively vulnerable to US and allied anti-submarine warfare capabilities, the design is clearly aimed at reducing the acoustic signature of the vessel and thereby making it harder to find and track (Carlson and Wang 2023, 29; Logan 2023b, 9-10). The new missile silo fields may serve multiple purposes for China but the most important is to provide US military planners a larger number of targets to have to expend its nuclear or SNNW missile force on in an attack making such a move a riskier prospect (Hiim, Fravel, and Trøan 2023, 176-7).<sup>5</sup>

North Korea too has continued to work on medium and long-range missile capabilities but it has also matched this with a sharp rise in tactical missile tests. Pyongyang has spoken publicly about what it describes as a tactical nuclear arsenal, tested numerous short range nuclear-capable missiles, and even launched a (self-described) “tactical nuclear attack submarine” (a conventional submarine capable of carrying a nuclear cruise missile or short-range ballistic missile). Russia too has responded by developing (and testing, with limited success) a nuclear-powered cruise missile as well as developing a nuclear-armed torpedo.

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4 For example, on the triangular relationship between these three and missile defence technologies, see Zhao and Stefanovich (2023).

5 That China would hedge its bets by developing both a stealthier class of nuclear-armed submarines as well as expanding the size of its land-based missile force in its response to the development of US SNNW was not only a logical, and therefore predictable response, but it was also foreshadowed by Chinese analysts themselves in the years leading to the revelations about the new silo fields. See for example, Santoro and Gromoll (2020, 12).





Such developments tell us that one of the options open to states concerned about the growing vulnerability of their strategic arsenal to a SNNW attack is to attempt to increase their advantages at the sub-strategic level in order to deter such an attack in the first place. North Korea is ensuring that it has the capability to employ tactical nuclear weapons early in a crisis if they perceive that the United States and its allies are not deterred by the threat of a North Korean ICBM. While North Korea's ICBM arsenal remains small it is vulnerable to a first strike or even to being effectively defended against. The more the US develops and deploys ever greater counterforce and missile defence capabilities, the greater the incentive for Pyongyang to deploy more tactical nuclear weapons.

## THE IMPORTANCE OF CRISIS MANAGEMENT INTEROPERABILITY IN THE THIRD NUCLEAR AGE

As was discussed above, the role of SNNW in questions of nuclear stability in the Third Nuclear Age has made crisis management and the avoidance of nuclear escalation more complicated. In particular, the entanglement of nuclear and conventional forces in various ways have expanded the range of signals that can be sent during a crisis (ie. the use of SNNW signalling during a nuclear crisis can now be added to traditional nuclear signalling). Crisis signalling is always a delicate art (Bell 1971). Military moves (eg. alerting or de-alerting particular forces, deploying or withdrawing forces from a forward location etc.) are one of the most important forms of crisis signalling (Fearon 1997; Slantchev 2005). Yet even military signalling requires interpretation on the part of the recipient and both the relative novelty of deployed SNNW as well as the myriad ways that SNNW can impact on nuclear forces will make sending and receiving clear signals during a crisis challenging. Entangled nuclear-conventional crises are set to be more difficult to navigate than the nuclear crises of the US-Soviet Cold War.

One of the novel aspects of crisis signalling today is that non-nuclear armed states, allied to a nuclear weapons state (the United States) are now armed with SNNW. In particular, missile defence and long-range conventional strike capabilities have become central to the new deterrence postures of allies from Western Europe, to Australia, to Northeast Asia. In addition, these allies are also looking to explore the potential advantages found in 'emerging technologies' such as artificial intelligence and quantum computing in military applications (Brooke-Holland 2023).

The presence of SNNW in the arsenals of US allies adds an additional layer of complexity to signalling during a nuclear crisis. Instead of only needing to worry about the signals sent from the other nuclear-armed protagonist in a crisis (eg. the United States and USSR during the Cuban Missile Crisis), now states will need to read the signals of their allies armed with SNNW as well. This is a particularly delicate area to navigate during a crisis given that, as one study notes (Wolford 2014, 145), "coalition partners often disagree over what threats to make, what signals to send, and generally how to bargain with their adversaries."

Increased and carefully focussed dialogue between the United States and its allies on crisis management under contemporary conditions is critical. Some dialogue is already underway and there are promising avenues for developing this further, but much more needs to be done. Having the United States and its allies all be on the same page – having a degree of crisis management interoperability between them – could be the difference between a crisis escalating to all out, even nuclear, war or not. This means ensuring that Washington, Tokyo, Seoul (as well as other relevant capitals including Canberra) have a very clear understanding amongst themselves on how to operate



their SNNW capabilities (eg. moving forces to a forward location or not, increasing alert levels or not of particular forces etc.) during a crisis as well as clear lines of communication to coordinate this between multiple allies.

For example, in a scenario in which tensions over Taiwan's quasi-independence have significantly increased, China and the United States will be watching each other's moves closely, particularly any movement of military forces. This includes obvious signals of improved military readiness such as moving assets such as submarines or carrier battle groups to forward locations or preparing liquid-fuelled missiles for launch. But it would also include less immediate military signals such as proceeding with planned drills, military exercises or tests. Such activities are "often a valuable way to improve the effectiveness of a state's armed forces and a visible means of conveying that effectiveness to observers", but they can also "be mistaken as a cover for initiating conflict" (Montgomery 2020, 317-318). Even something as simple as a planned, and regular, test launch of the US Minuteman III intercontinental ballistic missile was postponed in March 2022 in order to avoid sending escalatory signals to Russia in the aftermath of Moscow's public nuclear threats following its reinvasion of Ukraine the previous month (Basu 2022). But due to the presence of SNNW amongst US allies in Northeast Asia, during a Taiwan crisis, China would have to be watching for the same sorts of signals from Japan, South Korea, and even Taiwan itself.

Today, given that some SNNW such as hypersonic missiles, offensive cyber capabilities, and some novel anti-submarine warfare capabilities are in their infancy and are largely unproven in battle, the incentives to engage in calculated military demonstrations of their utility have increased (Montgomery 2020, 311). A lack of coordination between Washington and Tokyo, especially during a prolonged crisis over Taiwan or on the Korean Peninsula, could see a test of a new Japanese capability such as the Hyper Velocity Gliding Projectile (HVGP) medium-range missile (currently in development) which, in principle, could be used to target Chinese or North Korean early warning radar and command and control bases. This could be read in Beijing or Pyongyang as an escalatory signal aimed at demonstrating conventional counterforce capabilities but one sent by a close US ally rather than by the United States itself. If such a test was held in close proximity to something like a readiness evaluation of a missile defence battery (such as the Terminal High Altitude Area Defense battery stationed at Osan Air Base in South Korea), these two actions could easily be read (or misread as the case may be) of the United States and its allies preparing to engage in a pre-emptive counterforce strike and defend against the retaliation.<sup>6</sup>

Therefore, careful coordination between the allies would be needed to avoid inadvertently sending the wrong signal. The 1983 Able Archer episode illustrates the dangers of nervous nuclear-armed states misreading the signals sent by a group of allies engaging in a pre-planned military exercise at a moment of heightened tensions (Jones 2016).

Such a level, and type, of coordination has not been necessary in the past given that a counterforce strike required the use of nuclear weapons and Washington's Northeast Asian allies are not nuclear-armed. Therefore, even existing dialogue and military coordination mechanisms will need to be

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<sup>6</sup> For an example of just such an exercise being carried out for a US THAAD interceptor battery stationed on Guam, see Wild (2024).



upgraded. Of particular focus in the immediate term should be information sharing and awareness raising amongst the relevant arms of the respective militaries and defence policy communities of the category of SNNW and seeking agreement on which weapons types should fall under this category. In addition, war gaming and crisis simulation exercises should be specifically designed to include SNNW, including those under the command of South Korea and Japan. The recent establishment of the US-South Korean Nuclear Consultative Group is one obvious avenue for pursuing such activities. For example, adapting the group’s existing workstream focussed on “nuclear consultation and communication processes in crises and contingencies” to include SNNW should be relatively easy (White House 2023). But building a wide range of coordination and dialogue activities on this issue involving government officials and beyond (journalists, think tank analysts, academics etc.) will create a more robust basis for this interoperability.



President of Russia Vladimir Putin with President of China Xi Jinping at a welcome ceremony with members of the Beijing Capital Garrison Honor Guard Battalion, during Putin’s state visit to China. Kremlin.ru

The same dynamic is increasingly likely to apply to less formal partnerships as well. The most pressing is the Sino-Russian strategic partnership. This is a self-described “no limits” partnership between two nuclear-armed states who are also two of the leading developers of SNNW. As Moscow and Beijing grow closer, regardless of the lack of formal alliance arrangement between them, it is likely that ensuring stability and reducing risks of miscalculation during a crisis between either of them and the United States (or worse, concurrent crises between each of them and the



United States) will require a similar degree of crisis management interoperability.<sup>7</sup> Russo-North Korean relations, particularly in terms of military transfers and the sharing of intelligence, appear to be taking on a similar character and will therefore warrant attention in the coming years as well (Kim 2023; Nikitin, Bowen and Manyin 2024).

There are risks involved in building intra-alliance coordination on crisis signalling which would need to be mitigated.<sup>8</sup> Security alliances allow for capability aggregation which can encourage adversaries to build up their forces even further in order for their deterrent threats to remain credible. The prospect of having to deter both Russia and China is currently being used by proponents of further arms build-ups in the United States at the current time (Geller 2022; Congressional Commission on the Strategic Posture of the United States 2023; for a critique of this see, Glaser, Acton and Fetter 2023). China regularly articulates a fear of encirclement with reference to the series of US alliances in Asia (Bradsher 2023). If greater coordination between allies during crises was perceived simply as another mechanism for trying to achieve victory during a military crisis, then this could create incentives for the other side to escalate. Yet these risks exist anyway. What a greater level of crisis management interoperability can do is to lower the risks of inadvertent escalation.

## BEYOND CRISIS MANAGEMENT: PREVENTION THROUGH ASSURANCE

Beyond simply managing the dangers of new nuclear crises both driven by SNNW developments and shaped by the prospect of SNNW and tactical nuclear use, some forms of restraint and arms control (of whatever form) will also need to be developed. Only then can we increase the chances of crises being averted rather than simply being managed. The problem currently is that the only tool being used to respond to the destabilising aspects of increasing nuclear-conventional entanglement is a simplistic and incomplete approach to deterrence (ie. military build-ups and force modernisation). The current focus, on the part of Northeast Asia's nuclear-armed states and their allies, on increasing one's own ability to make credible deterrent threats needs to be matched by increasing the ability to send signals of assurance.

The deterrence policies preferred by states at the outset of the Third Nuclear Age are not undermined by policies aimed at assurance but are instead bolstered (perhaps even fundamentally underpinned) by them.<sup>9</sup> Deterrence and assurance are two sides of the same coin (Knopf 2012, 379). The former relies on the latter for success because without assuring the recipient a deterrent

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7 I am indebted to Jina Kim on this point about the dangers, and dynamics, of concurrent but separate crises.

8 I am indebted to Kyungwon Suh on this point.

9 Both the scholarly and policy-focussed literatures on this topic often confusingly use the terms 'assurance' and 'reassurance' interchangeably. Some use one term to refer only to signals sent to adversaries and another to allies (ie. to 'reassure' an ally of your commitment to their security). Unfortunately, scholars and policymakers alike have been inconsistent in their usage. For example, Michael Howard (1982/83) used 'reassurance' to refer to signals sent to allies, while Linton Brooks and Mira Rapp-Hooper (2013) use 'assurance' to describe this and instead use 'reassurance' to refer to signals sent to adversaries. Here I will use the broadest term of 'assurance' in line with the longest tradition of scholarship on the topic starting with Thomas Schelling to refer to actions aimed at signalling to the recipient of a deterrent threat that this threat is contingent - that if they refrain from doing that which is to be deterred, they will not be attacked. This more or less aligns with what Reid Pauly (2019) specifically calls 'coercive assurance' (as opposed to 'ally reassurance'). For a full discussion of these definitional issues, see Knopf (2012).



threat of your defensive intentions, such a threat risks incentivising them to attack first and thus result in deterrence failure (Schelling 1966, 74-5; Long 2008, 10-11). Thomas Christensen (1992, 133) is quite correct when he writes that “unless the target believes a punitive attack is contingent on its own behavior, it has no incentive to comply with the deterrer’s demands.”

However, in many cases the problem is even greater than this. Not only does the target (or recipient of the deterrent signal) not have an incentive to comply, but they may also actually have a clear incentive to take the action that they were supposed to be deterred from taking (Lebow and Stein 2007, 154). If a military attack appears imminent and inevitable, then there are often clear advantageous in being the first to strike a blow. This is especially so if a state’s nuclear forces are vulnerable to a first strike attack (whether by nuclear or non-nuclear forces).

The early deterrence theorists of the First Nuclear Age understood this well. At the height of the US-Soviet Cold War, Bernard Brodie ([1959] 1967, 302) argued that, Our over-riding interest, for the enhancement of our deterrence posture, is of course in the security of our own retaliatory force. But that does not mean that we especially desire the other side’s retaliatory force to be insecure. If the opponent feels insecure, we suffer the hazard of his being more trigger-happy.

This led Brodie and other Cold War deterrence theorists such as Thomas Schelling to advocate for various assurance measures including arms control. Brodie ([1959] 1967, 300-301) described “finding procedures where each side can assure the other through the latter’s own eyes that deliberate attack is not being prepared against him” as being “entirely compatible with our basic commitment to a strategy of deterrence.” Schelling (1961, 727) observed that, “Arms control fits into, and is a proper part of, a national military strategy” and is a “recognition that the ‘promise’ or ‘reassurance’ side of the deterrence equation needs emphasis.” As Schelling wrote (1966, 74), with characteristic clarity, “To say, ‘One more step and I shoot,’ can be a deterrent threat only if accompanied by the implicit assurance, ‘And if you stop I won’t.’”

Nothing about the conditions of the Third Nuclear Age has changed this basic logic. Assurance remains a critical part of any successful deterrence strategy (Cebull, Dafoe and Monteiro 2021). It is however, an exceptionally difficult task, often referred to as “the Goldilocks dilemma” – the mix of threat and assurance has to be ‘just right’, threatening enough to deter, but not so threatening as to induce pre-emption (Rosecrance 1995). The growing entanglement of nuclear and conventional forces makes this task even harder, given that, as Barry Posen has argued (1992, 233), “The basic nature of conventional warfare makes it difficult to reconcile the goals of crisis stability and deterrence in the same force structure.” As conventional forces tend to encourage what Posen calls “struggles for marginal advantage” (Posen 1992, 235), it becomes harder to control crisis escalation. But it is not impossible. Carefully calibrated agreements and policies can lower risks, primarily by lowering first-strike advantages (Posen 1992, 244).

The good news is that the current focus on deterrence (even in the absence of formal arms control) of nuclear-armed states and their SNNW-armed allies need not, in itself, preclude crisis avoidance (rather than simply management). Quite the opposite. If their deterrence policies are successful then this will result in crisis avoidance at best, or de-escalation at worst (Huth 1999, 28). But this will require a rebalancing of the present focus from solely deterring by making greater threats (primarily



through force build-ups) to matching this with a concomitant effort in assurance.<sup>10</sup> Ultimately, no matter what precise form they take, such assurance measures will require some willingness to show restraint in armaments.

Given the challenges associated with strategic arms control at present, there is little prospect for formal, multilateral SNNW arms control in the immediate term. Instead, the focus in the short-term ought to be on more informal measures from unilateral moratoriums, to confidence building measures, to track II and 1.5 dialogues focussed on finding common ground for future opportunities. Given the total lack of arms control in the SNNW field, a broad range of efforts will be necessary. For example, while moratoriums are best suited to specific weapons categories (eg. particular types of anti-satellite weapons or long-range precision strike missiles carrying specific explosive payloads), dialogues on strategic stability can focus on the inter-linkages between different classes of weapons and emphasise the dual-use nature of some SNNW capabilities. Such dialogues can be aimed at identifying the differing perceptions of the roles of SNNW and their impact on nuclear balances (both within and across different states and expert communities) as well as increasing knowledge and understanding amongst participants of the latest technological developments.

Within these informal measures, a focus on qualitative rather than quantitative restraint is more likely to address some of the drivers of insecurity discussed above and a broad rather than narrow approach to reciprocity (where parties to an agreement may not need to engage in like-for-like reductions and caps) is likely to be necessary. One of the challenges associated with the entanglement of SNNW and nuclear forces is that measuring strategic parity between two states has become exceptionally difficult. The military advantage offered by one state's strategic nuclear forces can be nullified by another's combined SNNW capabilities. In addition to qualitative restraint (restraint in the type of weapons deployed), operational restraint may also need to be explored.

Therefore, finding very limited areas at first in which states can signal their willingness to be restrained is likely to be the most fruitful path (Kühn and Williams 2024). The unilateral moratorium on destructive direct-ascent anti-satellite missile testing announced by the United States in April 2022 is an encouraging step that should be built upon (White House 2022b). Beijing's denouncement of the move and the invitation to join the moratorium as "fake arms control" is not entirely unjustified (Zhen 2023). The United States is decades ahead of others like China and India on these tests which would make a multilateral moratorium a way of locking in a comparative advantage for Washington. Yet it is an example of precisely the kind of ill-judged refusal to take even small, ultimately inconsequential actions and build on them to create an environment in which assuring signals can be sent and received by adversaries that fuels mistrust and ultimately arms racing.

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10 For a specific discussion of why deterring a Chinese military takeover of Taiwan requires carefully calibrated reassurance measures, see Christensen (2002).





U.S. Vice President Kamala Harris addresses the importance of U.S. space policy during her visit to Vandenberg Space Force Base, Calif., April 18, 2022. (U.S. Space Force photo by Michael Peterson) Wikimedia Commons

Established approaches to unilateral restraint such as Charles Osgood's (1962) GRIT (Graduated Reciprocation in Tension reduction) strategy may not apply neatly to situations of nuclear-conventional entanglement. Specifically, the reciprocal moves may need to involve different weapons systems and even different kinds of restraint across the different actors involved (from total abstinence, to limits in deployment numbers, to limits in geographic deployment). In the example of the US unilateral moratorium on destructive direct-ascent anti-satellite missile tests, China, Russia and India need not respond by imitating the exact moratorium in this area. But unilateral restraint in other nuclear or SNNW deployments or tests can act as a form of reciprocity that helps build a general climate of restraint and therefore assurance (Wu 2022). Even a qualified response (eg. the same moratorium but for a limited rather than unlimited time period) is a more productive one than outright rejection and criticism of the motives of the first mover.

Useful suggestions have been put forward in recent years for asymmetric arms control in specific SNNW areas such as hypersonic glide vehicles (Williams 2019) and restraint in anti-submarine warfare operations in patrol areas critical to the second-strike capabilities of particular states (Regehr 2023). Such proposals are an important start in slowly building an environment in which deterrent threats are matched with assurance practices in the Third Nuclear Age.

Early, informal arms control initiatives do not need to comprehensively address security concerns or even directly lower the risks of nuclear use in an immediate sense to be useful. If they re-normalise practices of assurance, they will improve the environment in which future arms control and other policies of restraint can take place. As scholars have long pointed out, even modest arms control measures can be useful as a process rather than an outcome (Freedman 1992; Tannenwald 2020). The resumption of an arms control dialogue between the United States and China in November 2023, even without any prospect for concrete outcomes, is, like the US unilateral ASAT test moratorium, a useful first step (and the two may not be unrelated). Such discussions can, at the very least, allow both sides to demonstrate a willingness in principle to engage in practices of assurance as part of their deterrence postures simply by discussing issues of restraint. If such a dialogue can



be ongoing, it can help each side identify the genuine concerns of the other side which at least allows for the possibility of mitigating future security dilemmas – or to use the phrase popularised by Ken Booth and Nicholas Wheeler (2008), to allow leaders to build “security dilemma sensibility.”

While the initial assurance moves need to be made by the major nuclear-armed powers whose arsenals are increasingly characterised by the entanglement of nuclear and SNNW forces, ultimately the allies discussed above who themselves are acquiring SNNW will also need to be involved. It is unlikely that US allies will be participants in any arrangements without the United States, so Washington will need to take the lead in relation to allied actions. But even in being open about their desire to develop crisis management interoperability, allies and informal partners alike will send assurance signals to potential adversaries. Simply by demonstrating that they are looking to peacefully manage and deescalate future crises rather than ‘win’ them, states can match assurance signals with deterrent threats.

## CONCLUSION

States who are allied with one another, such as the United States and its Northeast Asian treaty allies (or even close partners such as China and Russia) and therefore have the advantage of military capability aggregation, will need to pay particularly close attention to the risks of nuclear-conventional entanglement and inadvertent crisis escalation in the Third Nuclear Age. While military interoperability may boost their deterrence postures as well as improve their chances of victory in the event of deterrence failure, crisis management interoperability will be crucial in the coming years. Allies armed with SNNW and integrated into the defence postures of nuclear-armed states – such as most US allies – will need to greatly increase their level of information sharing, crisis scenario simulations, and joint planning for crisis signalling.

While such risk reduction measures are important, they will always be insufficient. Crisis prevention is the best approach to risk reduction in the new era of conventional-nuclear entanglement. Therefore increasing the analysis, public debate, and ultimately, policy making around assurance measures aimed at strengthening states’ deterrence postures will need to be prioritised in the years to come. There are some limited interventions focussed on the policies of both great powers and smaller states (including allies) already available that can be built upon (see, [Mastro 2023](#); [Roggeveen 2023, 163-166](#)). There is also a wealth of thinking and practice from the US-Soviet Cold War that is ripe for reappraisal ([Krepon 2021](#); [Maurer 2022](#)).

While some may be sceptical about the prospect of strategies of assurance being successful at the current time, it is precisely because of the rising suspicion between nuclear and SNNW-armed powers that such strategies need to be crafted. In times of lower tensions, assurance is relatively easy and less necessary. As one account puts it, “The test of the effectiveness of strategies of reassurance is their contribution to the avoidance of war among adversarial leaders who are hostile and suspicious of one another” ([Lebow and Stein 2007, 154](#)).

As the tensions increase and the likelihood of crises, even nuclear crises, in areas such as Northeast Asia grow, the dangers of the kinds of conventional-nuclear entanglement that are coming to characterise the Third Nuclear Age will need to be addressed ahead of time. Complacency is the greatest danger today. Crises can begin quickly and take on a momentum of their own, often driven by domestic as well as international dynamics. Building allied crisis management interoperability and exploring the very early stages of a new raft of assurance measures will not address all dangers, but they will lower immediate, and foreseeable, risks.





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## DISCLOSURE STATEMENT

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