

Chapter 6

The US and Extended Deterrence



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Abstract The U.S. provides extended nuclear deterrence to allies in Europe, Asia, and elsewhere. The 2018 NPR signals several potentially destabilizing policies, including lowering the threshold for use and adding low-yield capabilities, and it emphasizes the need for nuclear superiority. This chapter argues that the U.S. is changing its nuclear posture to address the growing challenge to U.S. conventional superiority. Extended nuclear deterrence is inherently dubious and the asymmetry between the U.S. on the one hand, and its allies and adversaries on the other, makes it doubly so. In the coming decades, this will continue to generate problems for the U.S. as long as it maintains its alliance commitments.

Keywords United States • Extended Deterrence • Nuclear Deterrence • Grand Strategy • Alliances • Nuclear Strategy • Autonomy

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6.1 Introduction

The US nuclear posture serves a drastically different purpose than that of other nuclear weapon states; US nuclear weapons are not solely or mostly intended to directly deter attacks on the homeland or other vital interests. Rather, the U.S. nuclear posture must consider how its nuclear weapons can deter attacks on third parties, namely its allies and partners.¹ The U.S. is also physically present with conventional forces in the states it protects. It does so not only to defend its allies against conventional attack and make nuclear weapons superfluous, but by underlining U.S. credibility and providing it with “sunk costs” to prove it has real interests at stake. Consequently, the U.S. has a series of complex extended deterrence arrangements across the globe, to allies in Europe, Asia, and the Middle East. Yet, the U.S. seems to have succeeded in achieving its ambitions, given the absence of major war with its allies, as well as the avoidance of nuclear annihilation for the past seven or so decades. However, should we expect the US to continue to successfully provide extended deterrence into the 21st century? This chapter will argue that current political and technological trends will intersect with structural features of the U.S. extended deterrence arrangements and present these with distinct challenges. The most current statement of US nuclear doctrine, the 2018 Nuclear Posture Review (NPR) is illustrative of these developments. However, before delving into current U.S. policies and trends, the rest of this introduction lays out the enduring features of U.S. extended deterrence.

Nuclear weapons are inherently paradoxical: they are considered too destructive as weapons to be considered useful in war, at least a war between two nuclear-armed states.² After all, the catastrophic consequences of nuclear war make it inherently dubious that most states would consider using nuclear weapons unless they themselves are under attack or unless the survival of their state was at risk in other ways, such as invasion and conquest. The U.S. has not been at risk of invasion since the American civil war and is protected by two oceans and weak neighbours. To deter existential threats to the American homeland would require a more limited number of nuclear weapons sufficient to survive a possible nuclear first strike—a counterforce strike—by an adversary.³ Yet, the U.S. has 5,800 warheads, of which 1,750 are deployed. Its nuclear triad consists of 400 warheads on land based Intercontinental Ballistic Missiles (ICBMs), 900 on Ballistic Missile Submarines (SSBNs), 300 assigned to bombers based in the United States, and 150 to tactical bombs based in Europe (and 2,050 are held in reserve).⁴ Moreover, this is only a fraction of the over 30,000 warheads the US possessed at the height of the Cold

¹Mazarr et al. 2018, pp. 8–9.

²As Bernard Brodie famously noted, the goal was no longer to win wars, but to avert them. Brodie et al. 1946.

³For a discussion on how Admiral Arleigh Burke lost the debate in the early 1960s on a SSBN-based “finite deterrence” doctrine, see: Rosenberg 1983, pp. 3–71.

⁴Kristensen and Korda 2020, pp. 46–60.

War. What drives these numbers? Also, given the overwhelming potential for destruction inherent in such an arsenal, why has the U.S. deployed hundreds of thousands of members of its armed forces in Europe, Asia, and elsewhere?

Since the advent of the nuclear age, the U.S. nuclear posture has primarily been driven by the obligations of the U.S. to protect its allies in Europe and Asia.⁵ As extended nuclear deterrence has been a permanent feature of the U.S. grand strategy since the late 1940s, it is easy to underestimate how counterintuitive it is. Moreover, arguably most of the scholarship tends to underline the difficulties of deterrence by focusing on basic or direct deterrence against direct threats to a state. Basic or direct deterrence depends on ensuring that the costs of actions an actor might undertake outweigh their benefits, in order that an actor does not engage in a specific behaviour.⁶ Deterrence can be through denial—the costs while acquiring the benefits will be high—and through punishment—the costs imposed afterward will outweigh the benefits.⁷ Deterrence exists as a function of both capabilities and signalling the perceived willingness or resolve to use these capabilities.⁸ Rationalist approaches to deterrence have focused on four sets of variables: the balance of military forces, costly signalling and bargaining behaviour, reputations, and interests at stake.⁹ Yet, the rationalist assumptions underlying deterrence have been challenged, as history is rife with errors in judgment by both attackers and defenders.¹⁰ Signals of intent are often not understood. The interests the adversary has at stake are misjudged. How can we assess the chance of success of deterrence if we are not sure of the mechanics?

However, while direct deterrence is already complex, extending deterrence on the behalf of others drastically multiplies the complexity of assessing intentions.¹¹ In the case of deterrence failure, there is an obvious incentive to avoid conflict. Weaker allies fear being abandoned by their protectors, while those in turn fear being dragged into conflict.¹² Integrating nuclear weapons into the management of alliances in turn further amplifies the complexities: a guarantor of extended nuclear deterrence is in effect promising that it is willing to be annihilated on behalf of its allies when those allies are threatened by a state with a credible second strike capability. As Richard Betts notes, “once basic deterrence becomes mutual, it negates extended deterrence by definition, since the latter requires the willingness to initiate nuclear attack”.¹³

⁵See, for example, Gavin 2015, pp. 9–46.

⁶Mazarr et al. 2018, pp. 2–6.

⁷Mazarr et al. 2018, pp. 6–8.

⁸Schelling and Schelling 1966, pp. 92–125.

⁹Huth 1999, pp. 25–48.

¹⁰Jervis et al. 1985.

¹¹Danilovic 2001, pp. 341–369.

¹²Snyder 1997, pp. 187–88.

¹³Betts 2010, p. 10. See also Freedman 1981, p. 276.

If deterrence with nuclear weapons is most believable when the issues at stake are existential in nature, extended nuclear deterrence is thus inherently deeply dubious.¹⁴ The problems of direct deterrence of the Soviet Union received more attention, yet, as Betts points out, the “most fundamental and vexing dilemmas” in U.S. nuclear doctrine remain driven by extended deterrence commitments.¹⁵ The underlying question remained and remains whether the U.S. will follow through with its promises.¹⁶ As these are not the intrinsic interests that would make nuclear use believable, the U.S. has had to go far beyond other states that pursued sufficient nuclear deterrence to prevent invasion or other large-scale threats to vital interests (such as France, the UK, and China). The physical presence of U.S. forces was fundamental to reassuring U.S. allies in Europe and Asia during the Cold War, with allied plans for the acquisition of nuclear weapons closely linked to rises and declines in U.S. troop numbers in the region.¹⁷ The U.S. has persistently struggled to find options between backing down from threats by its adversaries and provoking nuclear disaster.¹⁸

As understated as the inherent difficulties of extended nuclear deterrence, is how the demands of U.S. extended deterrence during the Cold War shaped many of the institutions within the global order. NATO was not only designed to defend Western Europe against the threat of Soviet invasion, it was also designed to let the West German contribute armed forces without unsettling its neighbours but still accept their precarious position on the front line of the Cold War. In turn, by providing it with security, the US could discourage Germany’s pursuit of nuclear weapons.¹⁹ The presence of U.S. forces in West Germany thus served multiple goals beyond deterring Russian conventional forces, it reassured Germany’s neighbours, and signalled a supposed U.S. willingness to perish on behalf of its

¹⁴Jervis et al. 1985, p. 185; Crawford 2009, p. 282.

¹⁵Betts 2010, p. 11.

¹⁶See: Freedman 1981, p. 276. Indeed, U.S. officials repeatedly expressed doubts that the U.S. would follow through on its guarantees. National Security Advisor for Richard Nixon, Henry Kissinger, at a private gathering of American and European strategies in Brussels in September 1979 said: “If my analysis is correct, we must face the fact that it is absurd to base the strategy of the West on the credibility of the threat of mutual suicide... and therefore I would say [...] that our European allies should not keep asking us to multiply strategic assurances that we cannot possibly mean or if we do mean, we should not want to execute because if we do execute, we risk the destruction of civilization.” Cited in Ravenal 1982, p. 37. Defense Secretary for John F. Kennedy and Lyndon B. Johnson, Robert McNamara, wrote that “in long private conversations with successive Presidents Kennedy and Johnson-I recommended, without qualification, that they never initiate, under any circumstances, the use of nuclear weapon.” Cited in Garnham 1985, p. 97. See also Pauly’s analysis of the reticence of U.S. officials to escalate to the use of nuclear weapons during wargames: Pauly 2018, pp. 151–192.

¹⁷See particularly: Lanoszka 2018; Crawford 2009, pp. 283–84.

¹⁸As President John F. Kennedy put it: “Above all, while defending our own vital interests, nuclear powers must avert those confrontations which bring an adversary to a choice of either a humiliating retreat or a nuclear war. To adopt that kind of course in the nuclear age would be evidence only of the bankruptcy of our policy—or of a collective death-wish for the world.” Kennedy 1963.

¹⁹For a definitive take, see: Trachtenberg 1999. See also: Sayle 2019.

allies. The often-cited quote by Lord Hastings Ismay, NATO's first Secretary-General, remains appropriate: NATO was intended to "keep the Soviet Union out, the Americans in, and the Germans down". Unlike the multilateral model of NATO, in Asia the US relied on a "hub and spokes" model of bilateral relations. Though it supplied its main Asian allies with military presence, US assurance was arguably more difficult in Asia. Its allies looked at US behaviour elsewhere in the region. In Japan abandonment fears intensified towards the late 1960s when the U.S. sought to lessen its involvement in the Vietnam War.²⁰ US manpower cuts on the Korean Peninsula unsettled South Korea in the 1970s.²¹ Its Asian allies looked to (re)initiating their independent nuclear programs as soon as the US commitment seemed to falter. In fact, inhibiting the proliferation of nuclear weapons was a key driver of U.S. grand strategy since 1945, as Frank Gavin argues, and this included extensive alliance commitments, perpetual troop commitments, and financial incentives and punishments.²² Put differently, the number of US nuclear weapons is driven by its alliance commitments, but its alliance commitments are in turn partly driven by the need to diminish the number of nuclear weapons held by other states. The key point here is that many aspects of the current political order and relations between the U.S. and its European and Asian allies derive from the nuclear relationship. Due to changes in the distributions of conventional and nuclear capabilities, specifically in Asia, this order has become fragile in multiple ways. Specifically, the U.S. is no longer guaranteed of fighting a conventional conflict at low costs, which undermines its commitments to allies. As the rest of chapter shows, the most recent statement of the U.S. nuclear posture focuses primarily on the flexibility and superiority of U.S. nuclear capabilities to address the increasing difficulties to guarantee current US commitments. The risks of crisis instability have strongly increased, as have the risks that current U.S. allies will reconsider their non-nuclear stances. Simultaneously, the Trump administration is ambiguous in signalling its intentions. The chapter proceeds as follows. First, the chapter lays out the perceived challenges to the U.S. strategy that the adaptations that the 2018 Nuclear Posture Review (NP) addresses. Specifically, how the asymmetry of interests between the U.S. and its adversaries and allies ensures that the declining conventional superiority of the U.S. has real repercussions for the credibility of its commitments. The second and third section follows through and notes the perceived need for flexibility and superiority the NPR identifies, and how it seeks to address these partly with additional low-yield weapons. The fourth section discusses how the suggestion that U.S. is lowering the threshold for use increases the risk of crisis instability. The final section notes how the intersection of these policies with current trends makes the U.S. extended nuclear deterrence arrangements precarious.

²⁰Lanoszka 2018, p. 79.

²¹Lanoszka 2018, p. 115; Jang 2016.

²²Gavin 2015; Gerzhoy 2015.

6.2 Current U.S. Nuclear Posture and Challenges

In the 2018 United States Nuclear Posture Review (NPR), the most current statement on the U.S. nuclear posture, the Donald Trump administration seeks to ensure the American arsenal is unchallengeable. Three features are particularly noteworthy. First, the 2018 NPR proposes to modernize the nuclear triad, in line with the NPR of the previous administration, though it also seems to signal a great willingness to gain superiority over rivals. Second, the 2018 NPR expands the threshold to include “non-nuclear strategic attacks”, and, third, stresses the need for more non-strategic options, particularly a low-yield nuclear warhead for the submarine-launched ballistic missile (SLBM). The second and third features have the potential to be escalatory.²³ While similarities exist with previous NPRs,²⁴ it is the emphasis in the 2018 NPR on the pursuit a “flexible, tailored nuclear deterrent strategy”²⁵ that seems far removed from the previous NPR drawn up during the Obama administration. Those made claims about the desirability of disarmament.²⁶ I argue that the changes to the U.S. nuclear posture are driven by the increased difficulties and precariousness of providing extended nuclear deterrence to U.S. allies.

United States is an extra-regional guarantor, insulated from all non-ICBM attacks by virtue of its insularity. The inherent asymmetry of interests between the U.S. and its adversaries there make extended nuclear deterrence even more difficult than it would already be. Competitors and adversaries such as China, Russia, and Iran are states with intrinsic security interests in their respective regions. The U.S. is operating in *their* backyard. Each of these is pursuing strategies aimed at raising the costs of U.S. actions, with the intention of forcing U.S. leaders and the American public to reconsider the extent of interests in these regions. North Korea is a more radical example of this logic, with its brinkmanship strategy underlining that the U.S. does not have existential interests at stake in the Korean Peninsula, unlike North Korea itself.²⁷ Adversaries know that pursuing asymmetric strategies that raise costs will in turn deter U.S. actions and thus undermine the credibility of its deterrent.

To deter its adversaries and reassure its allies, the United States is heavily reliant on its cutting-edge military technological advantages—exemplified in its precision strike complex—and its ability to command the global commons.²⁸ Given the fact

²³Steinberg 2018.

²⁴The 2018 NPR and the 2010 NPR both call for maintaining strategic stability together with Russia and China, continued NATO nuclear capabilities, addressing the threat of nuclear terrorism, as well as arms control. Both also calls for modernizing the nuclear arsenal. Mauroni 2018.

²⁵Office of the Under-Secretary of Defense 2018.

²⁶See: Gavin et al. 2018.

²⁷As Austin Long notes, once an adversary can reliably strike the U.S., the credibility of its extended nuclear deterrence becomes more questionable. Long 2018.

²⁸Posen 2003.

that the U.S. is an extra-regional guarantor, ensuring that the U.S. has access to the theatres of operations is crucial for projecting power against threats to its allies. The U.S. command of the global commons allows the U.S. to move forces, munitions, fuels, and dry goods to and within these theatres.²⁹ Adversaries are also investing in capabilities that test the U.S. command of the commons and its abilities to quickly reinsert or reinforce forces in local conflicts. U.S. conventional military superiority ensures that the costs of military actions are asymmetrical to its advantage to negate the asymmetry of interests between the U.S. and its (potential) adversaries.

Like the other key national security texts from the Trump administration, the 2017 National Security Strategy (NSS) and the 2018 National Defense Strategy,³⁰ the 2018 NPR identifies the return of great power competition as the key challenge driving American grand strategy. The NPR specifically signals advances in missile and targeting technology, has created the need for rethinking the nuclear posture.³¹ This was primarily a response to the incredibly rapid and sustained growth of the economy of the People's Republic of China and its growing military capabilities, reinforced by the renewed Russian belligerence exemplified by its annexation of the Crimea and invasion of Ukraine.³² The 2018 Nuclear Posture Review (NPR) followed suit, distancing itself from the previous NPRs—specifically the 2010 Barrack Obama administration NPR—that assumed the prospects for military confrontation between great power had declined and would continue to do so and that the U.S. could lead in nuclear arms reduction.³³ The NPR specifically notes the risks of Russia and China pursuing asymmetric ways and means to counter U.S. conventional capabilities, specifically the U.S. capabilities that make up its precision strike complex. Russia and China are developing counter-space military capabilities that undermine U.S. space-based intelligence, surveillance, and reconnaissance (ISR), nuclear command, control and communications (NC3), and positioning, navigation, and timing, as well as offensive cyberspace capabilities.³⁴

Chinese and Russian investments in Anti-Access Area Denial (A2/AD) are a particularly powerful driver of the change in U.S. nuclear posture.³⁵ The conventional advantages the U.S. has long enjoyed—certainly in the years that followed the end of the Cold War—have been steadily eroding, though not ending. That erosion of conventional military superiority impacts the options for deterrence. China is putting the conventional superiority upon which the U.S. military strategy

²⁹Matthews and Holt 1992.

³⁰Trump 2017.

³¹The nuclear posture can be defined as the capabilities of the nuclear force, with a doctrine for when and how to employ them, and specified control and command arrangements.

³²In contrast to the Chinese challenge to U.S. power in Asia, U.S. officials consider Russia primarily a regional concern. Interviews of the author with current and former national security officials, D.C., December 2018, February and December 2019.

³³Office of the Under-Secretary of Defense 2018, p. 6.

³⁴Office of the Under-Secretary of Defense 2018, p. 7.

³⁵Office of the Under-Secretary of Defense 2018, p. 7.

rests under pressure through the advances in quality and quantity of specifically its ballistic missiles but also other capabilities. The 2018 NPR signals how Chinese DF-26 intermediate-range ballistic missile capable of attacking land and naval targets, as well as new mid-course missile defence systems, sea-based mid-course ballistic missile defence, and developing theatre ballistic missile defence systems.³⁶ China has thus become increasingly capable of targeting fixed assets of the U.S. in Japan, South Korea, Guam, as well as elements of the U.S. navy.³⁷ The Chinese strategy centres on damaging or destroying on the airbases, shelters, fuel storage, and runways.³⁸ Their numbers are limited for the U.S. in the Asia-Pacific and their damage or destruction heavily constrains U.S. air power. Chinese capabilities are also targeting moving targets, specifically the aircraft carriers that extend U.S. power projection. The logic is straightforward: impede U.S. access to the region and deny the U.S. the ability to freely move around the region.

Russia has further developed its own A2/AD capabilities and trained these upon possible NATO reinforcements through the Baltics for any escalation in the Baltics. The Baltics are, after all, only connected to NATO territory through a narrow land bridge. The deployment by Russia of the 9M729 (SSC-8) land-based or submarine-launched cruise missile 3,000 km range missile violated the INF Treaty. This, in turn, has led to the suspension and then cancellation of the INF Treaty by the U.S. However, beyond the U.S. decision to reciprocate in kind to Russian actions, the suspension of the INF Treaty also freed up the U.S. to place its own missiles in the Asia-Pacific.³⁹

While the primary driver of the overall U.S. posture might be its declining conventional military superiority, the nuclear capabilities of Russia and China offer their own distinct challenges. U.S. officials fear that the Russian nuclear posture may rely on threats of limited nuclear first use to terminate conflicts on terms favourable to Russia.⁴⁰ Whether Russia would choose to exploit ambiguity through hybrid warfare (“the little green men”) or to exploit the geographically exposed nature of the Baltic NATO member states through sudden moves (*fait accompli*), it could then threaten the use of nuclear weapons should the U.S. and the other European NATO member seek to retake that territory. The NPR remarks that Russia has retained large numbers of non-strategic nuclear weapons and is modernizing these, in order to pursue military strategies and capabilities that rely on nuclear escalation.⁴¹ This has been referred to as its “escalate to de-escalate” doctrine—controversially so, because it is far from clear whether this accurately describes Russian outlook. As Ven Bruusgard notes, the strategy bears no resemblance to the theoretical discussions on limited nuclear options within Russian

³⁶Office of the Under-Secretary of Defense 2018, p. 11.

³⁷Biddle and Oelrich 2016; Montgomery 2014.

³⁸Heginbotham et al. 2015.

³⁹Blumenthal and Dan 2011.

⁴⁰Office of the Under-Secretary of Defense 2018, p. 7.

⁴¹Office of the Under-Secretary of Defense 2018, p. I.

military journals. If anything, when digging beneath apparent nuclear sabre rattling by the Russian regime,⁴² Russians are actively seeking to increase the threshold of nuclear use. Russians are apprehensive about the perceived unwillingness of the U.S. to accept mutual vulnerability.⁴³ Austin Long concurs; while Vladimir Putin believes nuclear weapons are of central importance to Russian security, he has generally refrained from invoking their use over anything besides vital interests.⁴⁴ Russia is also developing new intercontinental range systems, such as a hypersonic glide vehicle, and a new intercontinental, nuclear-armed, nuclear-powered, under-sea autonomous torpedo, the so-called Status-6 system.⁴⁵ Yet, it is unclear how the latter would be significantly more effective in threatening the U.S. second-strike capability than current Russian ICBM capabilities.

The U.S. appraisal of Chinese capabilities is more difficult to understand. The 2018 NPR notes that China is modernizing and expanding its “already considerable nuclear forces”.⁴⁶ However, it seems to overstate Chinese innovations. China possess a nuclear arsenal of approximately the same order as that of the UK and France (250–300 warheads). Moreover, unlike the UK and France, it relies on ICBMs rather than SSBNs. The Chinese second-strike capability is far from secure, and, importantly, so far it does not seem a major priority for China to invest resources to ameliorate this discrepancy.⁴⁷ As James Steinberg notes, the 2018 NPR’s assessment of the “China threat” is puzzling, as the document confirms that China’s policy and doctrine have not changed, yet it highlights a supposed lack of transparency from China. The fear might be that China could strengthen its theatre nuclear forces to threaten forward deployed U.S. forces in the case of a Taiwan contingency.⁴⁸

As the U.S. preoccupation is primarily with overcoming the improved Chinese A2/AD capabilities,⁴⁹ the real risk of the Chinese nuclear posture is the mixing of command and control systems of its nuclear capabilities and its A2/AD capabilities. In conflict, the U.S. could target Chinese command and control to ensure its naval and air assets survive, which Chinese military leaders could interpret as the first phase of a counterforce strike on Chinese nuclear capabilities.⁵⁰ There is thus a non-negligible risk of inadvertent nuclear escalation in the Sino-American competition.⁵¹

⁴²Braw 2015.

⁴³Ven Bruusgaard 2018.

⁴⁴Long 2018.

⁴⁵Office of the Under-Secretary of Defense 2018, pp. 8–9.

⁴⁶Office of the Under-Secretary of Defense 2018, p. I.

⁴⁷Kristensen and Korda 2019, p. 173.

⁴⁸Steinberg 2018.

⁴⁹Office of the Under-Secretary of Defense 2018, p. I.

⁵⁰Cunningham and Fravel 2015.

⁵¹See also: Posen 1991; Acton 2020.

The scenarios in Europe and Asia are thus entirely distinct, creating vastly different challenges for U.S. deterrence. In Europe, the threat is primarily land-based, favouring the offensive. It would be exceedingly difficult for NATO to stop Russia from capturing one or more of the Baltic states through conventional means—though it would be difficult for Russia to retain these gains through military means should the U.S. and NATO seek to recapture these. In such a scenario, U.S. planners fear Russia will resort to threatening the limited use of tactical nuclear weapons against NATO reinforcements or infrastructure—the supposed “escalate to de-escalate” doctrine discussed above. It is an interesting reversal of the Cold War stand-off between NATO and the Warsaw Pact: then, the U.S. was the actor that considered pre-strategic, tactical nuclear weapons to compensate for conventional shortfalls vis-à-vis the Soviet Union.⁵² Yet, during the Cold War, losses would have been cumulative, and degenerative for the balance of power. The capture of West Germany would have added significant industrial and military capabilities to the Soviet Union. Currently, the capture of the Baltics adds little to Russian capabilities, except potentially exposing the fissures within the alliance regarding the willingness to fight. Russian A2/AD capabilities would present problems for forces seeking to route Russian incursions into the Baltics. However, unlike in Asia, NATO airfields are too numerous for Russian missile attacks to present serious problems. Reinforcement of NATO Europe would be less vulnerable to Russian naval disruption.⁵³

In Asia, scenarios are primarily maritime in nature, favouring the defensive. While China is increasingly capable of targeting the limited number of U.S. and allied fixed assets such as airfields and airport, the ‘stopping power of water’ ensures it would be exceedingly difficult to make actual territorial gains. Yet, current U.S. allies could resort to ‘hiding’ or ‘bandwagoning’ strategies when facing Chinese power and retract U.S. access to airfields and ports on their territory, quickly degenerating the access of the U.S. to the Western Pacific. Losses would be cumulative. The solution to the U.S. problems in the Asia-Pacific—if it exists—is likely to focus on maintaining enough conventional air power and maritime access in the region to dampen the pressure China can put on U.S. allies, while dispersing U.S. bases and facilities across the region.⁵⁴ However, the improvements of Russian and Chinese A2/AD capabilities create another problem.

To ensure the credibility of its commitments, the U.S. has relied on a physical presence in the regions where it extends nuclear deterrence to its allies. It does so for two reasons. The first is to enable the U.S. and its allies to engage in deterrence by denial, meaning that they can raise the costs of aggression by the adversary by mounting a conventional defence. One could argue that the long-range precision

⁵²The reversal of the Cold War dynamics in Europe was noted by several former and current officials in interviews with the author.

⁵³However, despite the more favorable circumstances in the European theater, the ability of the U.S. to reinforce NATO Europe is far from given. Colin and Townsend 2019.

⁵⁴Heginbotham and Samuels 2018; Biddle and Oelrich.

strike capabilities of the U.S., plus its command of the commons, would allow the U.S. to remain out of region or retain only a minimal presence, with the option of reinforcing should deterrence fail.⁵⁵ This would, however, go against what constitutes the second reason for a U.S. presence in the regions it extends deterrence to, which is that the presence of American forces gives the U.S. ‘skin in the game’.⁵⁶ As Lawrence Freedman puts it, during the Cold War, the most important thing about U.S. ground forces in Europe was “their nationality”.⁵⁷ It compensates for the inherent asymmetry of interests between those of the U.S. as an extra-regional protector and those of its adversaries and allies in the region, and makes it more believable that the U.S. will risk the survival of its own society on behalf of its allies. Innovations in conventional weaponry by China and Russia in terms aim to raise the costs for the U.S. to maintain a physical presence.

What is different from previous eras—hence the emphasis on great power competition—is that the U.S. now faces two major powers that have significant conventional and nuclear capabilities. It is therefore significant that the U.S. has abandoned the planning assumptions of the 1997 Strategic Defense Review (SDR); the U.S. military is no longer planning the capability to fight and win two major regional wars.⁵⁸ The move to a one-war standard will limit the US ability to deter adversaries in multiple regions, as committing forces in Asia might undermine the ability to reinforce Europe and vice versa.⁵⁹ In combination with its declining conventional military superiority, the U.S. is increasingly pressured to rely on its nuclear arsenal.

6.3 Perceived Need for Flexibility

The current U.S. outlook is to increase flexibility in its nuclear posture in the face of perceived deterrence gaps. Yet, in doing so, the US is undermining stability in multiple ways, as the proposed solutions are likely to provoke potential adversaries. The NPR considers it a deterrence gap that the U.S. cannot respond in kind to a possible Russian limited use of low-yield tactical nuclear weapons. The existing U.S. non-strategic nuclear force consists exclusively of a relatively small number of B61 gravity bombs carried by F-15E and allied dual capable aircraft (DCA). The United States is incorporating nuclear capability onto the forward-deployable, nuclear-capable F-35 as a replacement for the current aging DCA.⁶⁰ The NPR believes Russia currently perceives it has a coercive advantage due its greater

⁵⁵Posen 2014; Mearsheimer and Walt 2016, p. 70.

⁵⁶Lanoszka 2018.

⁵⁷Freedman 1981, p. 276.

⁵⁸Mattis 2018.

⁵⁹Brands and Montgomery 2020.

⁶⁰Office of the Under-Secretary of Defense 2018, p. X.

number variety of non-strategic nuclear systems. While the NPR insists the U.S. is not pursuing “nuclear war-fighting” options, it still identifies a need to expand flexible U.S. nuclear options, including low-yield options. The DCA aircraft that allow nuclear sharing with NATO Europe allies, will be upgraded with the nuclear-capable F-35 aircraft.

However, the policy option that has most commentators up in arms, is the U.S. plan to modify existing Trident missiles on its SSBN force for a low-yield option (the W-76 or W-88 missile), and, in the longer term, a modern nuclear-armed sea-launched cruise missile (SLCM). The reason given is that, unlike DCA, a low-yield SLBM warhead or SLCM does not require or rely on host nation support.⁶¹

What to make of this reluctance to rely on allies? Is the concern that the European allies that currently base American nuclear weapons on their territory—Germany, the Netherlands, Belgium, Italy, Turkey—will stop doing so? Or is the concern that the DAC are too vulnerable to interception by Russian missile defence, while the SSBNs would be undetectable until it was too late? As James Steinberg notes, the choice suggests that administration officials think European governments might no longer support basing them on allied territory, a “rather curious turnabout” for an administration ostensibly preoccupied with ‘burdensharing’. Steinberg postulates that the US might be looking for a bargaining chip to incentivize Russia to negotiate seriously over a reduction of its non-strategic nuclear weapons (similar to the logic underlying the 1979 NATO Doubletrack decision that was intended to force the Soviet Union back to the negotiating table).⁶² In part, the move to SSBN based SLCMs and Tridents with low-yield options is supposed to be driven by Russian moves, it is as likely to be driven by the need to reassure South Korea and Japan vis-à-vis Chinese modernization.⁶³

Notwithstanding the motives, problems abound with the renewed U.S. emphasis on low-yield non-strategic nuclear weapons, and specifically the plan to adapt the Tridents on board the SSBNs to launch low-yield nuclear weapons. The first problem is that it muddles the political signalling that the division between platforms allows, through which the U.S. can significantly reduce uncertainty. At present, a submarine-launched weapon would be understood as a strategic attack, while bombers taking off from European airfields would signal the use of tactical nuclear weapons. Combining the tasks on one platform discards this advantage and generates a clear discrimination problem, as it relies on Russian systems distinguishing between a single SLBM and a massive counterforce attack.⁶⁴ Second, it supposes that Russia (or another adversary) would wait and see what the impact of warhead was—was it a single military target or multiple cities—to assess whether this was a deliberate tactical attack, an accidental misfire of a strategic attack, or the

⁶¹Office of the Under-Secretary of Defense 2018, pp. XI–XII.

⁶²Steinberg 2018.

⁶³Mauroni 2018.

⁶⁴Narang 2018; Nolan and Radzinsky 2018.

first phase of a strategic attack, before deciding whether to launch their own counterattack with strategic weapons. The third problem is a more general one to relying more on tactical nuclear weapons—what military asset would a low-yield non-strategic weapon target and where would it be located? During the Cold War, NATO's theatre nuclear weapons were intended to destroy staging areas and infrastructure that were part of the Soviet conventional assault envisioned as the most likely scenario. Importantly, these would likely be on the territory of Warsaw Pact states, but not Russia itself.⁶⁵ That would not be the case now and targeting Russian territory to stop a conventional move adds another step on the dangerous spiral path of escalation.⁶⁶

6.4 Superiority and Triad Renewal

The U.S. nuclear posture is expansive to cover a wide range of contingencies. The NPR identifies the increasing need for diversifying and increasing flexibility, makes the sustainment and modernization of the nuclear triad—and its command and control—necessary.⁶⁷ The triad consists of three legs: (1) land-based Intercontinental ballistic missiles (ICBM); (2) sea-based nuclear ballistic missile submarines (SSBNs) with submarine-launched ballistic missiles (SLBM); and (3) strategic bombers carrying gravity bombs and air-launched cruise missiles (ALCMs). During the Cold War, the triad was intended to assure a survivable second-strike, as it was considered extremely unlikely that the Soviet Union could destroy all legs of the triad in a surprise attack. The triad illustrate three different solutions for the problem of an adversary's first strike: redundancy; hiding; and hardening.⁶⁸ Redundancy ensures that the number of warheads would likely exceed what the adversary could destroy in a first strike. With no certainty that he would be secure, the adversary would refrain from action. Hardening centres on solidifying the shelters in which ICBMs are kept. Without precision penetration strikes, too many weapons are likely to survive, again assuring a secure second strike. Hiding centres on mobile platforms. Bombers are one option, mobile land launchers another, but the most effective mode for concealing platforms for launching nuclear weapons is under the sea: SSBNs. To insure against innovative adversary strategies, all three legs of the triad were thus deemed necessary to assure a secure second strike.

⁶⁵Long 2018.

⁶⁶During the Cold War, theater nuclear weapons would target Soviet forces on the territory of Warsaw Pact members. At present, U.S. tactical nuclear weapons would target Russian forces on Russian territory. Narang 2018.

⁶⁷Office of the Under-Secretary of Defense 2018, p. X.

⁶⁸Lieber and Press 2017.

The renewal of all three legs of the triad has been planned, as well as associated nuclear command and control. The costs of the current nuclear arsenal are approximately 3% of DoD budget, modernization will add another 3–4%. High projections place the highpoint of future cost at approximately 6.4% of the current DoD budget. The cost of modernizing all three legs of the nuclear triad are indeed significant, with estimates from the Congressional Budget Office of \$1.2 trillion between 2017 and 2046. In 2029, the Ground-Based Strategic Deterrent (GBSD) will replace Minuteman III and the 450 ICBM launch facilities will also be modernized. The air leg will see its own modernization, with a new development program for the next-generation bomber—the B-21 Raider. The Long-Range Stand-Off (LRSO) cruise missile replacement program will add onto the B-52H and B-2A ‘stealth’ strategic bombers. The 14 Ohio-class SSBNs will be replaced by 12 Columbia-class SSBNs.⁶⁹

Is the U.S. second strike capability at risk, given the modernization efforts? The NPR claims the triad provides flexibility while guarding against technological surprise,⁷⁰ yet it provides no evidence that technological surprises are imminent. U.S. planners have consistently feared counterforce options. Keir Lieber and Daryll Press claim that various technological innovations—specifically advances in sensing and computing—have made a secure second strike more doubtful.⁷¹ However, Russian and Chinese conventional capabilities are not close to achieving the capabilities needed to contemplate a first strike. Specifically, there is little justification for renewing the land-based leg of the triad, the ICBMs, beyond offering a target in sparsely populated areas of the U.S. to soak up the adversary’s weapons in a first strike. If the purpose is a secure second-strike capability, then the SSBNs have already assured these. The 14 Ohio-class SSBNs the U.S. currently relies on are undetectable to Russian or Chinese ASW capabilities or sensing. The 12 new Columbia-class SSBNs will assure this capability remains for the foreseeable future. An argument used for maintaining the number of weapons, as well as all three legs of the triad, centres on the perceived benefits of nuclear superiority. Matt Kroenig suggests that historical evidence shows the side with the greater number of nuclear weapons has a clear advantage in coercion.⁷² Yet, this is a highly controversial interpretation of the historical record, as Charles Glaser, Todd Sechser, and Matt Fuhrmann point out.⁷³ Arguably, the key driver of current decisions to maintain the triad is a preoccupation with vulnerability among U.S. officials.⁷⁴

⁶⁹Dorminey and Gomez 2019.

⁷⁰Office of the Under-Secretary of Defense 2018, p. II.

⁷¹Lieber and Press 2017.

⁷²Kroenig 2018.

⁷³Glaser 2019. As Todd Sechser and Matthew Fuhrmann note, in their study of militarized compellent threats from 1918 to 2001, compellent threats from nuclear states are no more likely to succeed than those from non-nuclear states. Sechser and Fuhrmann 2013.

⁷⁴Thompson 1992; Walt 2018.

6.5 Lowering the Threshold

Observers commented that the NPR is also remarkable in that it lowers the threshold for nuclear use by the U.S. by emphasizing cross-domain deterrence. The U.S. will invest in a range of flexible nuclear capabilities needed to ensure that nuclear or non-nuclear aggression against the vital interests of the U.S. itself or its allies and partners can lead to “intolerable consequences” for potential adversaries.⁷⁵ However, when operationalizing what this means, the NPR notes that this also applies to significant strategic attacks that are non-nuclear in nature. These could include attacks on the U.S., allied, or partner civilian population or infrastructure—which would include its information networks, i.e. a cyber-attack.⁷⁶ If the NPR’s statements are taken at face value, the possible scenarios for the use of limited yield nuclear weapons, or of strategic weapons, have now clearly multiplied. The NPR claims this “does not lower nuclear threshold”, but, by convincing adversaries that limited use of nuclear weapons will be too costly, “in fact raises the threshold”.⁷⁷ Yet, if the threshold has not been significantly lowered, at the very least its location has been obfuscated.

The NPR seems incomplete where it comes to identifying many concrete credibility gaps that are not addressed by the existing posture that necessitate increasing flexibility and offering “tailored responses”. If the text represents a change in nuclear doctrine, the only real change from the time of the 2010 review to now in terms of nuclear capabilities is in Russian posture. China has invested in conventional, and not nuclear capabilities. There has been no radical expansion of the Chinese program, and the doctrine is still a minimal one. In which scenario will U.S. lower-yield pre-strategic nuclear weapons aid the U.S. or its allies? With regards to North Korea, the newer, more flexible range of weapons foreseen in the NPR would not be relevant. If anything, the use of low-yield weapons by the U.S. would immediately trigger the maximum response from the weaker and more vulnerable nuclear forces of North Korea.⁷⁸ The 2018 NPR also includes North Korea and Iran as states to be deterred. The document notes that North Korea threatens “regional and global peace”.⁷⁹ The Iranian program was still contained by the JCPOA at the time the NPR was written. The 2018 NPR stresses that Iran’s ambitions remain an “unresolved concern”.⁸⁰ Yet, it does not seem to offer much that is specific for either one.

The 2018 NPR also reiterates past policy: “The United States will not use or threaten to use nuclear weapons against non-nuclear states that are party to the NPT and in compliance with their nuclear non-proliferation obligations.” So far, the U.S.

⁷⁵Office of the Under-Secretary of Defense 2018, pp. VII, VIII.

⁷⁶Office of the Under-Secretary of Defense 2018, pp. 21, 55.

⁷⁷Office of the Under-Secretary of Defense 2018, p. II.

⁷⁸Steinberg 2018.

⁷⁹Office of the Under-Secretary of Defense 2018, p. I.

⁸⁰Office of the Under-Secretary of Defense 2018, p. I.

has refused to disavow a first strike with nuclear weapons. Yet, during the 2019–2020 Democratic Party presidential primaries, candidates argued in favour of the U.S. adopting a “no first use” policy.⁸¹ As the Center for Arms Control and Non-Proliferation argues, a “no first use policy” could increase crisis stability by formalizing that nuclear weapons are only for deterrence and not “nuclear war-fighting”, thereby lowering the risk of nuclear-armed adversaries escalating to the nuclear level. A “no first use policy” would give Congress its rightful place in the decision to go to war.⁸² However, “first use” exists as an option because of U.S. alliance commitments, in the scenario that adversaries threaten U.S. allies or partners with conventional attack.

6.6 Difficult Decades Ahead

The chapter has argued that the future of the U.S. extended deterrence guarantee is precarious. It is increasingly unclear whether the U.S. can be credible without being escalatory, and vice versa. From its inception the problem of extended nuclear deterrence is that it is inherently dubious. However, as the U.S. is less and less sure whether it can fight and win conventional conflicts at low costs, the asymmetry of interests between the U.S. on the one hand, and its allies and adversaries on the other, is likely to play a greater role. At its core, as long as the U.S. maintains its alliance commitments, this will continue to generate uncertainty that this and future U.S. nuclear posture must address. Four additional points will serve to conclude the chapters.

First, the NPR emphasizes the possibility of U.S. deterrence failure due to changing Russian and Chinese nuclear capabilities. Yet, arguably the political signalling from the Trump administration has contributed to undermining the credibility of U.S. commitments to its allies.⁸³ The Trump administration’s policies have been rife with ambiguity. The commitment of resources to the European Reassurance Initiative has taken place at the same time as the President’s rhetorical dismissal of the value of alliances,⁸⁴ and obvious preference for a more transactional approach to alliances.⁸⁵ President Trump has also unobtusely poked his finger at the sore spot of the inherently dubious nature of the U.S. guarantees; the U.S. takes on real risks on behalf of states that present at best peripheral interests to the

⁸¹Elizabeth Warren, Bernie Sanders, and Joe Biden favor no first use. Egelko 2019.

⁸²Center for Arms Control and Non-Proliferation n.d.

⁸³In 2018 and 2019, the author interviewed former (and even current) U.S. national security officials. A key question was what they perceived as the main current challenges to the U.S. system of extended deterrence: over half considered the real challenge to deterrence in Europe and Asia to be statements by President Trump.

⁸⁴Reuters 2019; Barnes and Cooper 2019.

⁸⁵Leonnig and Rucker 2020.

U.S.⁸⁶ There is thus a clear tension between the current U.S. administration's sceptical outlook towards alliances and its focus on greater renewed nuclear superiority and flexibility. U.S. allies must decide what they will make of this discrepancy, and how it compares to previous fractures in the alliance. In doing so, they should keep in mind that Trump's style of politics is unusual, but that calls for retrenchment were growing before he came to office.⁸⁷

Second, the long-term U.S. commitment to European and Asian security is arguably more precarious for structural reasons that extend beyond the Trump presidency. The physical presence of U.S. forces has addressed the question of whether the U.S. has sufficient interests at stake in other regions. It is not clear whether it is still guaranteed, as the U.S. is increasingly challenged conventionally, especially in Asia, and has moved towards a one-war planning standard. Theoretically, there is a threshold "point X" below which the U.S. presence cannot go below without losing credibility with both its adversaries and allies. Point X would be a function of perceived U.S. interests at stake in the region (which includes the physical presence of U.S. forces as well as rhetorical commitments), the costs of U.S. commitments if it attempts to defend against aggression, and the costs of defeat in that region. Adversaries might still refrain from exploring where that threshold is located, because the costs of miscalculation will generally exceed the gains of aggression. One could argue that the simple creation of uncertainty in would-be adversaries' minds about the nature of the potential response—calling to mind Thomas Schelling's notion of a threat "that leaves something to chance"—is sufficient to deter threats to U.S. allies.⁸⁸ However, if that is not the case, and the U.S. is no longer to back up its alliance commitments through a physical presence, U.S. allies will find themselves in a precarious situation.

Third, the non-proliferation stance of U.S. allies will not be sustainable if the trends above continue. The 2018 NPR reiterates established U.S. policy by effectively assuring allies and partners depends on their confidence in the credibility of U.S. extended nuclear deterrence. In turn, this enables most allies and partners to eschew possession of nuclear weapons, and consequently contributes to U.S. non-proliferation goals.⁸⁹ Yet, even in Europe, a small but remarkable debate on alternative European nuclear arrangement emerged following the 2016 election of Donald Trump.⁹⁰ U.S. allies in Asia are also questioning their non-proliferation stances. An alternative to pursuing independent nuclear weapons, with all the instability and risk of escalation that might ensue, is to rely on other nuclear states for their protection. For European allies, such options, theoretically, exist as the UK and France are nuclear weapon states with significant interests in European security.

⁸⁶President Trump claimed that adding Monte Negro could entangle the U.S. in a conflict. *The Guardian* 2018.

⁸⁷Kinzer 2019.

⁸⁸Schelling 1960, p. 169.

⁸⁹Office of the Under-Secretary of Defense 2018, p. VIII.

⁹⁰Thompson et al. 2018; Tertrais 2019.

Another alternative is the acquisition of significant advanced conventional weapon capabilities by allies who fear U.S. abandonment. In doing so, they can significantly improve their deterrence by denial capabilities to partially compensate for the absence of the U.S. nuclear arsenal. U.S. allies should ask themselves these questions and seek for satisfactory answers. The increasingly precarious commitment of the U.S. to its European and Asian alliances requires them to do so.

Finally, as noted at the beginning of the chapter, policy debates and scholarship on nuclear deterrence have often been explicitly or implicitly informed by the demands the U.S. placed on itself to provide extended nuclear deterrence and the difficulties it faced due to its extra-regional status. This holds even if most authors frame the problems of U.S. nuclear deterrence as those following from direct deterrence. However, if the U.S. would no longer play the role of extended nuclear deterrence guarantor to the same extent, the notion of what is sufficient to deterrence is likely to change. The nuclear arsenals of states that are not the U.S. and Russia are significantly smaller and less sophisticated. Should the U.S. stop playing its role, a reinvention of the grammar of nuclear deterrence that is specified by separate regions will be in order.

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