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Strategic Stability Under Obama and Trump

Brad Roberts

As an organising concept, strategic stability played a central role in the strategic policy of the Obama administration, as set out in its policy and posture reviews of 2009 and 2010. The administration used strategic stability as a guide to policy development in a changed security environment, and valued it particularly in advancing cooperation with Russia and China at what seemed a hopeful moment in relations with both countries. Eight years later, it is time to take stock of the results of that approach, and to look for lessons. As the Trump administration conducts its own reviews, it must assess whether and how strategic stability might fit with its own guiding principles, such as 'America First' and 'peace through strength'.

The Obama approach to strategic stability

The Obama administration's focus on strategic stability had its roots in a particular view of the security environment. The May 2010 National Security Strategy (NSS) described a changed and changing strategic context, marked by a mixture of positive and negative trends, and significant uncertainty about the prospects for a more just and sustainable world order. The positive trends included, among other factors, improvements in the political relationships with Russia and China relative to the Cold War.

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The negative trends included the emergence of a new set of challenges to global order, such as nuclear proliferation and nuclear terrorism. The NSS expressed the commitment of the president to try to deepen international order by ensuring strong alliances, building cooperation on key challenges and, above all, renewing American leadership. Increased engagement with Russia and China was an explicit priority. The reviews of nuclear, missile-defence, cyber and other capabilities by the Department of Defense and its inter-agency partners were informed by this world view. Strategic stability became a way to organise policy initiatives to support these diverse presidential objectives.

The concept played its most obvious role in informing the administration's thinking about the design of US nuclear forces. The 2010 Nuclear Posture Review (NPR) report catalogued a number of decisions explicitly taken in pursuit of strategic stability.² These included the commitment to maintain a position of overall strategic equivalence (albeit not exactly numerical parity) with Russia and the traditional US commitment to a nuclear-deterrence posture 'second to none'. They also included decisions to maintain the triad of land-, sea- and air-delivered nuclear weapons; to de-MIRV intercontinental ballistic missiles (that is, to download warheads from missiles equipped with multiple independent re-entry vehicles so that only a single warhead remains); and to maintain the ability to forward deploy nuclear weapons with non-strategic delivery systems, and to make that capability available globally, rather than just in Europe. These decisions reflected a rather traditional view of strategic stability: an assured capability to strike in retaliation.³

The NPR report reflected some additional decisions informed by the commitment to strategic stability. The administration rejected the idea of further reducing the alert status of the nuclear force on the argument that this 'could reduce crisis stability'. But it also committed to maximising decision time for the president as a way to strengthen strategic stability, and toward that end committed to new investments in a modernised nuclear command-and-control system. The commitment to strategic stability was also tied to the decision to maintain nuclear-deterrence operations in both the Atlantic and the Pacific. The 2010 NPR report also elaborated a set of

ideas about how, in the service of stability, to hedge against uncertainty in the security environment, concluding that the United States needed both a capability to upload weapons (that is, to put extra warheads back onto delivery systems) and the capacity to generate supplemental nuclear forces at some future time in response to unexpected developments. The NPR also reflected decisions to exercise various forms of restraint, including, for example, the decisions not to seek new military nuclear capabilities and not to return to nuclear explosive testing, with the hope of avoiding unwanted new forms of nuclear competition.

Few of these ideas garnered universal support inside the administra-

tion. There were significant differences of view about how to prioritise these factors in an administration also committed, after the president's April 2009 speech in Prague, to the idea of taking practical steps toward the long-term goal of nuclear abolition. Alternative organising concepts were considered, such as 'mutual assured security' and 'mutual assured stability'. After signifi-

Alternative concepts were considered

cant deliberation, presidential-level decisions were made, as reflected in the administration's various reports, to focus on strategic stability and to commit to strengthening it, while also adapting to changing circumstances.

The commitment to strategic stability also directly informed the Obama administration's pursuit of an arms-control agreement with Moscow. Recall the situation the administration inherited in 2009. The arms-control regime as it then stood was soon due to come to an end, with the expiration of the Strategic Arms Reduction Treaty (START I) in December 2009 and the Moscow Treaty (the Strategic Offensive Reductions Treaty, or SORT) in 2012. The administration also had the advice of a bipartisan congressional commission to pursue a two-step arms-control strategy, with a first step focused on an interim agreement to ensure transparency and predictability, while seeking a follow-on agreement that would involve deeper nuclear cuts as part of a broader transformation of the US-Russian relationship.⁵ The Obama administration embraced this strategy and sought the New START treaty explicitly for the strategic-stability benefits of transparency and predictability.6 In the words of the NPR, New START would be useful

for 'maintaining a stable bilateral balance and avoiding dangerous nuclear competition'. The commitment to strategic stability also informed the development of concepts for a follow-on agreement, with a recognition that the challenges to strategic stability could intensify as the nuclear arsenals of Russia and the United States shrink to the point that parity with other nuclear-weapons states becomes a serious possibility.8

In a broader sense, strategic stability came to play a central role in the administration's efforts to deepen cooperation with Moscow. This reflected in part an assessment that the prospects for military confrontation with Russia

The administration sought dialogue with Russia

had declined dramatically since the Cold War, and that Russia and the United States had a mutual interest in strategic stability - and a track record of cooperation, even in difficult times, to safeguard it. Accordingly, the administration sought a high-level political dialogue with Russia aimed at a more stable, resilient

and transparent strategic relationship. In its Ballistic Missile Defense Review (BMDR), it offered assurances to Russia that it did not seek protection of the American homeland from the large-scale strikes of which Russia is capable.

The administration also set out to prioritise strategic stability in the relationship with China. This broke some important new ground in US strategic policy, as no prior administration had been as explicit about strategic stability as a governing concept for this bilateral relationship. But the administration said little about its views of the requirements of US-China strategic stability. It was hoping to break new ground behind closed doors, thereby laying the foundations for deeper and sustained cooperation. Significantly, it said little to address China's main strategic question: does the United States accept or reject mutual vulnerability as the basis of the strategic relationship with China? The Obama administration, like its predecessors, made only the limited assurance that missile defence was not intended to negate China's deterrent (while also noting that it would be employed against any attack, whatever its source).

In making its case for strategic-stability dialogues with Moscow and Beijing, the Obama administration recognised that both countries could have

concerns about the emerging US ballistic-missile-defence (BMD) posture. It did not publicly identify those concerns, though by 2009 it was abundantly clear that both Moscow and Beijing had major concerns about developments in the US non-nuclear strategic posture, and feared that a combination of improved non-nuclear strike capabilities and ballistic-missile defence could embolden Washington to challenge their interests more directly and perhaps even contemplate a decapitation strike. Accordingly, the administration sought opportunities to address concerns about developments in the US military posture – and to express its own concerns about developments in the Russian and Chinese postures (although these were not elaborated in these reports). It also believed that dialogue could lead to mutual understanding and cooperation of a kind that would preclude future choices by US leaders to reorient US policy in a way more directly challenging to their deterrent postures (and that such deeply engrained cooperation would be more meaningful than legal constraints in maintaining confidence and stability in these relationships).

Many of these key tenets of Obama-administration nuclear policy were reviewed and revalidated in the Deterrence Requirements Review conducted in 2012 and 2013. An unclassified summary of that review, in the form of a June 2013 report to Congress, provided some elaborations and adjustments. It highlighted the importance to strategic stability of being prepared for the possibility that deterrence might fail, leaving the president in the position of trying to achieve US political and military objectives with nuclear weapons. It provided significant elaboration on the hedging strategy as a response to geopolitical uncertainty, and made explicit calls on Russia and China to address growing US concerns, including the argument that Russia must demonstrate it has no intent to negate the US deterrent, nor NATO's.10

Although this catalogue has emphasised the impact of strategic stability on the nuclear policies of the Obama administration, its impact was in fact broader. The administration cited strategic stability as a basis for rejecting a major role for conventional substitution – that is, for replacing nucleartipped missiles with conventionally tipped ones as a way to accelerate reductions in the role and number of US nuclear weapons. Its policy on

Conventional Prompt Global Strike was to seek only a 'niche capability' that would be subject to New START counting rules (and thus not challenging to Russia's confidence in the strategic balance). But at the same time, it continued research on a boost-glide delivery system that, were it to be developed and deployed, would not be countable under New START (as more than half of its flight trajectory would not be ballistic). Also in the name of strategic stability, the administration committed to maintaining a homeland missile-defence posture that would not affect the strategic balance with Russia or China by jeopardising the credibility of their strategic

Strategic stability guided additional developments

deterrents. At the same time, it committed to ensuring that the American homeland would not be vulnerable to attacks from nucleararming regional challengers like North Korea. This rejection of mutual vulnerability with such challengers is, of course, a key driver of developments in US missile-defence and

conventional-strike capabilities, and is thus a source of significant concern for Moscow and Beijing. In response, the administration stated that the homeland-defence system 'does not have the capacity to cope with largescale Russian or Chinese missile attacks and is not intended to undermine the strategic balance with those countries'. 11 At the same time, it committed to regional missile defences against all threats to US forces and allies, which would be strengthened over time in a phased, adaptive approach. Like the NPR, the BMDR also made a case for hedging against unexpected future developments in the security environment, in the form of a capability to rapidly resume the growth of the homeland-defence capability.

Strategic stability guided additional developments in the administration's strategic policy. It fuelled the campaign to assure US allies that American security guarantees would remain credible and effective in the face of new regional threats, on the explicit argument that 'enduring alliances and broad-based political relationships are the foundation of strategic stability and security'. 12 In close conjunction, it motivated expanded cooperation with allies to comprehensively strengthen regional deterrence architectures and adapt them to new challenges. It also lay behind an intensified focus on the unfolding nuclear competition in South Asia and the attendant risks of nuclear miscalculation in a crisis, and of nuclear theft or diversion to non-state actors. Lastly, broader concerns about nuclear instability in a disorderly world reinforced the administration's resolve to aggressively pursue nuclear-materials security and other efforts to advance the 'global zero' agenda.

Strategic-stability concerns also explicitly informed the development of policies on cyberspace and outer space. This reflected an assessment that military competition in these new domains could bring new forms of crisis and arms-race instability. Accordingly, the administration sought both better protection and clearer rules of the road, as well as some forms of deterrence where practical. It explored the cross-domain challenge in various ways and experimented with new organisational structures to better integrate policy and operations in the interconnected realms of nuclear, cyberspace and outer space.

Finally, the administration laid down two important additional markers on strategic stability late in its second term. In April 2016, deputy secretary of defense Robert Work set out new arguments about weaknesses in the conventional-deterrence posture of the United States, especially vis-àvis opposing great powers, and made the case for a 'third offset' strategy to redress those weaknesses. He articulated an agenda aimed at 'comprehensive stability', encompassing both reliable strategic deterrence based on US-Russian strategic parity, and conventional deterrence based on 'overmatching capabilities to make the chance of us having a war infinitesimally small'. 13 A few months earlier, Work added an important footnote to the administration's signalling to China, by crediting it with having an assured second-strike capability and not contesting it: 'A great power is a state that can take on the dominant power, the United States, conventionally, [and] has a nuclear deterrent force that can survive a first strike. Using that definition, we have two great powers.'14

The Obama administration was not the first administration to have a strategy for strategic stability, and each administration has, in its own way, dealt with challenges to strategic stability. 15 In comparison to the approaches of the preceding two post-Cold War administrations, the Obama administra-

tion's approach showed elements of both continuity and change. Elements of continuity included the role of strategic-stability concerns in informing the design of US strategic forces (nuclear, missile defence, conventional strike, etc.) and US arms-control strategy. The rejection of mutual vulnerability with regional challengers was also an element of continuity, along with a generally laissez-faire attitude toward adaptations in the strategic deterrents of Russia and China that they deem necessary to maintain the credibility of their deterrents, in their eyes, as the US adapts its posture to negate the deterrents of regional challengers. Elements of change included the explicitly central role of strategic stability in informing a broad swath of decisions, the explicit commitment to engage China as a partner in strategic stability in the way the United States has tried to engage Russia as a partner, and the high-profile effort to assure US allies and to work with them to comprehensively strengthen and adapt regional deterrence architectures to deal with twenty-first-century threats.

In setting out its policy agenda for strategic stability, the Obama administration failed to satisfy the demands of many of its supporters (and some critics as well) for clearer definitions of strategic stability and more fulsome elaborations of the underlying logic. 16 Its first priority was not, however, to satisfy the demands of non-governmental experts; rather, its priority was to work political and military channels with Russia and China to identify areas of agreement and to expand over time areas of cooperation.

Accomplishments and disappointments

How should we assess the results of the Obama administration's approach? A first and major result is a programme for the sustainment and modernisation of US strategic forces that is well aligned with concepts of strategic stability. The size, scale and intended functions of US nuclear forces (as well as ballistic-missile defences, conventional long-range strike systems, and cyber and counter-space systems) are all consistent with the requirements of strategic stability as set out in 2009 and 2010. This has helped them to garner political support in Congress and from allies.

Additional results are best considered in terms of separate strategic relationships. Compared with the situation in 2009, the US–Russian strategic relationship has obviously taken a dramatic turn for the worse. By 2014, the cautious optimism that infused the Obama administration's reset in relations had given way to deep pessimism and rising anxiety that Russian President Vladimir Putin's commitment to 'snap back hard' against the European security order could bring a challenge to NATO's Article V collective-defence commitment.¹⁷ One important factor, among many, in this shift in US attitudes was the failure of the dialogue on strategic stability to deliver meaningful progress. After getting off to a productive start in 2009, talks ground to a virtual halt over vehement Russian objections to US unwillingness to accept legal restraints on its pursuit of missile defences, to the phased adaptive approach for strengthening missile-defence protection of NATO allies from missile threats emanating from the Middle East, and to continued US pursuit of improved conventional-strike capabilities along with advanced capabilities in cyberspace and outer space.¹⁸

Various unofficial but high-level efforts were unable to prevent this result.¹⁹ Russia's military leaders remain deeply motivated by the fear that the United States seeks a strategic military posture for the purpose of conducting pre-emptive, regime-ending strikes against Russia, and they reject any US argument that adaptations to the US strategic posture can be explained by the stated intention to negate the deterrents of regional challengers. Equally significant were Russian complaints about the absence of stability in the global political system, and arguments that American unipolarity, and a purported value-driven US agenda to remake the world in its image, are equally threatening to strategic stability.²⁰ These built on enduring Russian concerns about the presumed push for military dominance by the United States.²¹ Putin's decision to cast himself as the counter to American hegemony and influence, and apparently also to undermine American democracy, seem finally and definitively to have scuttled any US ambition to re-build the political relationship on a foundation of strategic military cooperation.

As of spring 2017, New START remains in force, with both sides fulfilling their obligations and no significant doubts about compliance. The stability benefits it provides in the form of transparency and predictability are even more valuable to the United States in troubled, rather than positive times.

But Washington and Moscow have been unable to agree to extend the treaty (once, as is permissible, for five years from 2021 to 2026, by mutual consent). Moreover, Russia's non-compliance with some other arms-control obligations is a mounting concern – especially its apparent deployment of new intermediate-range cruise missiles. Additionally, Russia's nuclear-modernisation programme appears to have some aspects that go beyond maintaining the balance of nuclear forces with the United States, by gaining new advantages at the regional and strategic levels. Russia has also set out a comprehensive new approach to deterrence that emphasises the use of all the tools available to it (including hard and soft power, kinetic and non-kinetic, nuclear and non-nuclear) at all levels of conflict (local, regional and strategic) to achieve integrated strategic effects.

These and other developments in Russian military policy and posture, including high-level political statements about the use of nuclear and other means to de-escalate wars, have illuminated Russia's significant preparations for war with NATO and its development of concepts and capabilities that are destabilising to the Euro-Atlantic security environment. They have also begun to raise significant questions about what direction Russia's strategic forces might take once freed of New START constraints in 2021 (or 2026, if the treaty is extended). Those forces will have significant potential for growth, if reports about the ability of modernised Russian rocket forces to carry and deliver multiple warheads are true. The second strains are true.

Today we must face a new and fundamental question: does Russia still share the vision of strategic stability that has guided Western – and Soviet – thinking for decades, or has it begun to move out in a different direction by seeking new advantages? The evidence is mixed, but the mixture of evidence is alarming. The United States faces significant questions about how it should respond. Should it compete with Russia, whether qualitatively, quantitatively or both, to maintain a stable strategic balance in Europe? Should it continue to exercise restraint vis-à-vis intermediate-range missiles? Should the hedge be implemented (that is, withdrawal from New START and uploading of MIRVable warheads) in response to developments in Russia's strategic forces? Can political dialogue with Moscow somehow alter the apparent political–military trajectory so that these questions become moot?

The US-China relationship has not taken the same dramatic turn for the worse. But it has not improved, and it has in some ways worsened. China's military assertiveness in neighbouring maritime settings, its rapid military growth and its repeated high-level opposition to the US-backed regional security order all raise questions about regional military stability. The bilateral dialogue on strategic stability was rejected by China, largely because Beijing deemed increased transparency on this topic to be unhelpful by potentially increasing the United States' confidence in its ability to put Chinese strategic assets at risk. In contrast, some headway has been made in official dialogues on cyber and outer space, largely on non-military

aspects, perhaps because of a clear perception of risks that are both rising and shared.²⁸ On strategic stability, China has preferred to use unofficial dialogues to express its concerns about developments in US military strategy and posture, many of which align closely with Russia's. These unofficial dialogues have proven to be substantive and

Some assurances were not received as intended

wide-ranging, and convey significant growth in China's capacity to engage in such dialogue, but from a US perspective make a poor substitute for official dialogue, insofar as there is no means to authoritatively state US leadership intent.29

Moreover, some of the assurances sent by Washington in 2009 and 2010 were not received as intended in Beijing (for example, restraint on missile defence was interpreted as a ruse, as other language from the administration seemed to confirm China's fears that BMD would be turned to its disadvantage).30 In June 2016, China's President Xi Jinping joined President Putin in a joint statement on global strategic stability. The two leaders expressed their shared view that 'some countries and military-political alliances seek decisive advantage in military and relevant technology, so as to serve their own interests through the use or threat to use force in international affairs'.31 As reported, the joint statement went on to argue that "strategic stability" has been a military concept in nuclear weapons' and that 'this conception is outdated and the international community should regard "strategic stability" from a wider angle'.32 Like Russia, China has rejected confidence-building measures proposed by the United States. It seems to have made up its mind about many of the topics that cause it concern, and seems uninterested in providing confidence to the United States by addressing American concerns.

From a military perspective, it is increasingly difficult for the United States to take an essentially laissez-faire attitude to developments in China's strategic military posture. Although China's nuclear forces remain small, in the context of China's commitment to a 'lean but effective' nuclear deterrent, the number of weapons deliverable onto the United States is growing rapidly as China modernises and diversifies its force.33 China's thinking

North Korea will present a growing threat

about how much is enough to be 'lean and effective' is not shared with the United States. It has also begun to integrate conventional ballistic missiles with its nuclear ballistic missiles, to support 'dual deterrence' operations, a move many in the United States consider deeply destabilising (because of the wartime risk that attacks on China's conventional forces would be mis-

interpreted as an attack on its nuclear forces).³⁴ China's conventional-force modernisation is driving major instabilities in the Asia-Pacific security environment. Its pursuit of modern cyber, space and missile-defence capabilities raises new questions about crisis and arms-race stability – questions that are likely to become sharper in the years ahead. And like Russia, China has set out a new body of military ideas about integrated strategic deterrence, with a principle focus on deterring the United States.³⁵

All of these developments raise significant questions about whether and how the United States should respond. Is the current state of affairs in strategic dialogue – a mixture of official and unofficial dialogues, but no sustained high-level political–military dialogue on strategic stability – acceptable to the United States? Should the United States begin to tailor the modernisation of its nuclear forces and missile defences with an eye to strengthening deterrence of China? How can the competitions in cyberspace and outer space best be managed?

The US–North Korea strategic military relationship is moving in dangerous directions. North Korea is now a nuclear-arming state, moving toward a future deployed nuclear force of some unknown number of nuclear weapons mounted atop missiles of various ranges, including intercontinental. If it continues to grow this force unabated, it will seriously test the United States' commitment to try to escape a relationship of mutual vulnerability by focusing its defensive and offensive military tools on negating the North Korean deterrent. It will certainly present a growing threat to US allies and to US forces in the region. The necessary US and allied responses will unavoidably trouble China, which will worry about their long-term operational and political implications.

These developments, too, raise important new questions for the United States. Even as it continues to work with its international partners to persuade North Korea to abandon its nuclear capabilities, the United States must focus increasingly on strengthening deterrence. The US and its allies have in recent years sought to adapt and strengthen the Northeast Asian deterrence architecture to meet these new challenges, deploying more robust defensive and offensive capabilities, backed by the US 'rebalance' to Asia.³⁶ But a net assessment of the deterrence landscape reveals that more needs to be done to address the instabilities associated with the nuclearisation of North Korea's military and political strategies. What more can and should the United States do with its modernisation plans for its nuclear deterrent and missile defence to strengthen deterrence? What are the distinct contributions that allies can make that the United States cannot (or may not, having foresworn intermediate-range ballistic missiles)?

The strategic military relationship with Iran has, notably, moved in a new direction with the Joint Comprehensive Plan of Action (JCPOA). The plan has essentially frozen and partially rolled back Iranian capabilities for a future nuclear arsenal, though major questions remain about its long-term impact. The plan retains sanctions on Iran's missile programme, at least for an interim period, though this has not prevented continued Iranian progress in developing new and longer-range systems.

If there is a bright spot in this storyline, it is in the US engagement with its allies to adapt and strengthen deterrence. In Europe, NATO has been on a long journey from Lisbon to Warsaw, which is to say from cautious optimism at the 2010 summit about the relationship with Russia to a commitment in 2016 to ensure its deterrence posture is effective against Russian

aggression.³⁷ In Northeast Asia, a great deal has been accomplished in improving cooperation for deterrence, in both the policy and operational realms. Generally speaking, in my personal experience of multiple official and unofficial dialogues, many of America's most vulnerable allies had growing confidence through the Obama years in the commitment of the United States to stand by them when their vital interests might be at risk. Whether and how to sustain that confidence while also ensuring necessary sharing of the burdens of defence, including the risks of strategic conflict, are key questions posed by the arrival of the Trump administration.

In sum, the results of the Obama administration's efforts to build a broad policy agenda for strategic stability are mixed. On the positive side, there are two key results: a programme of record for the sustainment and modernisation of US strategic forces aligned with strategic-stability principles and enjoying some bipartisan support, and some strengthening of the assurance of allies.

On the negative side, the list is longer. With Russia and China, there has been no convergence of views on strategic stability, nor even a narrowing of differences. Neither has been receptive to US efforts to address their concerns, and neither has been willing to try to address US concerns. There has been some limited headway in beginning to talk about military competition in the new domains, but nothing in the way of a practical result. To be sure, the Obama administration might have been more effective in understanding and addressing Russian and Chinese concerns; on the other hand, it seems that the governments in Moscow and Beijing already knew all they felt they needed or wanted to know about US strategic policy.

Militarily, the list of problems presenting strategic-stability challenges for the United States has grown, not shrunk. No common vision motivates the actions of the major powers, whose separate national efforts to strengthen and adapt deterrence are interacting in troubling new ways. Russia and China are well along in implementing new approaches to integrated strategic deterrence, with potentially significant stability consequences at the regional level of war, and perhaps also the strategic. Conspicuously, but as yet without attracting much notice from American analysts, Russia and China are creating precisely the kinds of capabilities that they have feared

in US hands - modern missile defences, advanced conventional-strike capabilities and new counter-space capabilities, all backed by modern C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) systems.

Additionally, new problems have crowded onto the strategic-stability agenda. North Korea is advancing its capabilities to put the US homeland, and US forces and allies in Northeast Asia, at significant nuclear risk. The stability-instability paradox is alive and well, insofar as Russia, China and North Korea are all pursuing more assertive regional military strategies under the cover of modernising and growing strategic postures.³⁸

This legacy is not only mixed, in the sense that it has positive and negative aspects. It is increasingly troublesome to some of the core tenets of US policy since the end of the Cold War. The Trump administration thus inherits an even more difficult set of challenges than those inherited by the Obama administration eight years ago.

Analytical lessons

Before considering future policy development, it is useful first to consider analytical lessons. There are many such lessons, but I wish to highlight three here.

Firstly, the change from a bipolar world to a more multipolar world adds significant complexity. The core ideas of arms-race and crisis instability were elaborated in a very different world, one marked by bipolarity, military confrontation and the risk of an Armageddon-like nuclear war. Today's more multipolar security environment is radically different. US relations with different potential adversaries are marked by varied degrees of competition and cooperation. Military flashpoints exist, but the pathway to major war is highly uncertain, at least relative to the Cold War. The risk of Armageddon-like war appears much reduced from the past, though the risks of nuclear attack on the United States and its allies appear to have risen in recent years. Testing of US resolve has become a staple for Russia, China and North Korea.

But the more multipolar world is more complicated than that.³⁹ The United States cannot ignore the military challenge of nuclear-arming regional challengers, whereas Russia and China can (or at least have so far chosen to do so). Dilemmas have become trilemmas or more, as actions taken in one bilateral relationship have cascading effects in others. Moreover, there are strategically significant qualitative differences among the poles. The governments in Moscow, Beijing and Pyongyang see the United States as predatory, see themselves as vulnerable and exploited, cannot risk weakness, and perceive democracies as flawed and easy to cripple (by making them fearful) – all of which influences their security perceptions and strategic behaviours.

Secondly, the more multidimensional nature of potential conflicts also adds complexity. Military competition in cyberspace and outer space adds new sources of competition, uncertainty, unpredictability and conflict escalation, both accidental and intentional – including as these domains interact with the nuclear and conventional ones.⁴¹ Anxiety over these factors has grown significantly in recent years. So too has the hope that mutual vulnerability in these domains can serve in a crisis as a material disincentive to risk taking.⁴²

Here too, the problem is more complicated than it might first seem. On the one hand, war has always been multidimensional, so the addition of new domains may add complexity but not change something fundamental. On the other hand, a particular problem attaches to these two domains that is alien to the others – the fact that they operate largely in secrecy and isolation. This makes it impractical to try to identify and assess the nature of the strategic balance – or perhaps even to know that an attack is under way.⁴³

Lastly, experts in Russia, China and the United States are focused on different problems. The United States has been focused primarily on the negative consequences for strategic stability of regional challengers with nuclear weapons and long-range missiles, and on the possibility that extended deterrence and assurance might fail. Russia and China have been focused primarily on the United States, and their fear of US coercion and confrontation. But the differences run deeper. Experts in the United States tend to equate strategic stability with what we used to call the nuclear balance, as expanded now to include the mix of offence and defence issues bearing on the credibility of assured nuclear retaliation. Experts in Russia

and China are concerned with these factors as well, but also take a much broader view of developments in the global power system that affect their expectations for armed conflict threatening to their vital or core interests.

Thus it is not surprising that presidents Putin and Xi argue for a 'wider angle' on strategic stability. And they are on to something. Strategic stability today does not directly equate with the requirements of arms-race and crisis stability as elaborated in the Cold War as a way to avoid Armageddon-like nuclear exchanges. The United States needs its own 'wider angle'. It needs a clearer and more compelling set of arguments about how its exercise of power affects global peace and security, and thus also the possibilities for armed conflict of a kind that might bring the United States or others to the nuclear brink. There are some important markers in the literature, but not a broadly shared and well-tested set of ideas about the strategic stability the United States should prize in these relationships and how to promote it.44

The United States also needs to become more effective in making a credible case for why its national-security strategy, as opposed to its military or nuclear strategies, serves shared interests in strategic stability. In my experience, the standard American reaction to the 'wider angle' critique of Russia and China is more instinctive than substantive. Those countries' concerns about the destabilising role of the United States in a fragile global political system are poorly met in a dialogue where the United States is at best largely on the defensive, or at worst simply assuming its own bona fides.

As a general matter, the US analytical community has faced significant challenges in fitting the concepts of strategic stability as first elaborated in the Cold War to the very different strategic landscape of the twenty-first century.45 The need to better understand the characteristics of strategic stability in specific bilateral relationships has sometimes obscured thinking about the interconnectedness of the new puzzle that now commands policy attention.

Strategic policy in the Trump era

How might the Trump administration approach strategic stability? Can strategic-stability concepts be aligned with America First, peace through strength, and a pledge to stand atop the nuclear 'pack'?46

The Trump administration could simply set aside strategic stability as an organising concept in its policy and posture reviews. Like many of its predecessors, it might simply assume that any big idea of the outgoing administration is necessarily wrong, out of date, or both. More provocatively, it might assess that strategic stability is a preoccupation of an establishment elite that has lost touch with how to put American interests first and which reflexively offers weakness rather than strength in the face of adversity. Insofar as strategic stability requires some measure of American restraint, it might simply be rejected as anathema. Even in the absence of such an assessment, the administration may judge that the attempt at dialogue with Russia and China has been both unproductive and counterproductive – unproductive in that it never gained much traction, and counterproductive because (by this way of thinking) it sent unhelpful messages of appeasement.

An explicit rejection of strategic stability as an organising concept would seem to foreshadow major departures in US nuclear and missile-defence policies, among many others. An America First nuclear policy could set aside many forms of nuclear restraint and reduce the priority given to the protection of US allies. A strategy of peace through nuclear strength could lead to a push for new weapons with new nuclear military capabilities and a broader role for nuclear weapons in US defence strategy. The ambition to be top of the nuclear pack could mean a commitment to nuclear supremacy and the associated arms racing as others respond. In the missile-defence domain, this could mean a clear push for a space-based defence intended to defeat missile attacks, whether limited or large, whatever their source, including those from Russia and China. In the conventional-strike domain, it could mean the deployment of long-range prompt-strike systems sized and scaled to pose credible threats not just to regional challengers such as North Korea but also to China and Russia. Arms control would likely be set aside as a unilateral burden on the United States. The focus of US diplomatic strategies would likely shift from reassurance and restraint to assertiveness and competition.

Alternatively, the Trump administration could take a more à la carte approach, picking up some but not all elements of the Obama agenda. There are at least four options on the menu.

Firstly, the Trump administration could keep the focus on strategic stability as a guide to the design and operation of US nuclear forces, while jettisoning the effort to deepen understanding with Russia and China on the requirements of strategic stability. Questions about the design and operation of those forces are at the core of the Trump administration's own Nuclear Posture Review, as it decides whether or not to endorse the programme of record for nuclear modernisation set down by the Obama administration. There is no escaping the political fact that any significant changes to that programme would be criticised by its supporters as destabilising. If the new administration were to significantly modify the

modernisation plan, it would need a politically compelling answer to that charge in order to gain and sustain congressional support for an alternative approach to modernisation. If, for example, it were to seek new nuclear military capabilities (an objective rejected by the Obama administration), it might try to gain congressional support

Arguments about strategic stability have traction

with the argument that more and newer weapons would make the nation stronger and thus more secure.

In my assessment, this argument would find few supporters and many detractors, whereas arguments about strategic stability have some proven traction. Moreover, the alternative to strategic stability as a guide to the design and operation of US nuclear forces is, practically speaking, affordability. But the choice not to modernise some or all of the remaining nuclear forces after 30 years of paring them down could significantly and, from the American perspective, negatively affect the risk-taking calculus of potential US adversaries.

Secondly, the Trump administration could prioritise extended deterrence and assurance over central strategic stability. This would involve choosing to expand missile defences and strike capabilities as needed to credibly negate expected growth in North Korea's arsenal of nuclear-tipped missiles; to accelerate cooperation with US allies to strengthen regional deterrence architectures, with the deployment of more defensive and offensive systems; and to discount, and essentially ignore, the concerns of Russia and China, and tolerate adjustments in their strategic postures unless they tried to sprint to a position of supremacy – in which case the Trump administration would, presumably, try to outrun them to the top of the pack.

Thirdly, it could prioritise central strategic stability over extended deterrence and assurance. This would involve choosing to accept politically binding limits on the future growth of US missile defences and conventional-strike assets as part of a new strategic deal with Russia, China or both; to set aside the effort to negate the strategic deterrents of regional challengers like North Korea and accept a relationship of mutual vulnerability with them, whether tacitly or explicitly; and to discount, and essentially ignore, the concerns of US allies.

Fourthly, it could attempt a regionally based mix-and-match approach. This would involve cutting a deal with Russia, including caps on (or rollback of) missile defences in Europe and at sea, and on conventional prompt-strike systems (based in part on the argument that Iran's JCPOA restraint makes this possible); ramping up the East Asian regional deterrence posture (based on the arguments that both North Korean and Chinese military build-ups are regionally threatening); and setting the expectation that allies should follow America's lead.

This way of framing the choices facing the Trump administration illuminates the fact that it will make important choices about strategic stability not just in its review of nuclear policy and posture but also the missile-defence review and in the national-security strategy. In its Ballistic Missile Defense Review, for example, it will face the following questions. Should it continue the approach of the last three administrations, focusing on protection of the American homeland from limited strikes by countries such as North Korea, and on protection of US forces and allies against all regional threats? Should it grow the homeland defence to keep pace with (or outpace) developments in North Korean long-range strike capabilities – in which case China and Russia will strongly react? Should it abandon the commitment to protection against only limited strikes, and seek more robust coverage, of a kind that would also generate strong reactions from China and Russia? And even if it does not take that route, should Washington stop trying to assure Moscow and Beijing of its good intentions? It is not possible to navigate these choices

without making some choices about which risks are unacceptable and which are manageable – choices that are directly related to strategic stability.⁴⁷

The administration's policy toward Russia may also be a key driver of its choices from the menu above. Will it prove possible for the Trump administration to renew the political relationship with Russia, with some new political agreement? President Putin has been very clear about his terms. He seeks major new restraints on US and NATO missile defences and non-nuclear strike systems, a remaking of the European security order to accommodate his preference for a buffer zone and a remaking of the global order to further constrain the exercise of American power. A deal on these terms would be a striking departure for US policy. But the point here is that it would directly involve fresh assessments of the requirements of strategic stability, from the US perspective, in a bid to renew partnership with Moscow.

The Trump administration's nuclear and missile-defence reviews bring with them the opportunity to renew the exploration of the place of strategic stability in US strategic priorities. Having put strategic stability centre stage in its own reviews, the Obama administration leaves behind an eight-year track record to assess. The administration was ambitious and optimistic, setting out a broad agenda both to strengthen strategic stability and to use shared interests in strategic stability as a way to deepen international cooperation and help create a more durable peace. Its optimism proved misplaced. The failure of Russia and China to engage in a practical, substantive and sustained dialogue on what the Obama administration took to be a shared interest is striking. Militarily, the further development of US capabilities has been well guided by the interest in strategic stability, but developments in the external environment have increased and intensified the problems of strategic stability, not the reverse.

This leaves the Trump administration facing major questions about whether and how to address strategic stability. Will it endorse strategic stability as a central organising concept, in the way the Obama administration did? Should it?

As a veteran of the Obama administration's efforts in this field, I find it easy to be pessimistic. The Trump administration shows little inclination to value strategic stability. The president himself has set out some high-level principles that seem to point in different directions. Moreover, it is difficult to argue that the priorities set eight years ago have paid many dividends for the nation.

But this does not mean that the objective of strategic stability should be set aside. Strategic stability remains in the US interest. In the design and operation of US nuclear forces, and of other strategically consequential military capabilities, such as missile defence and long-range conventional-strike systems, the alternatives to strategic stability as the guiding principle are not only unhelpful but dangerous.

In the relationship with Russia, with rising uncertainty about the prospects for conflict in Europe and about the future of its strategic military capabilities in 2021 and beyond, there is a rising US interest both in the crisis-stability benefits of assured retaliation and in a long-term framework for strategic predictability. In the relationship with China, the United States has a similar interest, albeit less intense in the short term. The United States has an enduring interest, too, in avoiding a relationship of mutual deterrence with regional challengers like North Korea, as they might attempt to exploit their new leverage to the disadvantage of the US and its allies (the so-called stability–instability paradox). And despite episodic concerns about whether allies are sharing burdens equitably, the United States has an enduring interest in their assurance, because this is essential to their partnership.

This implies that the Trump administration should neither completely set aside the concept of strategic stability, nor seek to pick and choose among different possible elements. The costs of prioritising one element of the strategic-stability agenda over another are simply too high. That said, it cannot just replicate the agenda of eight years ago. Times have changed, and experience has its lessons. The Trump administration's own agenda should be guided by the following principles.

Firstly, the administration should preserve the modernisation programme of record. Further reductions in the role and number of nuclear

weapons seem implausible today, especially relative to the circumstances of eight years ago; new nuclear capabilities are not needed now.

Secondly, the administration should persist in the effort to build a strategic-stability dialogue with Russia. The door is likely to be open to a new administration and the desire in Russia to impress their views on US officials remains strong. But a dialogue involves a two-way flow. The Trump administration must be prepared not just to receive Russian views but to respond to them and, beyond that, to set out US concerns about strategic stability in the Euro-Atlantic context. And it must have an approach to engagement with NATO that addresses concerns about Russia's threats to Euro-Atlantic instability in the absence of Russian willingness to reduce those threats. The administration must also be prepared to discuss that 'wider angle', with arguments about how the world role it envisages for the United States is at least compatible with Russian interests. But the administration should understand that our views are unlikely to converge any time soon, if ever. And it should also understand that this need not necessarily preclude cooperation in areas of shared interest.

Thirdly, the United States should persist in the effort to build a strategicstability dialogue with China. But here too, it should do so with diminished expectations, a broader agenda, a focus on the long term and an approach to engagement with allies that strengthens the regional deterrence architecture. Here a bilateral à la carte approach may have some advantage. China's reluctance to embrace strategic stability is deeply embedded, as it sees the United States as trying to recreate with China the strategic military relationship it had with the Soviet Union (and to create an arms race it 'won'). But China's concerns about missile defences, prompt conventional strike and conventional deterrence are specific. Given North Korea's progress in crossing the nuclear threshold and creating new threats to the United States and its allies, a reasonable focus of US-China dialogue could be on joint efforts to manage the spillover effects on the bilateral strategic military balance of further adaptations to US and allied defensive and offensive capabilities as the North Korean threat grows. China must, of course, agree to come to the table if this process is to get anywhere. In a sense, this requires that it agree to be assured. Yet it is reluctant to be assured, given its sense of vulnerability

to American power. It cannot trust a stronger power – especially one with an ideological agenda – and it has no interest in bolstering US confidence or security. Here, too, a 'wider angle' could pay dividends.

But that wider angle will prove challenging, especially for an administration offering radical new ideas about the US world role. That wider angle must inform and be informed by views of how to promote order in the international system – a just order that meets the needs of others, including others capable of trying to advance their own contending visions of world order. Such contenders already exist.⁴⁸ America First was a recipe for geopolitical instability and then calamity in the pre-nuclear 1930s; how it could be aligned with the requirements of global political order and global nuclear order in the twenty-first century is largely unexplored territory.

In closing, the Trump administration may choose interpretations of America First, peace through strength, and 'top of the pile' that are deeply inconsistent with the traditional approaches to strategic stability reflected in the Obama strategy. In the service of putting America First, the Trump administration might choose, à la carte, an option that sacrifices the interests of other stakeholders. In the service of peace through strength, it might seek new nuclear weapons or a substantially more robust missile-defence posture. In the service of having a nuclear capability at the top of the pile, it might precipitate and try to win an arms race.

Yet there is a different possible course, one more closely aligned with traditional approaches. The Trump administration could yet reinterpret America First to require that it not compromise any interest in strategic stability. It could reinterpret peace through strength to require nuclear modernisation via the full programme of record. It could reinterpret 'top of the heap' to mean 'second to none', the traditional force-sizing criterion. This implies that the 2017 policy and posture reviews might be just as wideranging, if not more so, than those of 2009.

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Notes

- White House, 'National Security Strategy', May 2010, https:// obamawhitehouse.archives.gov/sites/ default/files/rss viewer/national security_strategy.pdf.
- US Department of Defense, 'Nuclear Posture Review Report', May 2010 [hereafter '2010 NPR'], https://www. defense.gov/Portals/1/features/ defenseReviews/NPR/2010 Nuclear Posture_Review_Report.pdf.
- Ibid., p. 20.
- Ibid., p. 26.
- 'America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States', United States Institute of Peace, 2009, pp. 65-73, https://www.usip.org/sites/default/ files/America%27s_Strategic_Posture_ Auth Ed.pdf.
- The case for the strategic-stability benefits of New START was made most forcefully during the Senate's review as part of the ratification process. See, for example, 'Questions for the Record Submitted to Secretary Robert Gates by Senator Wicker', Senate Foreign Relations Committee, 18 May 2010.
- 2010 NPR, p. 5.
- This was focused in part on the implications of deep cuts on the assurance of US allies. See Wade Huntley, 'Speed Bump on the Road to Global Zero: U.S. Nuclear Reductions and Extended Deterrence in East Asia',

- Nonproliferation Review, vol. 20, no. 2, 2013, pp. 305-38; James Russell, 'Nuclear Reductions and Middle East Stability: Assessing the Impact of a Smaller Nuclear Arsenal', Nonproliferation Review, vol. 20, no. 2, 2013, pp. 263-78; and David Yost, 'Strategic Stability in Europe', Nonproliferation Review, vol. 20, no. 2, 2013, pp. 205-45.
- US Department of Defense, 'Ballistic Missile Defense Review Report', February 2010 [hereafter 2010 BMDR], p. 32, https://www.defense.gov/ Portals/1/features/defenseReviews/ BMDR/BMDR as of 26JAN10 0630 for_web.pdf.
- ¹⁰ US Secretary of Defense, 'Report on the Nuclear Employment Strategy of the United States', report to Congress, 12 June 2013.
- 2010 BMDR, p. 13.
- 2010 NPR, p. 33.
- Robert Work, 'Remarks by Deputy Secretary Work on Third Offset Strategy', Brussels, 28 April 2016, https://www.defense.gov/News/ Speeches/Speech-View/Article/753482/ remarks-by-deputy-secretary-workon-third-offset-strategy/.
- ¹⁴ Robert Work, 'Remarks by Deputy Secretary of Defense Robert Work', Reagan Defense Forum: The Third Offset Strategy, Reagan Presidential Library, Simi Valley, CA, 7 November 2015, https://www.defense.gov/News/

- Speeches/Speech-View/Article/628246/ reagan-defense-forum-the-third-offset-strategy/.
- For a review and discussion of the George W. Bush administration's strategy for stability, see Brad Roberts, American Primacy and Major Power Concert: A Critique of the 2002 National Security Strategy, IDA Paper P-3751 (Alexandria, VA: Institute for Defense Analyses, 2002), pp. 56-60.
- These and related views were collected at the time in an edited volume that generated useful insights and discussion. See Elbridge Colby and Michael Gerson (eds), Strategic Stability: Contending Interpretations (Carlisle, PA: Strategic Studies Institute and U.S. Army War College Press, 2013).
- ¹⁷ On the promise to 'snap back hard', see President Vladimir Putin's statement to the Russian Duma, 18 March 2014, in which he made the case for the annexation of Crimea.
- See US Department of State, 'Joint Report: 2009–2010 Results of the U.S.-Russia Presidential Commission', 24 June 2010, and the follow-on 2012 and 2013 reports.
- See, for example, 'Joint Statement by Ellen Tauscher and Igor Ivanov on Mutual Assured Stability', Atlantic Council, 8 April 2013, http:// www.atlanticcouncil.org/news/ press-releases/joint-statement-byellen-tauscher-and-igor-ivanov-onmutual-assured-stability.
- Matthew Rojansky, 'Russia and Strategic Stability', in Colby and Gerson, Strategic Stability, pp. 295–342. See also Alexander Dynkin et al., Strategic Stability after the Cold War

- (Moscow: IMEMO, 2010).
- See Sergei Rogov, 'The Bush Doctrine and the Prospects of Russo-American Relations: Washington is Endeavoring to Prevent the Appearance in the 21st Century of an Adversary Equal in Strength to the United States', original in Russian in Yadernyy Kontrol, 3 April 2002.
- President Putin rejected Obama administration proposals to extend the treaty and then reportedly raised the extension possibility in a February 2017 phone conversation with President Trump, who was unreceptive. See 'In Call With Putin, Trump Denounced Obama Era Arms Control Treaty – Sources', Reuters, 9 February 2017.
- ²³ Michael Gordon, 'Russia Deploys Missile, Violating Treaty and Challenging Trump', New York Times, 14 February 2017, https://www. nytimes.com/2017/02/14/world/ europe/russia-cruise-missile-armscontrol-treaty.html?_r=o.
- 'Russia Reveals Giant Torpedo in State TV Leak', BBC News, 12 November 2015, http://www.bbc.com/news/ world-europe-34797252.
- Kristin Ven Bruusgaard, 'Russian Strategic Deterrence', Survival, vol. 58, no. 4, August–September 2016, pp. 7-26.
- ²⁶ Dmitry Adamsky, Cross Domain Coercion: The Current Russian Art of Strategy, Proliferation Paper No. 54 (Paris: IFRI, 2015).
- See, for example, Rod Lyon, 'Why Russia's New RS-28 Sarmat Nuclear Missile Matters', National Interest, 30 January 2017, http:// nationalinterest.org/blog/the-buzz/

- why-russias-new-rs-28-sarmatnuclear-missile-matters-19241.
- See US Department of State, 'The Second Meeting of the U.S.-China Space Dialogue', 24 October 2016; and Department of Homeland Security, 'Third U.S.-China High-Level Joint Dialogue on Cybercrime and Related Issues', 8 December 2016.
- Summaries of unofficial dialogues led on the US side by Pacific Forum CSIS in Honolulu are available at its website. See Ralph Cossa et al., US-China Strategic Nuclear Relations: Time to Move to Track-1 Dialogue, CCC PASCC Reports (Monterey, CA: Naval Postgraduate School, 2015). See also Li Bin and Tong Zhao (eds), Understanding Chinese Nuclear Thinking (Washington DC and Beijing: Carnegie Endowment for International Peace, 2016); Fiona S. Cunningham and M. Taylor Fravel, 'Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability', International Security, vol. 40, no. 2, Fall 2015, pp. 7-50; and Thomas Fingar and Fan Jishe, 'Ties that Bind: Strategic Stability in the U.S-China Relationship', Washington Quarterly, vol. 36, no. 4, 2013, pp. 125–38.
- 30 Wu Riqiang, 'China's Anxiety about U.S. Missile Defence: A Solution', Survival, vol. 55, no. 5, 2013, pp. 29–52.
- 'China and Russia Sign Joint Statement on Strengthening Global Strategic Stability', Xinhua, 26 June 2016.
- *Ibid.* Cooperation to oppose US BMD continued in 2016 and 2017, with additional joint meetings to criticise US BMD as damaging to their strategic interests. See 'Chinese, Russian

- Militaries Hold Joint Briefing on Anti-Missile Issue', Geneva, 29 March 2017.
- 33 US Department of Defense, 'Annual Report to Congress: Military and Security Developments Regarding the People's Republic of China', 2016, p. 38.
- John Lewis and Xue Litae, 'Making China's Nuclear War Plan', Bulletin of the Atomic Scientists, vol. 68, no. 5, 2012, p. 51.
- Michael Chase and Arthur Chan, 'China's Evolving Strategic Deterrence Concepts and Capabilities', Washington Quarterly, vol. 39, no. 1, 2016, pp. 117-36.
- ³⁶ Brad Roberts, Extended Deterrence and Strategic Stability in Northeast Asia (Tokyo: National Institute for Defense Studies, 2013).
- See the communiqué of the June 2016 NATO summit in Warsaw, Poland.
- 38 The paradox refers to the increased propensity of some leaders newly armed with nuclear weapons to take risks at the conventional level of war, betting that confidence in stability at the strategic level enables them to be provocative at the non-strategic level. For the case that this is so vis-à-vis China, see Thomas J. Christensen, 'The Meaning of the Nuclear Evolution: China's Strategic Modernization and US-China Security Relations', Journal of Strategic Studies, vol. 35, no. 4, August 2012, pp. 463, 466; and Avery Goldstein, 'China's Real and Present Danger: Now is the Time for Washington to Worry', Foreign Affairs, September/October 2013.
- ³⁹ For a useful exploration of this topic, see 'The Nature of Multilateral Strategic Stability', Report of the International Security Advisory Board,

- US Department of State, April 2016. Linton Brooks and Mira Rapp-Hooper, 'Extended Deterrence, Assurance, and Reassurance in the Pacific during the Second Nuclear Age', in Strategic Asia in 2013-2014: Asia in the Second Nuclear Age (Seattle, WA: National Bureau of Asian Research, 2014). See also Gregory D. Koblentz, Strategic Stability in the Second Nuclear Age, Council Special Report No. 71 (Washington DC: Council on Foreign Relations, 2014).
- ⁴¹ Eric Gartzke and Jon R. Lindsay, 'Thermonuclear Cyberwar', Journal of *Cybersecurity*, 2017, pp. 1–12.
- ⁴² David Gompert and Philip Saunders, The Paradox of Power: Sino-American Strategic Restraint in an Era of Vulnerability (Washington DC: National Defense University, 2012).
- 43 Ibid.
- The important markers include the essays in the Colby-Gerson volume cited above as well as Koblentz, Strategic Stability in the Second Nuclear Age; Andrei Kokoshin, Ensuring Strategic Stability in the Past and Present: Theoretical and Applied Questions (Cambridge, MA: Belfer Center for Science and International Affairs, Harvard University, 2011); Michael Krepon, 'Can Deterrence Ever Be Stable?', Survival, vol. 57, no. 3, June-July 2015, pp. 111-32; Lu Yin,

- 'Reflections on Strategic Stability', in Bin and Zhao (eds), *Understanding* Chinese Nuclear Thinking, pp. 127–48; and Thomas C. Schelling, 'A World Without Nuclear Weapons', Daedalus, 2009, pp. 124-9. Insights of enduring value are included in Thomas C. Schelling and Morton H. Halperin, Strategy and Arms Control (New York: Twentieth Century Fund, 1961).
- Let us recall that strategic-stability concepts pre-date the Cold War. The 1648 Treaty of Westphalia, for example, reflected a certain set of ideas about how best to preserve peace and stability in Europe, just as the Washington Naval Treaty of 1923 reflected a set of ideas about arms-race stability. But the advent of nuclear weapons focused thinking about strategic stability as never before, with the hope of avoiding an Armageddon-like exchange.
- 'Trump Wants to Make Sure U.S. Nuclear Arsenal At "Top of the Pack", Reuters, 24 February 2017.
- Brad Roberts, 'Anticipating the 2017 Ballistic Missile Defense Review', in Thomas Karako (ed.), Missile Defense and Defeat: Considerations for the New Policy Review (Washington, DC: Center for Strategic and International Studies, 2017).
- Henry Kissinger, World Order (New York: Penguin Press, 2014).