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Theatre Nuclear Weapons and the next round of bilateral New START Treaty follow-on talks¹

The 8 April 2010 signing of the New START Treaty (NST), and its subsequent entry into force on 5 February 2011, led many observers to speculate upon what kinds of follow-on activities the United States and the Russian Federation might contemplate. Some topics for discussion (if not necessarily for eventual inclusion in a follow-on agreement) have already been identified, and in giving its advice and consent to ratification in December 2010, the U.S. Senate insisted on the inclusion of the following language:

TACTICAL NUCLEAR WEAPONS-(A)

Prior to the entry into force of the New START Treaty, the President shall certify to the Senate that -

(i) the United States will seek to initiate, following consultation with NATO allies but not later than one year after the entry into force of the New START Treaty, negotiations with the Russian Federation on an agreement to address the disparity between the non-strategic (tactical) nuclear weapons stockpiles of the Russian Federation and of the United States and to

secure and reduce tactical nuclear weapons in a verifiable manner; and

(ii) it is the policy of the United States that such negotiations shall not include defensive missile systems.²

President Obama has always supported TNW reductions or elimination so this was not a controversial stipulation in Washington. What, though, are the incentives for Russia to agree to discuss TNW reductions? NATO is generally conceded to have fielded some 180-odd TNW on the territory of five European allies (Belgium, Germany, Italy, the Netherlands and Turkey), while estimated numbers for Russian TNW in or near European Russia tend to start around 2,000 and climb from there.³ These assumptions have recently been challenged by Igor Sutyagin of the Royal United Services Institute, who estimates that Russia may now have as few as 1,000 operationally assigned non-strategic nuclear warheads, though it is still a little early to tell whether his methodology will hold up to peer scrutiny.⁴

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The views expressed in this paper are the author's own.

Even a reduced imbalance presents a significant challenge to classical arms control techniques, in particular because the roles for the two arsenals are different, and because the Russians still project important utility to their deployments that is completely unrelated to NATO deployments. One proposed “bridge” between U.S. and Russian interests is the far greater capacity of the United States under the NST to upload warheads currently in storage onto strategic missiles that at present carry fewer than their full capacity. Such a step could quickly increase U.S. deployed warhead totals by a significant percentage.⁵ Some analysts believe that this so-called “upload” potential concerns the Russian government so much that they would be willing to entertain negotiations based on overall numbers of nuclear warheads – strategic and non-strategic, deployed and non-deployed – thus trading their greater TNW numbers for reducing the U.S. strategic upload capacity.⁶

An historical perspective on the role of TNW

How accurate is this belief, and what are Russia’s views on TNW and their deployment and potential use? A brief history is useful here, as the geopolitical balance has shifted markedly since NATO first discussed nuclear weapons as a deterrent to conventional attack in Europe by Soviet forces.

The birth and legacy of TNW

The North Atlantic Council decided to deploy TNW to deter Soviet aggression in December 1957, and numbers reached 7,000 within a decade.⁷ Weapon availability was soon followed by strategic refinement:

From 1961, Britain gradually persuaded NATO allies to accept a complex war-termination strategy – should deterrence fail – whereby NATO would use recognisably

non-strategic nuclear weapons in response to a substantial Warsaw Pact attack. This would be done mainly with the political goal of signalling resolve and threatening further escalation, aiming at “war termination” with this “last warning”. The targets for this “first use” by NATO would be chosen for their palpable military effect, while an attempt would be made to spare – at least initially – the big cities.⁸

The nuclear arsenal available to NATO planners during the 1950s and 1960s was varied and complex, with a number of truly tactical devices intended for use by small teams of military personnel. These included man-portable miniature nuclear devices whose commando-trained delivery teams were considered expendable,⁹ and nuclear artillery shells delivered by standard artillery pieces serviced by regular crews, with attendant difficulties.¹⁰

The doctrinal use of TNW within NATO continued to evolve, culminating in the adoption by the Alliance of the strategy of Flexible Response in 1967 as MC 14/3:

Specifically, conventional forces would deter and defend against a conventional attack, theatre nuclear forces would deter a conventional and theatre nuclear attack, as well as limited conflict escalation, and strategic forces would pose as the ultimate deterrent by reinforcing conventional and theatre nuclear forces by the threat of assured destruction. Additionally, to ensure the threat to employ TNWs was viewed by the Soviets as credible, the United States and its allies consistently demonstrated their will to use them via security agreements, employment doctrine, operational plans, and through the show of overwhelming support for nuclear deterrent strategies.¹¹

By the late 1970s there was another shift in posture and policy. In 1976 the USSR deployed a road-mobile intermediate-range nuclear missile, the SS-20. By 1978 NATO's High Level Group (HLG) had recognised they could not easily be targeted, and decided to respond in kind with the deployment of Long-Range Theatre Nuclear Forces (LRTNF, popularly known as "Euromissiles").¹² This European basing also ensured that risks were shared amongst European NATO members, shoring up NATO cohesion and reassuring the West Germans.¹³

At the same time, the other side of the so-called "dual-track" decision, NATO agreed that the United States would engage with the USSR in negotiations to eliminate an entire class of nuclear weapons encompassing the SS-20, *Pershing II* and intermediate-range GLCMs. The INF Treaty was concluded in 1987, and eliminated all ground-launched ballistic and cruise missiles with ranges of between 500 and 5,500 kilometres, their launchers and associated support structures and support equipment.¹⁴ The successful negotiation of the treaty, started at the height of the Cold War, showed the power of arms control, and was also seen as a victory for the strategy of negotiating from a position of strength.

Up until 1991 and the break-up of the Soviet Union, the treaty was strictly bilateral, and did not cover, for example, the West German unilateral decisions made in August 1987 to eject the 72 *Pershing IA* missiles based on their soil and not to request that the United States replace them with more modern systems if the on-going INF negotiations succeeded in eliminating all intermediate-range and medium-range nuclear missile systems.¹⁵

Following the collapse of the Warsaw Pact in 1989 and the subsequent fall of the Soviet Union in 1991, the incentives to maintain TNW on European soil diminished greatly. In recognition, NATO updated its concept for the deployment and use of nuclear weapons, and the U.S. and Russian governments each took unilateral action to reduce their massive TNW arsenals in Europe (at the time the Soviets possessed about 17,000-18,000, NATO 7,000 TNW). NATO's 1991 Strategic Concept acknowledged that the salience of nuclear weapons was greatly reduced, and that only a limited number of TNW with a single delivery system (B61s on dual-capable aircraft) would provide a continued link between conventional and strategic nuclear forces.¹⁶ All land-based and naval-based TNW were removed from Europe unilaterally. This involved the destruction of 3,000 TNW and the removal from Europe of a further 1,275 weapons. The Soviet Union under President Mikhail Gorbachev followed a month later with the announcement of similar proportional reductions and further deep cuts to its strategic arsenal. Additional strategic and TNW cuts were offered by President Bush in early 1992, resulting eventually in a 90% reduction in U.S. TNW. Russian Federation President Boris Yeltsin confirmed the Gorbachev cuts and expanded on them in response to the second round of U.S. cuts. Meanwhile, France eliminated its intermediate-range ballistic missiles, the UK removed WE77 gravity bombs from its dual-capable aircraft (DCA), and NATO allies agreed to reduce the DCA-delivered gravity bomb stockpile from 1,400 to approximately 400.¹⁷

These "Presidential Nuclear Initiatives" (PNIs) were, however, imperfect: they had no binding legal force; could be reversed at will; and most importantly, left an imbalance in place of

remaining TNW in Europe. Exact numbers remain classified, and suspicions were voiced that Russia had not completed implementation of the promised cuts. The U.S. State Department specifically alleged in June 2005 that

Russia has failed to state publicly the status of the elimination of its nuclear artillery munitions, nuclear warheads for air defense missiles, nuclear mines, or nuclear weapons on land-based naval aviation.¹⁸

This continuing imbalance has had unfortunate consequences for the potential elimination of the remaining U.S. TNW from Europe.

Military and political challenges for NATO's TNW today

Both sides in the Cold War had a full range of nuclear options upon which they could draw to escalate a conflict in time of crisis. The B61 unguided nuclear gravity bomb remains the sole legacy weapon of the extensive Cold War NATO nuclear deployments besides the strategic forces of the United States and United Kingdom. However, the combination of B61 and "dual-capable" aircraft (DCA) such as the European Tornado (operated in DCA roles by Germany and Italy) and the U.S. F-16 (used in this capacity by Belgium and the Netherlands) has a critical problem: it lacks credibility as a crisis response tool for both military and political reasons.¹⁹

As originally designed, the gravity bomb/DCA weapons system was to deliver nuclear warheads onto East Germany, Poland and Czechoslovakia, primarily. After the fall of the Soviet Union, however, their targets were now on Russian Federation territory; a minimum distance of 1,000 km from Bergheim, Germany to the Russian enclave of Kaliningrad, and considerably further (1,500+ km) to the integral territory of the Russian Federation.

This is assuming the B61/DCA system would not be called on to deliver nuclear warheads to Iranian or other, even more distant, targets. Such a long-distance mission would be highly dangerous, because the aircraft would be extremely vulnerable to air defence systems, and would require in-air refuelling if the aircraft were to return safely. In today's world, delivery of nuclear warheads by such a means would be one of the least preferable for a military commander, and an almost certain suicide mission for the pilots concerned.

Political reasons – crisis destabilisation

The Russians worry little about the B61/DCA combination. Indeed, as a source of Alliance friction in peacetime, and likely an even greater source of division at a time of crisis, when NATO host states are likely to resist calls to scramble their nuclear forces, NATO's current TNW system can hardly be a priority for Russia to eliminate.

What Russia really fears

Given the lack of credibility of NATO's TNW posture, what exactly does the Russian Federation fear about the Alliance? What motivates Moscow to single out NATO as its "main external military danger"?²⁰ The brief answer lies in the U.S. possession of advanced technological military capabilities, especially in the areas of precision guidance and kinetic hit-to-kill missile defence technology, and in a lack of trust of U.S./NATO motives. This distrust has been greatly exacerbated by NATO's growing proclivity for out-of-area operations, starting with Kosovo in 1999 and continuing through Libya in 2011. Many decision-makers in Moscow share the view that NATO and the United States have moved beyond the age of nuclear warfare to what is termed a "sixth generation" of warfare involving increasingly precise targeting, high-yield

conventional and low-yield nuclear warheads, and ever-increasing stand-off delivery capabilities, notably with advanced drone technologies.²¹

The result has been a move by the Russians toward a nuclear posture and policy closely resembling that of NATO and the United States in the 1960s:

At the same time, [the Russian government] seems to believe that, in the absence of effective conventional forces, low-yield nuclear weapons with special effects can be used to disrupt precision-strike attacks and de-escalate a local war before it can become a general war leading to the use of strategic nuclear forces.²²

A war-termination role for TNW in Europe has therefore come full circle since the days of Flexible Response and MC 14/3. This is not surprising; reliance on TNW can have a persuasive logic for the side which feels itself vastly inferior in conventional forces. This, in turn, suggests that efforts to bring Russia to the negotiating table to discuss changes to its European TNW posture and policy will necessarily involve a link to conventional arms control.

Russia has not remained idle in response to its fears of the U.S./NATO edge in technology. It appears that the most recent turning point in Russian (and Chinese, and other strategic actors') thinking on U.S. and NATO capabilities came in the Iraq war of 2003, generally seen as the first large-scale test of a new U.S. doctrine as well as revised technologies. The post-September 11, 2001 change in U.S. doctrine, embracing pre-emption when facing foes (especially terrorists and their putative sponsors in "rogue states") which possess WMD, was supposedly based on the UN

Charter Article 51 guarantee of "anticipatory self-defence". In practice, however, the new Bush doctrine grew to include prevention, that is, attacks on slow-building and long-term threats, rather than merely pre-emptive responses to perceived imminent dangers. Among other unfortunate side effects, this has led to the perception by other governments of pre-emption as a legitimate option and has encouraged Russia to reconsider its own military doctrine.

The same conflict indicated changes in U.S. ballistic missile defence capabilities had taken place: Unlike the estimated 9 per cent interception rate for the Patriot missile defence system in the 1991 Gulf War (as audited by the U.S. Government Accountability Office [GAO]),²³ the record of the Patriot system in 2003 was perfect. The Saddam Hussein regime launched 19 SRBMs at U.S. forces and facilities; ten fell harmlessly off-course (and were ignored for that reason), and the remaining nine were all successfully intercepted by Patriot missiles. There was, however, a problem:

the Patriot batteries failed to detect or intercept any of the five primitive Iraqi LACMs [land-attack cruise missiles] which only bolstered their value as a difficult-to-defeat system. In fact, the addition of LACMs to the Iraqi missile threat sowed such confusion among U.S. forces that it contributed to a series of friendly-fire casualties: Patriot batteries erroneously shot down two friendly aircraft, killing three crew members, while an American F-15 crew destroyed a Patriot radar, in the belief they were being targeted. That a mere handful of primitive LACMs could achieve such an impact seems to have sunk in quickly. "This was a glimpse of future threats. It is a poor

man's air force," the chief of staff of the 32nd U.S. Army Air and Missile Defense Command told the *New York Times* shortly after the fall of Baghdad. "A thinking enemy will use uncommon means such as cruise missiles and unmanned aerial vehicles on multiple fronts."²⁴

In strategic affairs, it appears that imitation is the sincerest form of flattery, and Russian strategists have been quick to emulate the 1991 and 2003 successes of U.S. Tomahawk LACMs. In response to announced U.S. plans to build BMD sites in Poland and the Czech Republic, Russia unveiled the R-500 LACM, also known as the Iskander-K, in May 2007. This cruise missile appears to be able to launch from the transporter-erector-launcher associated with the SS-26 Iskander SRBM, which would greatly complicate the job of missile defences assigned to protect against the system. As Dennis Gormley has said:

After the May 2007 test, Moscow's *Izvestiya* proclaimed in regard to the R-500 LACM: "neither the National Defense system (it has not been designed for this principle) nor even the most modern American Patriot surface-to-air missile systems are capable of noticing, still less intercepting such targets."²⁵

Indeed, the problems which a combination of ballistic and cruise missile threats present to modern missile defence systems are likely to spread far beyond the offices of Moscow's military planners:

... adversaries are likely to see the operational advantages of combining ballistic and cruise missile launches to maximize the probability of penetrating even the best American or allied missile defences. Converting small airplanes or unmanned aerial vehicles (UAVs) into

weapons-carrying "missiles" offers a particularly attractive "poor man's" option. When these, in large numbers, are combined with more expensive and sophisticated ballistic and cruise missiles, they could have a distinct advantage over even thick, layered defenses.²⁶

To summarise, Russia is responding to the nexus of three factors:

- the U.S. military edge in advanced conventional military technology;
- Russian lack of trust in U.S./NATO motives (stemming in no small part from the doctrine of pre-emption); and
- the continued deployment of advanced ballistic missile defences in Europe.

Russian fears of advanced technologies have led them to combine the further development of cruise and ballistic missiles in order to prevail over NATO missile defences in a cost-effective manner. This is a logical progression for a state with limited resources to follow, and not in itself threatening to European security or stability.

NATO's inadequate response to Russian anxieties

What has NATO's response been to Russian concerns? Whilst stating its intention to seek a strategic partnership with Russia, the Alliance also decided at its May 2012 Summit in Chicago to send some very mixed signals to Moscow by:

- re-committing itself to its out-of-area operation in Afghanistan;
- cooperating more closely on developing advanced defence capabilities; and
- announcing an initial operational capability for its European missile defence system.²⁷

In addition, reports indicate that the Alliance has acceded to U.S. requests to support the B61 Life Extension Program (LEP) which includes, *inter alia*, a precision-guidance upgrade giving NATO's nuclear deterrent the high accuracy of modern conventional precision-guided weapons.²⁸ In short, NATO and the United States are doing just about everything possible to play on Russian fears, while demanding that Russia reduce its TNW arsenal significantly. But what will Russia get in return?

At a 30 May 2012 conference on missile defence organised by the Royal United Services Institute, then-U.S. Special Envoy for Strategic Stability and Missile Defense Ellen Tauscher had this to say about what Russia had to gain from cooperating with NATO on missile defence:

Russia should come inside the missile defense cooperation tent and see what we are doing... the U.S., NATO and Russia can work together on a broad range of cooperation: sharing sensor data, working on developing common pre-planned responses, conducting a joint analysis of missile defense systems, and working together on missile defense exercises. The United States and NATO have been transparent about our missile defense programs. We have provided Russia with a number of ideas and approaches for transparency and we are also committed to discussing other approaches to building confidence between our two countries.²⁹

In short, greater transparency is on offer to Russia in exchange for their willingness to allow NATO's missile defence system to proceed. Beyond that, Russia is being asked to decrease its numerical advantage in the one

area where it retains a significant advantage over NATO, namely TNW.

Do NATO's words and deeds, as outlined above, address Russia's security concerns? Not particularly well, it would seem. The B61 LEP represents a microcosm of how NATO decision-making is leading to unintended consequences in NATO-Russian relations. Adding precision guidance to the B61/DCA weapons system unites two key Russian fears about NATO (precision guidance and low-yield nuclear warheads) against a background of continuing out-of-area operations by NATO:

Until very recently, Russian military analysts spoke of three distinct threats on three distinct axes. The first, coming from the West, was U.S.-NATO out-of-area intervention with a military built around precision-strike technology and advanced C4ISR [Command, Control, Communication, Computers, Intelligence, Surveillance and Reconnaissance] capabilities. Russian TNWs/NSNWs were intended here for de-escalation by disrupting the West's capacity to conduct tactical and operational combat in theater warfare. Every Western out-of-area intervention has led to long discussions in Russia on how a force might counter such an opponent. Following the invasion of Iraq, intense debates occurred between those who saw "no-contact" warfare as the dominant trend in future war and those who looked upon the invasion as a reversion to operational art, with the addition of advanced technologies.³⁰

In the arena of political and military affairs, it is sometimes useful to remember the quote variously attributed to Henry Kissinger and Golda Meir: Even paranoids have enemies.

Solutions to the problem: Best, next best, worst

What, then, can be done to improve the chances of cooperation between NATO and Russia? More specifically, how can U.S. negotiators ensure that Russia will agree to discuss TNW if and when both sides sit down to hash out what comes next after the NST? Transparency is important, but difficult to achieve and often marginal in its short-term confidence building effects. Classical arms control solutions, as noted above, are hard to find in an environment as unbalanced as the NATO-Russia TNW “correlation of forces” in and around Europe. What remains?

Much thought is being given to these questions. An excellent recent example is an April 2012 paper published by the U.S. National Defense University (NDU) and written by a former NATO Head of Euro-Atlantic Integration and Partnership, Dr Isabelle François:

In today’s European security context, trust and confidence are elusive. In addition to a broad security dialogue involving political and military high-level engagement, a specific set of measures to build confidence with a far-reaching bilateral and multilateral cooperative program needs to be developed on the basis of today’s security agenda to reassure Russia. Tangible results of concrete measures toward this end will take time and proceed through incremental steps to build confidence. Such a program of confidence-building should focus on five main areas of particular relevance to the United States and the Allies in today’s European security environment that should have resonance in Moscow.³¹

The five main areas Dr François cites are:

- Operational cooperation (counterpiracy, counternarcotics, and counterterrorism, especially the Cooperative Airspace Initiative (CAI) created by the NATO-Russia Council);
- Transparency in Contingency Planning and Exercising;
- Dialogue on Deterrence and Transparency – Safety Measures Regarding TNW;
- Extension of Smart Defence Approaches and Projects (i.e., extending NATO’s planned pooling of resources and cost-sharing to Russia, such as existing bilateral negotiations on cargo aircraft);
- Joint Installations (building on the success of the CAI, and eventually involving shared missile defence data fusion centres).

Dr François concludes that:

The relationship with Moscow cannot be allowed to drift. A serious effort at engaging with Russia and addressing the unfinished business of post-Cold War European security with its well-known contentious issues will be required to develop an inclusive security community, which in turn will be a *sine qua non* condition for facing no less challenging issues looming on the horizon, and relating to regions beyond Europe, such as the Caucasus, Middle East, North Africa, Central Asia, and High North.³²

While several of the areas mentioned stray far from arms control in general and TNW in particular, the approach Dr François advocates seems a sensible improvement over NATO’s recent efforts to bring Russia to the negotiating table. If this could be combined with a renewed dialogue on conventional arms control in Europe within the NATO-Russia Council framework, including potential

controls and/or transparency initiatives on precision-guided weapons, it could address Russian fears and interests and offer cooperative opportunities which both sides might genuinely find useful. It does not, however, address the Russian public demand that the United States withdraws all its TNW to national territory before talks on TNW reductions can be considered. Whether this is a diplomatic tactical position by Russia, on which they could compromise if there were attractive outcomes on offer, is yet to be seen.

This issue has been addressed by a number of commentators. Although Łukasz Kulesa of the Polish Institute of International Affairs is not explicitly in favour of the withdrawal of TNW from Europe, he highlights well the fact that their continued deployment is not necessary for the cohesion of the Alliance and U.S. engagement in Europe:

If one subscribes to the notion that the only function of nuclear weapons for the Alliance is the “insurance” role, the utility of the U.S. tactical nuclear weapons stationed in Europe can be questioned. The strategic arsenals of the U.S. and UK make these weapons redundant, as the credibility of the insurance function depends not on the deployment of U.S. nuclear weapons in Europe nor on the modalities of transferring them to the Allies, but on the convergence of interests within the Alliance and the willingness of the nuclear weapon states to defend other members from armed aggression. Despite occasional disagreements over policy issues between the Allies, the level of interdependence and policy cohesion between the two sides of the Atlantic (and the two sides of the English Channel) has reached a point where Europe no longer needs “hostages” in the form of

U.S. bombs stored on the continent...[i]t is hard to imagine a situation in which Washington and London (and Paris) would not react to an aggression against a member of the Alliance, even if conducted by a nuclear-armed adversary. Any failure of one to act on the other’s behalf would result in an inevitable collapse of the “West” as a geopolitical construct.³³

Given the dubious military utility of NATO’s 180-odd TNW, why not indulge the Russians at zero strategic cost and remove the B61s from Europe? This could possibly take the same form (i.e., unilateral but with something between a hope and an expectation of eventual reciprocity) that the Bush/Gorbachev/Yeltsin PNIs did in the early 1990s.

Unfortunately, there is no political consensus for that option, nor does one seem likely any time soon.³⁴ The nations which oppose changes to NATO’s nuclear posture for national reasons (Central and Eastern European allies for fear of diminished extended deterrence, France for fear that arms control initiatives within NATO will eventually weaken legitimacy of the *Force de Frappe*) will not allow meaningful change to be discussed around the North Atlantic Council’s table. The creation of various committees for arms control and disarmament within NATO are pure window dressing as far as TNW are concerned, with no mandate to consider the Alliance’s nuclear posture, much less affect it.

With the best option (unilateral withdrawal of B61s to U.S. soil) off the table, what is next best? Something along the lines of Dr François’ proposal, along with the patience to wear down Russian insistence that TNW controls will not be considered until B61s are back in the United States. Real cooperation on

missile defence along the lines mentioned above by Ellen Tauscher could help over time, and time will be required, as Russian Deputy Foreign Minister Sergey Ryabkov noted in January 2011:

We are not even close to discussing the prospects of concluding an agreement in this field; moreover, we do not yet know how the implementation of the ratified START treaty will go. Until we see how the obligations taken within its framework are being carried out and to what extent the sides are acting in accordance with its letter and spirit, this question is altogether irrelevant and premature. Time is needed to at least acquire the initial experience in the field of implementing the START treaty.³⁵

The danger to NATO, however, lies not in the next-best solution to the TNW problem, but in the worst: if NATO refuses to rethink its hosting of B61s as an alliance, there is a danger that individual hosting governments might choose to take action on their own. There appears to be a shared belief among a number of legislators in The Hague, Brussels and Berlin that their disarmament concerns have been trumped by the French in particular, and that further action within normal NATO committee structures would be futile.³⁶ This could pave the way for one of them to request that the United States remove its B61s. NATO

would have no say in this interaction, nor would the U.S. government be in a position to refuse. It is conceivable that great pressure could be brought to bear on a government which chose to act in this fashion, both bilaterally from the United States and through NATO, but a government which stuck to its position in response to domestic pressures could see U.S. nuclear weapons off its soil in a matter of weeks.

This course of action would have huge negative impact on NATO solidarity. For it to be avoided, however, the current political logjam within NATO on nuclear posture must be addressed forthrightly by President Obama during his second term. It remains to be seen whether any hosting governments will choose to tread the difficult path of making unilateral moves in the face of opposition from their allies, but in the absence of meaningful nuclear posture or policy change from NATO, such a course may begin to seem the least bad option in the months and years to come, and that would be a very bad thing for NATO's future credibility and coherence. Meanwhile, now is the time for President Obama to redeem the pledge he made in Prague in April 2009: unless there is movement on TNW in Europe over the next few years, the vision of a world free of nuclear weapons is likely to become another forgotten promise.

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Endnotes

¹ This paper uses the term “Theatre Nuclear Weapons” in preference to the more common Non-Strategic Nuclear Weapons (NSNW) and Tactical Nuclear Weapons. NATO’s nuclear weapons and many of Russia’s have strategic impact, and though they would be used in theatre they are not ‘tactical’, or short range in the sense of a nuclear artillery shell. The New START Treaty (NST) refers to the “Treaty Between The United States Of America And The Russian Federation On Measures For The Further Reduction And Limitation Of Strategic Offensive Arms”.

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³ A major TNW study from the U.S. Army War College published in April 2012, for example, claims that Russia has about 3,000-6,000 TNW. George E. Hudson, “Russian Perspectives on Tactical Nuclear Weapons”, *Tactical Nuclear Weapons and NATO*, (Carlisle Barracks, PA: U.S. Army Strategic Studies Institute, 2012), p. 110.

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