ABSTRACT
In the context of a deteriorating security environment, the new American Nuclear Posture Review (NPR) parts ways with the stated intention of reducing the role of nuclear weapons, which dominated the previous NPR and had served as a general guideline for American nuclear policy since the end of the Cold War. The review has been heavily criticized, especially with regards to the new “supplements” proposed for the current non-strategic arsenal. These “supplements” aim to restore deterrence against potential adversaries that have not ruled out recourse to a nuclear option to compensate for disadvantages in conventional forces. However, these supplements have been criticized for lowering the threshold for nuclear use and thus increasing the risk of escalation from a conventional conflict to a nuclear exchange. Beyond this debate, which appears to fall into a historic cleavage between two different American nuclear schools of thought, the question arises about the future of the nuclear order, while the bilateral process of arms control is struggling to survive.

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As was to be expected, the new Nuclear Posture Review (NPR) of the United States received a great deal of criticism even before its official publication at the beginning of February 2018. A draft version (very similar to the final draft) had been published online by the press in January.¹

Criticisms were expected for at least three reasons. First, it is normal for such an important document as the NPR to be commented upon at length. After all, the NPR sets the nuclear policy guidelines of the world’s leading power, for a period of five to ten years. Furthermore, the U.S. and Russia continue to own around 90 percent of the world’s nuclear stockpile, despite the combined effects of the enormous reductions to their arsenals since the end of the Cold War, the emergence of new nuclear armed states and the expansion of the nuclear arsenals of certain other countries.

Second, there is a stark contrast between the 2010 NPR, whose main priority had been to reduce the role of nuclear weapons, and the 2018 NPR, which was designed for a very different international context. The primary objective of the 2018 NPR was to restore the credibility of U.S. nuclear deterrence. It did not place the emphasis on decreasing the role of nuclear weapons (NWs) but on the fact that they still have an essential role to play in the security strategy of the U.S. and its allies and partners. Consequently, this NPR has been criticized for expanding the circumstances under which nuclear weapons may potentially be employed.

Third, it is quite often the case that such decisions to develop new capabilities trigger strong reactions, especially with regards to their financial, political, and doctrinal implications. The 2018 NPR confirms the renewal of the three strategic components (sea-, air-, and land-based) as well as the modernization of the entire nuclear infrastructure.² These much-needed changes, after almost 25 years of simply maintaining the arsenal, were criticized despite being initiated by the previous administration.

Last, and most importantly, the 2018 NPR has been criticized for introducing new non-strategic nuclear weapons. This has ignited fears about the possibility of lowering the threshold for nuclear use, and subsequently, increasing the risk of nuclear use.

This paper aims to examine this controversial yet crucial question. The first part will question the supposed expansion of the role of NWs. The second part will focus on the threshold for nuclear use.

**HAS THE ROLE OF NUCLEAR WEAPONS REALLY BEEN EXPANDED?**

Many commentators converged on the view that the 2018 NPR increased the role of nuclear weapons by broadening the range of their functions.³ Others, by contrast, rejected this interpretation and underlined the continuity of the U.S. nuclear policy in that regard.⁴ What does the review say precisely on this subject? What can we conclude from this? How can one explain that the same text can have such contrasting interpretations?

**Nuclear weapons protect the vital interests of the United States and their allies**

In continuity with the previous reviews, the 2018 NPR asserts that NWs play an important role in the U.S. national security strategy. As such, NWs remain a necessary and essential tool for the “deterrence of war” and for “protecting the Nation.” Their purpose is to defend the “vital interests” of the United States and their allies.

Like the previous NPR, this one relies strongly on the notion of vital interests. In this way, ambiguity – which is necessary for effective deterrence — is preserved. Vital interests remain undefined because otherwise, a potential aggressor could calibrate aggression to remain below the threshold of nuclear employment and retaliation. The concept of vital interests also signals that NWs are framed in terms of deterrence strategy and therefore play a political role, as

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opposed to conventional weapons, which can legitimately be used on the “battlefield.” This strategy is still categorized as being defensive in nature. On this particular aspect, American, British and French doctrines continue to converge.

The vital interests being protected are not only those of the US but also those of its allies and partners. In this regard, the 2018 NPR shows continuity with the previous version, while assigning greater importance to extended deterrence. The review insists on extended deterrence, partly to deter a potential adversary from threatening the vital interests of allies of the United States, but also to offer reassurance to States that are under America’s nuclear umbrella (the NPR does not specify individual countries but does mention Europe and Asia). Reassuring protected states is a necessity. Uncertainty about the decision that would be taken in a real-life scenario by the protecting state is inherent to the concept of extended deterrence. The protected state fears that the protecting state will not live up to its promise of protection if it risks nuclear retaliation on its own soil by defending the protected state (a concept referred to as “risk of decoupling”). Hence, it is in the interest of the United States to provide reassurance to protected states which might otherwise decide to acquire NWs of their own. Thus, extended deterrence is also presented as a non-proliferation measure. Finally, the new NPR does not bring any modifications to the extended deterrence mechanisms but, given the announcement related to new weapons systems, it does suggest changes in the way that this deterrence could be implemented (see section below, p. 5, “The NPR and the renewal of non-strategic nuclear weapons”).

Since the U.S. doctrine relies on the concept of vital interests, it considers the scale of damages caused by a potential aggressor (are vital interests at stake?) and not the nature of the aggression itself (the type of possible response is not determined by the fact that the aggression is nuclear or of a different nature). However, American nuclear policy does distinguish between nuclear and non-nuclear threats. It highlights the importance of nuclear deterrence against nuclear aggressions.

Nuclear weapons deter nuclear attacks

The last two NPRs have established the deterrence of nuclear attacks as a priority. The 2010 NPR stated that the fundamental role of NWs was to deter a nuclear attack on the US, its allies and its partners. The 2018 NPR indicates that the deterrent effect of NWs is unique and essential for preventing any type of nuclear attack, which constitutes “the highest priority of the United States.”

The NPR is an opportunity for the U.S. to publicly declare its nuclear policy, in order to detail the conditions under which it would resort to the use of NWs and the restrictions it would impose, also known as negative security assurances (NSAs). “Nuclear Weapon States” (NWS) give NSAs to “Non-Nuclear Weapon States (NNWS) when they guarantee not to use or threaten to use NW against NNWS. Such NSAs were accorded by each NWS to all NNWS. In 1995, (by the time of the NPT Review and Extension Conference), the NWS made an effort to coordinate their statements (that were appended in a resolution of the Security Council). The 2010 NPR simplified the U.S. NSAs (for instance, by removing all obsolete Cold War vocabulary). The NPR emphasized the necessity to respect nuclear non-proliferation obligations in order to benefit from such guarantees. It also implemented the objective of reducing the role of NWs, highlighting the diminished number of cases in which U.S. NWs may still play a role in deterring a non-nuclear aggression. The 2010 NPR went so far as to suggest that the adoption of a “sole purpose” policy (in which the role of NWs was limited to deterrence of nuclear attacks) had been contemplated. It concluded that the U.S. was not ready to adopt such a policy, but that it would look to create the necessary conditions to eventually move in that direction.

The 2018 NPR repeats the paragraphs referring to NSAs from the 2010 NPR: “The United States will not use or threaten to use nuclear weapons against non-nuclear weapon states that are party to the NPT and in compliance with their nuclear non-proliferation obligations.” It also restates the U.S’s affirmation that it would only consider the employment of NWs in “extreme circumstances to defend the vital interests of the United States, its allies and its partners,” but it in no way attempts to reduce the scope of possible circumstances where NWs could be used, nor does it 5. See N. Roche, Pourquoi la dissuasion, PUF, January 2017, p. 153-155.
7. The “Warsaw Pact Exclusion Clause” excluded from the scope of these negative security assurances any aggression committed or supported by states allied or associated with a nuclear weapon state.
claim to pursue this aim. The only official aim is to reduce the likelihood of a conflict occurring, the use of NWs, and if necessary, to end any conflict at the lowest level of damage possible.

Nuclear weapons deter non-nuclear aggression

Just as in the 2010 document, the 2018 NPR assigns NWs the role of deterring both nuclear and non-nuclear attacks. However, the two texts differ on how they envision the deterrence of possible non-nuclear attacks. The 2018 NPR states that “U.S. nuclear capabilities make essential contributions to the deterrence of nuclear and non-nuclear aggression.” It does not repeat what the 2010 NPR stated about the reduction in the number of cases in which a non-nuclear attack could trigger a nuclear response. Indeed, the 2010 review explained that the strategic context had changed since the end of the Cold War and that America’s conventional military superiority and improvements in missile defense and ability to defeat chemical and biological attack have led to a “significantly” reduced role of NWs in deterring non-nuclear attacks. By contrast, the 2018 NPR insists on the possibility for NWs to be used to deter non-nuclear aggression. It explicitly notes potential scenarios in which this could apply: “significant non-nuclear strategic attacks include, but are not limited to, attacks on the U.S., allied, or partner civilian population or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities” (NPR, p. 21). This list illustrates a wide range of types of non-nuclear attacks which could potentially lead to a nuclear response and is extended to include military objectives that, at first sight, do not seem to match the expected high level of damages to the U.S. or its allies (i.e. vital interests) that could intuitively justify a nuclear response. Thus, critics of the NPR argued that the review increased the number of cases where NWs could be used. They also noted the changes to the NSAs and thought they confirmed that the role of NWs had been increased.

Another important difference between the 2010 and 2018 NPR involves NSAs, which normally come with certain reservations. Hence, the 2010 NPR indicated that the U.S. reserved the right to make any adjustment if the biological weapons threat evolved. In 2018, the conditions for such a potential adjustment were described as “the evolution and proliferation of non-nuclear strategic attack technologies.” This change reinforces the idea that the new NPR places more importance on nuclear retaliation in cases of non-nuclear threats.

Overall, a comparison between the wording of the two NPRs does suggest that the perimeter of potential non-nuclear aggressions has changed. However, one cannot conclude from this apparent extension that there has been a change in terms of doctrine. Perhaps, the 2018 NPR simply provides an explicit statement of what was already implicit in the 2010 NPR. The current administration speaks of the “clarification” of a long-standing policy, which includes “significant non-nuclear strategic attacks” in the “extreme circumstances” which would justify considering the nuclear option. This justification appears both plausible and coherent because a “clarification” might have been useful in the context of a deteriorated strategic situation and also because the previous NPR could have led to a false understanding of American nuclear policy (the will to reduce the importance of NWs could have indicated an aversion to them or a move towards a “nuclear taboo”). Declaratory policies are primarily geared toward potential aggressors. Thus, they are elaborated to strengthen the credibility of deterrence. Apparently, the authors of the NPR felt that it was necessary to restore deterrence.

ARE WE HEADED TOWARDS THE LOWERING OF THE NUCLEAR THRESHOLD?

Critics of the NPR not only mentioned the potential for an expansion in the number of cases where NWs could be used but also a lowering of the threshold for their use. These critics, based on the NPR’s intention to add more non-strategic capabilities to the American arsenal, also fear that the use of NWs would be facilitated.

What are the planned capability enhancements? What is the NPR’s justification for this? How can the NPR’s decision, presented as aiming to raise the threshold for NW use, be at the same time interpreted as lowering that same threshold?

The following paragraphs will attempt to answer these questions and to envisage the future prospects in the light of these announcements.

The NPR and the renewal of non-strategic nuclear weapons

The 2018 NPR dedicates several paragraphs to non-strategic NWs. Its insistence on their role within U.S. deterrence strategy makes it difficult not to foresee a renewal of this weapons category, even though it has never been entirely absent from the US arsenal America’s current non-strategic arsenal consists solely of B-61 gravity bombs (on American F-15s or on dual-use carriers of some NATO allies). Once again, this conclusion stems from comparison with the 2010 NPR, which indicated the maintenance of certain non-strategic capabilities (the air-delivered B-61) and the retiring of another type of capability in this category (nuclear-equipped sea-launched cruise missiles) and, in particular, guaranteed not to develop new nuclear warheads (no new military missions or new military capabilities, and the use of nuclear components based on previously tested designs). The vocabulary employed in the 2010 NPR was very carefully selected: it did not use the word modernization of the B-61 but only mentioned “Life Extension Programs” of weapons and options for ensuring their “safety, security and use control.”

By contrast, the 2018 NPR explicitly proclaims the necessity to develop new weapons: “This need for flexibility to tailor U.S. capabilities and strategies to meet future requirements and unanticipated developments runs contrary to a rigid, continuing policy of ‘no new nuclear capabilities’” (NPR, p. 27).

What are these new capabilities? The NPR says only “modest supplements” (NPR, p. 52) will be needed to face a more hostile environment. In the short term, certain SLBM (sea-launched ballistic missile) warheads (Trident missiles) will be modified in order to reduce their yield10 and, in the long term, a new nuclear-armed sea-launched cruise missile (SLCM) will be added to the arsenal. So, this means the return of tactical nuclear weapons to the arsenal of the US Navy. The first expected capability corresponds to the modification of an already existing armament. For the second, the U.S. will need to develop and acquire a new system with a similar capacity to the nuclear-equipped Tomahawk cruise missile (TLAM/N), now permanently retired, as was announced in the 2010 NPR. The new system will have to outperform the previous one (especially in terms of penetration). However, it nevertheless symbolizes the return of a capability that the U.S. had previously managed to do without. This helps to partly explain the criticisms, as noted by Lawrence J. Korb in the Bulletin of the Atomic Scientists: “They felt that the NPR would reverse almost half a century of progress toward lowering the prospects of a nuclear conflict and actually provoke a new arms race.”11

One illustration in the 2018 NPR (p.53) provides a comparison between the non-strategic arsenals of the United States and Russia, demonstrating a significant gap between them (eleven systems for Russia, including anti-missile missiles, and only one for the U.S.). This could suggest that there is an arms race in progress and that the U.S. decides of the size of its own arsenal according to the size of the Russian arsenal. However, the justification for obtaining new non-strategic capabilities is based on strategy rather than capabilities.12 The NPR denies any attempt to equalize or imitate the Russian arsenal (NPR, p. 54). This diagram rather illustrates the idea that Moscow would perceive the possession of such an impressive and varied arsenal as offering a “coercive advantage” in times of crises and low-level conflict.

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10. The NPR calls it a “weak power.” Non-governmental experts believe this to mean decoupling of the trigger with the power level with a power between a couple of kilotons and ten kilotons.
Russia is presented as benchmark

The 2018 NPR explains that these supplements will reinforce deterrence by bringing potential adversaries to recognize that it is a mistake to try and gain the upper hand by employing limited nuclear strikes against the U.S. or its allies. To reach this objective, the NPR relies on the belief that more options are needed. It rejects the idea of a “one size fits all” deterrence model since deterrence does not really lend itself to a uniform approach. As such, the 2018 NPR evokes the U.S.’s commitment to applying “tailored deterrence.” Operationally, the choice to use these delivery vehicles is justified by their added value in terms of range and survivability. Furthermore, the NPR underlines that these missiles allow the U.S. to act without the support of a host nation.

With regards to Russia, the 2018 NPR mentions the so-called “escalate to de-escalate” doctrine (NPR, p. 30), or in other words, the possibility that Moscow will resort to limited nuclear use in a conventional conflict with the West (NPR, p. 30). This doctrine, which does not appear in any official Russian documents, and thus would only be secret, has recently been questioned by certain international experts, yet Russian nuclear rhetoric and the remaining significant tactical nuclear arsenal do fuel concerns about their use. In response to the NPR, Russia answered by recalling the situations in which it would use NWs and reduced the scenarios to two situations (the first one being an attack on Russia or its allies including the use of NWs or of other weapons of mass destruction and the second one being in response to a non-nuclear attack if the survival of Russia is threatened). In this statement, Russia has not explicitly denied the existence of a “escalate to de-escalate” doctrine.

For the American administration, publicizing their project of acquiring a new weapons system remains within the logic of arms control, with the hope of bringing Russia to the negotiating table. The NPR cites the aim of providing “the necessary incentive for Russia to negotiate seriously a reduction of its non-strategic nuclear weapons” and refers to the role played by the decision to deploy missiles in Europe in the conclusion of the 1987 INF Intermediate-range Nuclear Forces Treaty (NPR, p. 55). It also claims that Russia is in violation of this treaty. During a conference organized by the Brookings Institution (Washington, 12 February 2018), David J. Trachtenberg, Deputy Under Secretary for Policy at the department of Defense, indicated “Russia has little incentive to negotiate seriously about nuclear reductions without a robust and ongoing U.S. nuclear modernization program.”

Even if the review emphasizes Russia, the role of non-strategic NWs is also envisaged against other potential adversaries. In the chapter entitled “Enhancing deterrence with non-strategic nuclear capabilities,” the NPR also mentions North Korea, but not China, whereas in other chapters devoted to each of these countries, the description of possible scenarios involving the use of non-strategic NWs tends to include China. Overall, the NPR highlights a renewed interest in non-strategic NWs, whilst assigning them a strictly strategic function.

The NPR aims to prevent the lowering of the nuclear threshold

The reasoning that underpins criticisms related to the lowering of the nuclear threshold rests on the idea that NWs with lower yield and shorter-range delivery vehicles would facilitate breaking the “nuclear taboo.” It would therefore increase the probability of a recourse to NWs and the engagement of a nuclear conflict and extreme escalation. This kind of reasoning is applied to Pakistan’s claimed rights to develop tactical nuclear weapons, but not the NPR’s

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13. “The requirements for effective deterrence vary given the need to address the unique perceptions, goals, interests, strengths, strategies, and vulnerabilities of different potential adversaries. The deterrence strategy effective against one potential adversary may not deter another;” NPR, p. 26.

14. At this point, the choice of carrier remains open: the preferred submarine option is not the only one. The use of shipborne systems is also a possibility. See General J. Hyten “Nuclear Posture Review Nonstrategic Options,” U.S. Strategic Command, 16 February 2018 (http://www.stratcom.mil/Media/Speeches/Article/1446542/nuclear-posture-review-discussion-at-national-defense-university/).


16. The NPR clarifies: “As then Secretary of State George P. Schultz stated, ‘If the West did not deploy Pershing II and cruise missiles, there would be no incentive for the Soviets to negotiate seriously for nuclear weapons reduction’” (p. 55).


18. See NPR “The United States will maintain the capability to credibly threaten intolerable damage as Chinese leaders calculate costs and benefits, such that the costs incurred as a result of Chinese nuclear employment, at any level of escalation, would vastly outweigh any benefit” (p. 32).
The aim of the American administration is not to facilitate the use of NWs but rather to discourage a potential adversary from thinking that the U.S. would not employ NWs or that the U.S. would automatically be self-deterred, due to the lack of lower-yield weapons in its arsenal. Should deterrence fail, the adversary could thus compel the U.S., to use NWs at a lower threshold than established by American doctrine. In acquiring lower-yield weapons, the U.S. is trying to give more credibility to its deterrent, in order to decrease the risk of a deterrence failure. The NPR asserts (ex. p. 8) that this approach does not lower the threshold but in fact raises it, by convincing adversaries that even limited use of nuclear weapons would be more costly than they can tolerate. It would be more accurate to conclude that the NPR is trying to prevent a lowering of the nuclear threshold by an adversary. The NPR also stresses the fact that such weapons were not intended to enable nuclear war-fighting.

The prospect of an even greater integration of nuclear and non-nuclear forces in military planning, as laid out by the NPR (see example NPR, p. VIII) has aroused fears, because it could generate a continuum from conventional to NWs and lead to a conflation in the functions of these two classes of weapons. Here again, the NPR adopts a reassuring tone, stating that this integration is intended to meet the threats of nuclear use and the use of NWs by others. However, critics were hardly persuaded by this argument either.20

The concern that the nuclear threshold could be lowered is mostly related to the insistence on the possibility of resorting to NWs in the case of non-nuclear strategic aggression as well as the importance placed on non-strategic NWs. This combination leads to the conclusion that using NWs could be possible in response to a conventional attack, regardless of its level. The NPR does not come to such a conclusion. The Administration answered this concern by stating that the threshold was still at an “incredibly high level.”21 Similarly, the Department of Defense tried to explain that the NPR did not envision any form of limited nuclear war. David J. Trachtenberg offered a very clear answer when asked about the strategies planned in order to avoid an escalation beginning from a low intensity nuclear exchange: “And so the recommendations that we are proposing to include a low-yield ballistic missile, and a sea-launched nuclear-armed cruise missile, are intended not to engage or not to fight a nuclear war, or not even suggest that one could be fought in a way that is limited, however one wants to define the term limited, but are designed to try to convince adversaries and potential opponents that they should not feel that they have some exploitable advantage by using a capability for which the United States has no counter.”22 In that sense, the NPR highlights the paradox of deterrence – the need to think the unthinkable.

To conclude, it appears that the NPR is reappropriating deterrence, and what it truly implies. Beyond the political issues surrounding an NPR endorsed by a Republican president, and perhaps even primarily endorsed by Donald Trump himself, the impossibility of a discussion between supporters and opponents of the NPR confirms the existence of a deep divide between the two camps that have formed in the U.S. concerning nuclear policy, as described by Brad Roberts, in the introduction of his book published in 2016 making The Case for U.S. Nuclear Weapons in the 21st Century: on the one hand, the proponents of nuclear disarmament who believe the U.S. must play an important role in this domain, and on the other hand, those who want to maintain a strategy of deterrence and are convinced that nuclear abolition would not make the world safer.23 The first group, despite its aversion to NWs, seems to have accepted the principle of deterrence, while trying to give American policy a pronounced impetus towards disarmament. For this group, the NPR is bad news and represents a worrying step backwards. The arguments of the NPR simply will not resonate with those who have never been convinced by deterrence. The way they denounced the potential increased risk of nuclear employment is somewhat reminiscent of the reasoning of abolitionists advocating the elimination of nuclear weapons to prevent their use.24

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20. See L. Korb “It proposes to integrate nuclear and conventional weapons in military planning, to facilitate nuclear war fighting. Such integration actually lowers the sharp distinction between conventional and nuclear weapons – a distinction that has existed since the Eisenhower Administration” (“Why Congress should refuse to fund the NPR’s new nuclear weapons,” op. cit.).


24. See example of Joan Rohlfing’s ideas, president of the Nuclear Threat Initiative, quoted by Jamie McIntyre: “Rather than raising the bar for nuclear use as they assert in the review, I believe it lowers the bar and makes their use more likely. This is destabilizing, not stabilizing” (“Trumps nuclear weapons plan: ‘Low-yield’ bombs set off furious debate,” Washington Examiner, 28 January 2018).
The NPR gives a new impetus to deterrence within a coherent framework. It aims neither to increase the cases of use of NWs nor to lower the bar for their employment. That does not mean that the decisions of the NPR are not concerning, for what they reveal of the current state of the world and in particular of U.S. – Russian relations. The US Administration has been accused of returning to a Cold War mentality. It is indeed true that the arms-control logic underlying the NPR is emblematic of the Cold War: the decision to acquire a new weapon system to make Russia enter new bilateral negotiations is a repetition of the scenario that preceded the conclusion of the 1987 INF Treaty. At the time, this treaty allowed for the elimination of an entire category of weapons and constituted important progress. Based on its attitude to the existing frameworks, Russia does not seem to have any appetite to spontaneously seek the constraints of a new agreement. It now remains to be seen how the United States intends to reestablish dialogue and how Russia will respond.

(English translation by Eleonore BUFFET HEUSER and Mickaela CHURCHILL)

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