Regulating Tactical Nuclear Weapons

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In the coming months and years, the United States and its North Atlantic Treaty Organization (NATO) allies will discuss, and U.S. and Russian Federation negotiators may enter, the next frontier in nuclear arms control: regulating small, “tactical” nuclear weapons. This framework Article is the first squarely on the subject in the legal literature. My core arguments are that (1) to date the bilateral Washington–Moscow arms control legal regime has primarily regulated strategic (long-range) nuclear delivery vehicles (bombers, missiles, and submarines) rather than warheads; (2) contrary to common assumption, the legal regime has regulated a small number of tactical delivery vehicles (jet fighters and other short-range systems) with arguable strategic relevance, providing a regulatory precedent; (3) the nuclear tactical versus strategic distinction in Cold War policy and the legal architecture is eroding and should be abolished; and (4) now that all nuclear weapons have “strategic” (that is, major) significance, and in view of the enduring “loose nuke” threat and other risks, the arms control legal regime should be expanded to regulate and reduce what we now consider tactical nuclear arms. Nonlegal steps—confidence-building measures and parallel unilateral reductions—may pave the way, but tactical nuclear weapons ultimately ought to be regulated via the new treaty I outline.

Extension of the legal regime to regulate all tactical delivery vehicles and warheads would be revolutionary. Warheads are much smaller than nuclear delivery vehicles, which can be readily observed from space. Warheads are therefore easier to conceal or steal, and they present unique verification challenges. Resolution of the verification problem in a new treaty will be tough. But it also presents an opportunity: creation of what I term Nuclear Information

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* Assistant Professor, The Ohio State University Mortiz College of Law; Visiting Associate Professor, Georgetown University Law Center, 2010–13. © 2013, Dakota S. Rudesill. This Article in early form was presented at a conference at Georgetown University Law Center on March 1, 2011. Parts are also based on a paper I presented at the U.S. Strategic Command in October 2004. See Dakota S. Rudesill, Getting to Zero Loose Nukes: Where the Grand Bargain Fell Short and a Proposal to Fix It, Presentation Before the U.S. Strategic Command (Oct. 14, 2004) (slides available at http://csis.org/images/stories/poni/2004_STRATCOM_Rudesill.pdf). This scholarly Article is informed by my work as Interim Director of the Georgetown Federal Legislation & Administrative Clinic, supervising student lawyers as they have advised their clients on arms control. This Article is also informed by my service as a U.S. Senate staff member from 1995 to 2003, when I advised Senator Kent Conrad on his legislative work regarding tactical nuclear forces. For stimulating discussions and suggestions, I thank David Koplow, Chief Judge Jamie Baker, Robin West, Victoria Nourse, Steven Pifer, Laura Donohue, David Super, Larry Solum, Kate Stith, Judith Resnik, Nadia Asancheyev, and Rachel Spitzer Rikleen, among others. For outstanding research assistance, I thank Michael Asplet, Bonny Lin, Sarah Erickson-Muschko, Elly Bennett, Rebeca Givner-Forbes, Jesse Lemon, Justin Shubow, and Bryan Boroughs. Any errors are mine. The Author thanks the editorial staff of the Journal for their excellent work during the editing process, and thanks the Journal for stipulating that this Article may be reproduced for any academic purpose and any public-education or policy-related purpose.

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Stability (NIS) between the United States and Russia, a condition characterized by continual communication and common understanding of the number, location, and operational status of nuclear hardware. The superpowers built 100,000 nuclear warheads during the Cold War and retain thousands of warheads today to mitigate uncertainty and reduce risk of a successful surprise attack—rationales for large stockpiles that would be challenged by NIS. Ultimately, I argue, NIS could allow the United States and Russia—and other nuclear states to which the concept could be exported—to see a realistic path from Mutually Assured Destruction (MAD) to a day-to-day state of Mutually Assured Security (MAS).

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In the coming months and years, the United States and its North Atlantic Treaty Organization (NATO) allies will discuss, and U.S. and Russian Federation negotiators may enter, nuclear arms control’s next frontier: regulating tactical nuclear weapons.

Tactical nuclear warheads (often abbreviated TNWs) are also known as non-strategic, sub-strategic, theater, or battlefield nuclear warheads. Generally, they are carried by tactical nuclear delivery vehicles (DVs)—aircraft, ships, missiles, or ground forces—with shorter ranges than the intercontinental-range strategic nuclear delivery vehicles that carry strategic nuclear warheads. Usually, tactical warheads are physically smaller than their strategic siblings. They are therefore easier to conceal or steal—and accordingly pose difficult arms control verification problems, and pose one of the world’s greatest nuclear terrorism risks. These “small” nuclear weapons have awesome destructive power, in some cases more than ten times the explosive yield of the bombs that destroyed Hiroshima and Nagasaki. After post-Cold War cuts, the United States still deploys just under 200 tactical nuclear bombs in 5 European NATO states. Russia’s TNW

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1. For ease of reading, I use the terms tactical warheads, weapons, bombs, and arms interchangeably and in place of the common acronym TNW. Tactical DVs specifically reference the DVs for these nuclear weapons, while the term tactical nuclear forces embraces the warheads plus DVs. I use the same approach regarding strategic nuclear systems.


3. The leading nongovernmental open-source authority regarding the number of U.S. tactical weapons in Europe estimates that the United States now deploys 150 to 200 B61 bombs in Germany, the Netherlands, Belgium, Italy, and Turkey. U.S. Deputy Under Secretary of Defense for Policy Jim Miller referenced 180 U.S. tactical bombs in Europe during a July 2009 NATO briefing. See Robert S.
arsenal numbers in the thousands and is less secure.4

The history of nuclear arms control stretches more than half a century. The legal regime has been built at the international, bilateral, and national levels, most notably in the 1968 Nuclear Non-Proliferation Treaty5 and via seven Washington–Moscow nuclear forces treaties, including the 2010 New START treaty.6 Despite the dangers they present, however, tactical nuclear weapons have been largely—but not entirely—neglected by this body of law.

The legal regime’s neglect has been mirrored by the legal literature’s failure to address in a focused manner extending the nuclear arms control regime to include tactical nuclear weapons.7 This Article addresses this scholarly gap.

Prospects for regulating tactical nuclear weapons appear less encouraging than immediately after the New START treaty, but TNWs remain on the arms control agenda. In a June 2013 speech in Berlin, U.S. President Barrack Obama notably did not explicitly restate his Administration’s desire for an agreement with Russia to follow New START, reducing tactical arms in addition to deployed strategic warheads and nondeployed warheads. He instead said the United States could reduce its deployed strategic warheads by one third, that he wanted “negotiated cuts with Russia to move beyond Cold War nuclear postures,” and that the United States would “work with our NATO allies to seek bold reductions in U.S. and Russian tactical weapons in Europe.”8 Obama’s

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7. My review of the legal literature yields no publications that broadly address regulating tactical nuclear weapons in a focused way. The existing legal literature includes passing references or limited discussions. For an example of the latter, see Brian L. Bengs, Legal Constraints upon the Use of a Tactical Nuclear Weapon Against the Natanz Nuclear Facility in Iran, 40 GEO. WASH. INT’L L. REV. 323, 327 (2008) (arguing that a U.S. tactical nuclear strike on Iran would be illegal).
8. Compare U.S. President Barack Obama & Russian President Dmitry Medvedev, Remarks at New START Treaty Signing Ceremony and Press Conference, Prague, Czech Republic (April 8, 2010), http://www.whitehouse.gov/the-press-office/remarks-president-obama-and-president-medvedev-russia-new-start-treaty-signing-cere (Obama stated at signing that New START will “set the stage for further cuts” and talks “on reducing both our strategic and tactical weapons, including nondeployed weapons”).
speech came as U.S. officials floated the possibility of nuclear arms control steps outside of a legally binding agreement, from confidence building measures to parallel unilateral reductions, perhaps in parallel with Russia. In recent legislation, the U.S. Congress—primarily at Republican impetus—has continued to suggest a formal agreement on TNWs, while increasingly seeking to limit presidential arms control latitude. In part, the U.S. President and his Republican congressional skeptics have both been responding to a general cooling of relations with Russia. Russia has said it is willing in principle to talk but has also stipulated that it first wants the United States to withdraw its last TNWs from Europe, among a list of other conditions.

and President Barack Obama, Address to U.S. Senate on the New START Treaty, § 4(a) (Feb. 2, 2011), http://www.whitehouse.gov/the-press-office/2011/02/02/message-president-new-start-treaty-0 (formally certifying to the U.S. Senate the President’s intention to initiate talks with Russia on an agreement on TNWs), with President Barack Obama, Remarks at the Brandenburg Gate, Berlin, Germany (June 19, 2013), http://www.whitehouse.gov/the-press-office/2013/06/19/remarks-president-obama-brandenburg-gate-berlin-germany (Obama pledges to work with NATO allies to “seek bold reductions,” without reference to a potential formal agreement on tactical arms).

9. See, e.g., Jackie Calmes, Obama Asks Russia to Join in Reducing Nuclear Arms, N.Y. TIMES, June 19, 2013, http://www.nytimes.com/2013/06/20/world/europe/obama-asks-russia-to-join-in-reducing-nuclear-arms.html?pagewanted=1&r=0&ref=world (stating “some administration officials have suggested making reciprocal but nonbinding cuts” to strategic forces, an approach which could be applied to TNWs as well).

10. Compare H. AMEND. 395, 113th Cong. (2013) (Rep. Mike Rogers (R-AL) amendment to H.R. 2397, the 2014 Department of Defense Appropriations bill, barring use of funds to implement strategic force reductions pursuant to New START treaty, approved by voice vote), and National Defense Authorization Act for 2014, H.R. 1960, 112th Cong. (House-passed bill in § 1053 conditions withdrawal of U.S. tactical DVs from Europe on Russian reductions and NATO consensus, § 1054 bars strategic DV cuts below the 800 allowed under New START unless a treaty or congressional-executive agreement enters into force providing for proportional Russian reductions to its tactical warheads and the intelligence community has “high confidence” about China’s nuclear posture, and § 1055 expresses the Sense of Congress that the President should consider not seeking further arms reductions with Russia because of alleged Russian violation of existing agreements) [hereinafter House 2014 NDAA], with National Defense Authorization Act for Fiscal Year 2013, H.R. 4310, 112th Cong. § 1037(a)(1) (2012) (expressing Sense of Congress that the United States should “pursue negotiations . . . aimed at the reduction of Russian” tactical nuclear forces). For discussion of the provision’s origin in the Republican-controlled House version of the bill, see H.R. REP. NO. 112-705, at 856 (2012) [hereinafter 2013 NDAA], and Resolution of Advice and Consent to Ratification, as Amended, of the New START Treaty (Senate New START Resolution), Treaty Doc. 111-5, 111th Cong., § (a)(12)(A) (stating the condition that the President certify that the United States will seek to initiate talks with Russia on an agreement on TNWs (LeMieux Amendment)). Senator Bob Corker (R-TN), Ranking Member of the Senate Foreign Relations Committee, also responded to Obama’s Berlin speech by warning against unilateral nuclear cuts. See Calmes, supra note 9.

11. Russian officials used heated language to respond to Obama’s Berlin speech, but the substance of the Russian position is consistent with Kremlin statements over the past several years. Then-President and now-Prime Minister of Russia Dmitry Medvedev, along with U.S. President Obama, indicated at the start of the New START negotiation that a treaty on strategic forces was just the first step with a broader treaty including all warheads, including tacticals, coming later. See WOOLF, supra note 4, at 32–33. Subsequently, Russian officials identified a U.S. tactical nuclear pullout from Europe as one precondition among several. See Several Steps Indispensable Before to Start TNW Reduction Talks, ITAR-TASS DAILY, Feb. 5, 2011, http://dlib.castview.com/browse/doc/23811328 (describing U.S. pull-out precondition). After Obama’s 2013 Berlin speech, Russia’s envoy to NATO again named a U.S. TNW pullout from Europe as a precondition to TNW talks, along with limiting U.S. missile defense,
Regulating tactical nuclear weapons is a long-term project. My contention in this Article is that this is a worthy and vitally important one. Today, tactical nuclear weapons are Cold War relics and represent the foremost piece of unfinished business on the nuclear arms control agenda. Confidence-building measures and parallel unilateral steps have potential benefits and drawbacks, but my argument here is that regulation is best accomplished by treaty.

Here, I explore the factual and legal aspects of the tactical nuclear arms regulatory challenge. I start with the problem, then move to the ultimate solution I recommend: a new treaty that verifies the number, location, status, and dismantlement of not just tactical DVs such as aircraft but of individual nuclear warheads. Then I consider such a treaty’s theoretical implications for deterrence and arms control.

Lawyers begin by defining their terms and establishing the facts. Accordingly, Part I provides a primer on tactical nuclear warheads and their delivery vehicles. In the context of disagreement about which warheads and DVs are tactical and which are strategic, I argue that the best definitional approach proceeds from the general principles that tactical DVs do not have intercontinental range and were not regulated in New START. Then, I set out the key facts, surveying stockpiles and explaining the deterrence theories that drove the United States and the Soviet Union to build tens of thousands of TNWs during the Cold War. In evolving form, Cold War deterrence concepts still shape discussions. I conclude this Part by identifying challenges to regulating tactical nuclear weapons: the alleged lack of precedent, verification, the asymmetric negotiating positions of the parties, and domestic politics.

Part II analyzes the nuclear legal regime and its relative, yet not complete, neglect of tactical arms. There is no international legal instrument created with the specific purpose of regulating the full range of tactical delivery vehicles and warheads. However, my research demonstrates that the common assertions that tactical nuclear systems have never been regulated, or have been regulated only once, are not accurate.12 There are several precedents of regulation of tactical nuclear DVs—partial, thin, and expiring though these precedents may be, and instructive rather than controlling—that merit attention.

non-nuclear long-range strike weapons, space weapons, conventional arms, and the nuclear arsenals of third parties. The Russian envoy also seemed to object to NATO’s policy that it will remain a nuclear alliance as long as nuclear weapons exist. See Russia Urges NATO’s Nuclear States to Bring Non-Strategic Nuke Weapons Back to Their Territories, ITAR-TASS, July 9, 2013, http://www.itar-tass.com/en/c32/800981.html.

12. See, e.g., Steven Pifer, Arms Control Options for Non-Strategic Nuclear Weapons, in TACTICAL NUCLEAR WEAPONS AND NATO 411, 411 (Tom Nichols et al. eds., 2012) (TNFs “have remained outside of arms limitation efforts” except for the exception Pifer identifies, the 1987 INF Treaty). Amy Woolf correctly notes that “[t]he United States and Russia have not included limits on nonstrategic nuclear weapons in past arms control agreements,” if by “Russia” one only means “negotiated by Russia.” WOOLF, supra note 4, at 1. Russia, as a Soviet successor state, has acceded to the INF Treaty, CFE Treaty, and START I, which, as I demonstrate in section II.B, limits and even bans some arguable tactical DVs.
A close reading of the legal texts and their policy contexts shows that the tactical nuclear arms that have been regulated have taken on strategic significance. By strategic significance I mean more than battlefield significance, linked to intercontinental-range strategic forces, related to state survival or war-making capability, or just a Big Deal geopolitically.

The NPT-based multilateral nuclear arms control regime has been informed by the idea that any nuclear weapon is a strategic threat to peace and security, and therefore the legal regime at this aspirational level has taken a categorical approach to nuclear weapons acquisition, testing, and emplacement. In the cases in which a limited number of nuclear DVs on the tactical versus strategic distinction line have been regulated by the bilateral Washington–Moscow nuclear treaty regime focused on strategic DVs, those arguably tactical DVs have appeared strategic in the view of one or both sides. The 1987 Intermediate Nuclear Forces (INF) Treaty is the best known example. Ironically, the broadest regulation of tactical nuclear arms to date has come from a non-nuclear treaty and a non-treaty agreement, respectively: the 1990 Conventional Forces in Europe (CFE) Treaty and the 1991–1992 Presidential Nuclear Initiatives (PNIs).

The legislative history shows that the U.S. Congress’s unilateral national legislative regulatory efforts have been prescient but have had limited impact. Congress has been most effective where efforts to secure Russian tactical warheads have been included in a broader program—the Nunn-Lugar Cooperative Threat Reduction (CTR) program—focused on Russian strategic nuclear forces, and in which the Russian government has partnered. Here again, we see tactical nuclear systems addressed when viewed in a strategic light.

I expand this strategic significance point in Part III. Here, I argue that these thousands of Hiroshima-yield bombs ought to be brought into the legal regime because all tactical warheads are taking on strategic importance as the tactical versus strategic distinction blurs. Since the fall of the Berlin Wall, TNWs have presented three strategic concerns with a common nexus in the vast number of such warheads in Moscow’s arsenal. One is that TNWs in Russia represent one of the world’s worst “loose nuke” risks due to their smaller size and greater portability compared to strategic warheads, due to security deficiencies in Russia, and due to the sheer number of Russian tactical bombs. The second concern is that deep reductions in strategic arms have given tactical arms greater relative significance, especially given Russia’s large lead. Third, growing acceptance of the NPT’s animating theory that nuclear reduc-

15. For the text of the U.S., Soviet, and Russian presidential statements announcing the PNIs, see TACTICAL NUCLEAR WEAPONS, supra note 2, at 167–81.
tions by the P-5 powers will help keep nuclear weapons out of the hands of other states has given all nuclear warheads relevance to the strategic objective of non-proliferation. Meanwhile, I argue, several trends are causing nuclear “bracket creep”: tactical arms becoming more strategic. These bracket-blurring trends include globalization (which would give any nuclear use strategic effects and potentially enormous social justice implications), obsolescence of the Cold War-era tactical nuclear mission, and convergence of tactical and strategic nuclear hardware. The descriptive and prescriptive implication of all of these concerns and trends, I posit, is elimination of the tactical versus strategic warhead distinction, and regulation of all nuclear warheads and delivery vehicles.

In Part IV, I argue for regulation in a formal agreement. I outline the goals and sketch the content of such an accord. Then, I argue that a formal agreement better addresses concerns about precedent, verification, asymmetries in the U.S. and Russian tactical arsenals and geopolitical positions, and politics. The greatest challenge to a formal agreement on tactical arms would be its greatest virtue: a formal legal agreement could provide the intrusive inspection regime needed to verify warhead status and dismantlement. Confidence building measures and parallel unilateral reductions may facilitate an ultimate treaty, but that goal should not be abandoned.

Finally, in Part V, I consider theoretical implications. I argue that a formal agreement that provides monitoring and verification regarding warheads offers an opportunity to renew the goal of moving beyond Mutually Assured Destruction (MAD) and toward Mutually Assured Stability (MAS) as a day-to-day circumstance. The treaty-provided bridge from MAD to MAS is a new concept I term Nuclear Information Stability (NIS).

I. TNF Primer: Definitions, Arsenals, and Deterrence

One of the most iconic images of the nuclear age was produced by one of the Cold War’s smaller nuclear weapons. In 1953, a double mushroom cloud rose over the Nevada Test Site, produced by a miniaturized warhead launched in an artillery shell. The warhead’s delivery method, and the artillery piece in the foreground, reflected the U.S. Army’s drive for a usable battlefield nuclear weapon.

Whether that artillery-fired warhead was really more usable than other nuclear warheads is, to date, thankfully theoretical. But few would disagree that an artillery-fired warhead is a TNW. What is less clear, as I explore in this Part, is how to define tactical versus strategic forces, and especially tactical versus strategic nuclear warheads. The 15-kiloton yield of that artillery nuke, for example, is about the same as that of the Hiroshima bomb. I argue that the


best definitional approach proceeds from the criteria that TNWs are carried by delivery vehicles (DVs) that do not have intercontinental range and were not regulated by New START. Then, this foundational Part turns to the key facts and theories. I close by identifying principal challenges to regulating tactical nuclear weapons, related to precedent, verification, asymmetries, and domestic politics.

A. THE DEFINITION DIFFICULTY

There is no agreed-upon definition of tactical nuclear arms.

Generally, SNWs are understood to be large, high-yield warheads. They are intended for “strategic targets”: assets that are integral to state survival and war-making capacity, including SNFs (via “counter-force” targeting), population centers (via “counter-value” targeting, which the U.S. abandoned), and national leadership and infrastructure (targeted under both).\footnote{Strategic missions attack targets “with the purpose of progressive destruction and disintegration of the enemy’s war-making capacity and will to make war.” Woolf, supra note 4, at 5–6 (quoting U.S. DEP’T OF DEF., DICTIONARY OF MILITARY AND ASSOCIATED TERMS (2010), available at http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf). For counter-force and counter-value targeting definitions, see WEAPONS OF MASS DESTRUCTION: AN ENCYCLOPEDIA OF WORLDWIDE POLICY, TECHNOLOGY, AND HISTORY 78–79 (Eric A. Croddy et al. eds., 2005).} Strategic warheads are carried by strategic delivery vehicles (DVs): long-range bombers and the air-launched cruise missiles they carry, intercontinental ballistic missiles (ICBMs), and intercontinental-range submarine-launched ballistic missiles (SLBMs) carried in launch tubes aboard ballistic missile submarines (SSBNs).\footnote{For background on U.S. strategic DVs, see Amy F. Woolf, CONG. RESEARCH SERV., RL33640, U.S. STRATEGIC NUCLEAR FORCES: BACKGROUND, DEVELOPMENT, AND ISSUES (2012). For background on Russian strategic DVs, see Hans M. Kristensen & Robert S. Norris, Russian Nuclear Forces, 2011, 67 BULL. ATOMIC SCIENTISTS 68 (2011), and New START, supra note 6, art. III, § 8(a)(ii), (b)(ii), (c)(ii).}

Tactical warheads, by contrast, are generally conceived of as smaller, lower yield weapons. They are arrayed against “tactical targets”: assets involved with the maneuver of military units on the battlefield, including military units themselves and the bridges and other infrastructure they use.\footnote{The Department of Defense defines tactical use of a nuclear weapon as “in support of operations that contribute to the accomplishment of a military mission of limited scope, or in support of the military commander’s scheme of maneuver, usually limited to the area of military operations.” See Woolf, supra note 4, at 6.} Tactical warheads are deliverable by shorter range tactical DVs: jet fighters; ballistic and cruise missiles; torpedoes; depth charges; air-defense (anti-aircraft) missiles; artillery; and in the case of “nuclear demolition munitions,” “satchel bombs,” and mines, even individual soldiers.\footnote{For a discussion of types of existing and eliminated TNWs, see William C. Potter & Nikolai Sokov, PRACTICAL MEASURES TO REDUCE THE RISKS PRESENTED BY NON-STRATEGIC NUCLEAR WEAPONS (2011); Joshua Handler, The 1991–1992 PNIs and the Elimination, Storage, and Security of Tactical Nuclear Weapons, in TACTICAL NUCLEAR WEAPONS, supra note 2, at 20, 20–41.}
above contain more than a half-dozen potential definitional criteria. All are problematic. They include destructive yield (problematic because strategic and tactical warhead yields overlap); physical size (newer strategic warheads are smaller than many older tactical warheads); intended target and intended role (the same weapon can service tactical or strategic targets); and firing range (same). Instead, I recommend starting with New START: the DVs regulated under New START are strategic DVs and warheads deployed on them or intended to be carried by them are strategic NWs, whereas all other systems are tactical DVs or tactical warheads. Why? New START is the most recent treaty, so that is where the bilateral treaty law stands now. New START only deals with intercontinental-range delivery vehicles. No other bilateral nuclear treaty, except the INF Treaty, is still in force. Also, Congress has made definitional forays with an eye to New START.


23. Lewis & Gabbitas, supra note 22, at 3.


25. The enacted 2013 NDAA identifies “(1) a heavy bomber and air-launched cruise missile; (2) an [ICBM]; (3) a [SLBM]; (4) a ballistic missile submarine”; along with (5) nuclear command and control, as “strategic delivery systems” about the modernization of which the President has to report to Congress. 2013 NDAA, supra note 10, § 1035(a). But, Congress then muddied matters by explicitly defining a “strategic delivery system” as merely “a delivery system for nuclear weapons,” while elsewhere making reference to “nonstrategic nuclear weapons” without a definition of that term. 10 U.S.C. § 495(a), (c), & (e)(2) (2006); 2013 NDAA, supra note 10, §§ 1035, 1037. One could reasonably infer that Congress’s list in what is now 10 U.S.C. § 495(a) of “strategic delivery systems” is exhaustive, but as a useful definition the NDAA passage leaves much to be desired in purpose, precision, and scope. The modernization-related report required by § 495(a) relates to developing a new future strategic DV of each type, a pledge the Obama Administration made during the New START ratification debate in late 2011, and unhelpfully for our definitional purposes includes command and control systems. The “strategic delivery system” definition could reasonably be read to mean either that strategic DVs are one of several varieties of nuclear DVs, or that Congress is sweeping away the strategic/tactical distinction and all nuclear DVs are now strategic DVs. There is, however, no legislative history supporting the latter interpretation. The former is supported by the 2013 NDAA’s requirements for separate presidential reports 60 days in advance of reduction of “strategic” DVs and of cuts or changes to “nuclear forces in Europe” under the section heading “NONSTRATEGIC NUCLEAR WEAPON REDUCTIONS.” Compare §§ 1035, with 1037. Finally, the definition says nothing about DV range, nor does it name currently fielded DVs. The House-passed version of the 2014 NDAA has a force retention provision that includes a list of current U.S. strategic DVs—B-52H and B-2 bombers, Trident SSBNs and D-5 SLBMs, and Minuteman III ICBMs—rather than identifying criteria. See House 2014 NDAA, supra note 10, § 1054(e)(3).
B. ARSENALS BY THE NUMBERS

1. United States

The U.S. TNW stockpile reached its apex of about 23,000 warheads around 1964, accounting for nearly four-fifths of all U.S. warheads.26 During the Cold War, U.S. TNWs were deployed in the United States, aboard ships, and in up to twenty-seven countries and territories, primarily Europe, Japan, and South Korea.27 The United States fielded TNWs on a range of air, land, and sea tactical DVs.

In the wake of the Cold War’s end and the PNIs, U.S. TNW deployments and inventories were sharply reduced. All TNWs were removed from Japan, South Korea, naval vessels, and Air National Guard jet fighters on U.S. air defense alert.28 The number of tactical DVs and nuclear-authorized military units contracted dramatically.

The TNW stockpile cut since 1991 has been more than 90%.29 The leading open-sources authorities, Hans Kristensen and Robert Norris, estimated in 2010 that of the total in-service U.S. stockpile of 8613 to 9613 warheads, 500 are TNWs.30 Kristensen’s work and comments by a Department of Defense official in 2009 together suggest that approximately 200 are deployed in Europe, and 300 are a stored “responsive force.”31

Norris and Kristensen report that the roughly 200 deployed U.S. TNWs are at air bases in Belgium, Germany, the Netherlands, Italy, and Turkey.32 These U.S. warheads represent the entirety of NATO’s TNWs and are a single system: the

27. See WOOLF, supra note 4, at 8.
32. U.S. TNWs in Europe 2011, supra note 3, at 65–70.
B61 air-dropped bomb.\textsuperscript{33} This nonprecision weapon would be delivered by U.S. F-16 fighter jets and other NATO air forces. The B61 will be the only remaining U.S. TNW.\textsuperscript{34}

2. Russian Federation

To negotiate, the parties must first establish the size of the Russian arsenal; yet secrecy and uncertainty shroud even this most basic fact. The nuclear weapons bureaucracy created by the Soviets retains its paranoia regarding the West. Russia’s leaders reportedly have struggled with one of its idiosyncrasies: the USSR may have produced nuclear warheads en masse by type without individual identifiers and conducted accounting by recording on paper the total number of warheads at storage sites.\textsuperscript{35} The problems from an inventory control standpoint are obvious. Evidence that Russia has improved accounting is encouraging.\textsuperscript{36} Yet there is also evidence that the Soviets never knew how many warheads they had.\textsuperscript{37} Russia insists no warheads have gone missing. But Moscow may still not be certain how many warheads were produced and therefore whether any have gone missing.

The Soviet TNW stockpile may have reached 33,000 warheads by 1986, accounting for nearly three-fourths of the rough total of 45,000 Soviet nuclear warheads.\textsuperscript{38} Soviet TNWs were deployed in the Soviet Union and the Warsaw Pact States as well as on ships at sea.\textsuperscript{39} The USSR also fielded TNWs on a wide range of ground, air, and naval tactical DVs. The Soviet Union also may have produced one-kiloton “suitcase” nuclear devices, 100 of which a senior Russian government official controversially warned in the 1990s might be missing.\textsuperscript{40}

\textsuperscript{33}. Id. at 65. To be more precise, the B61 is a munition that includes a nuclear warhead—a “physics package”—inside an aerodynamic casing.


\textsuperscript{37}. See WOOLF, supra note 35, at 4–5.

\textsuperscript{38}. See NRDC TABLE, supra note 26. As with the U.S. table, this NRDC table is increasingly dated but has been regarded as one of the best open sources. The figures I include in the text are NRDC’s USSR TNW stockpile estimate for 1986 (30,000 warheads) plus a prorated share of the 4277 warheads that NRDC estimates were retired and awaiting dismantlement that year.


\textsuperscript{40}. In 1997 a retired Russian general and former senior advisor to Russian President Yeltsin, Alexander Lebed, stated that as many as 100 bombs, with a 1-kiloton yield, “are not under the control of the armed forces of Russia . . . . I don’t know whether . . . they’ve been sold or stolen.”
As of the Soviet crackup in 1991, the operational Soviet stockpile may have been 15,000 to 25,000 TNWs. In the 1990s, Russia dismantled thousands of TNWs and tactical DVs. In the late 1990s, Russia may have had 7000 to 12,000 TNWs.

Pentagon officials estimated in March 2012 that Russia has 2000 to 4000 TNWs. Hans Kristensen estimated in May 2012 that Russia has 2000 active TNWs, all in storage. That is more than ten times the deployed U.S.-NATO force in Europe, and four times the U.S. TNW deployed plus “responsive” forces of about 500 bombs. Norris and Kristensen estimated in 2010 that Russia has another 3300 to 3390 TNWs in reserve or awaiting dismantlement, for a total Russian TNW inventory of 5300 to 5390 TNWs, approximately 45% of the total Russian nuclear inventory of 12,000 weapons.

Department of Defense data do not make clear how many of the U.S. warheads awaiting dismantlement are TNWs, so it is hard to do an apples-to-apples Russian–American comparison. A rough estimate is that in active warheads Russia’s TNW arsenal is ten times larger, and that Russia’s total TNW inventory is six to seven times larger.

3. Other Nuclear Powers

Russia has called for multilateral negotiations, so other TNW stockpiles are worth noting.

The UK, France, and China all built arsenals during the Cold War with the Soviet threat in mind that included TNWs and have since de-emphasized them. In the late 1990s, the UK cut back to a single nuclear system, the Trident II

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Sublette, Alexander Lebed and Suitcase Nukes, Nuclearweaponarchive.org (May 18, 2002), http://nuclearweaponarchive.org/News/Lebedbomb.html. The Kremlin disputed Lebed’s account. The U.S. State Department backed the Kremlin. See id. Matthew Bunn sees “no convincing evidence” that the bombs were missing and “substantial reason to doubt” Lebed’s claims. Bunn, supra note 36, at 18.

41. See, e.g., Kristensen, supra note 30, at 51 (USSR had 15,000 to 21,700 TNWs in 1991); NRDC Table, supra note 26 (USSR had 18,933 TNWs in service in 1991, plus some part of another 6405 warheads awaiting dismantlement).

42. See NRDC Table, supra note 26; Handler, supra note 21 (discussing Russia’s implementation of PNIs).


45. Kristensen, supra note 30, at 46. Note, however, that the Russian defense minister in 2006 referenced that some general-purpose submarines at sea still carried nuclear weapons. See id. at 59 n.141.

46. Kristensen & Norris, supra note 19, at 76, 78–80. The authors state in text at page 79 that the Russian nonstrategic inventory is 5390 warheads, but in a table in footnote 3 on page 76, the authors cite a total of 5300 nonstrategic weapons. I have stated a range based on their data.
SLBM, which has had both strategic and tactical roles. France has also slashed its arsenal and depends primarily on strategic warheads on SLBMs for deterrence. Unlike the “uniad” UK force or U.S. “triad,” France has a “diad” also featuring nuclear cruise missiles on fighter jets. These French missiles, numbering between fifty and sixty, may be considered TNWs in view of their short range but may have strategic targets. China, like the UK and France, has focused on fielding limited but capable strategic forces. China’s nuclear program is, however, the most opaque of the P-5. Based on the public record, one ought not be highly confident that China has nuclear weapons it regards as TNWs.

The nuclear arsenals of non-NPT members Pakistan (90–110 total weapons), India (60–80), Israel (60–80), and North Korea (less than 10) provide an existential deterrent. For that reason, they are usually considered strategic warheads even though they lack intercontinental range and have low yields. However, India and Pakistan appear to be developing TNWs that they understand as such.

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47. KRISTENSEN, supra note 24, at 47 (discussing British decisions to phase out air-delivered TNWs and reassign a “sub-strategic” role to some of the SLBM warheads); Robert S. Norris & Hans M. Kristensen, British Nuclear Forces, 2005, 61 BULL. ATOMIC SCIENTISTS 77 (2005).
50. For discussion of China’s nuclear program, see JEFFREY G. LEWIS, THE MINIMUM MEANS OF REPRISAL: CHINA’S SEARCH FOR SECURITY IN THE NUCLEAR AGE 1 (2007) (stating that China does not have TNWs); Charles D. Ferguson et al., Chinese Tactical Nuclear Weapons, in TACTICAL NUCLEAR WEAPONS, supra note 2, at 110, 110–26 (noting that it is unclear whether China has TNWs); Brad Roberts, The Nuclear Dimension: How Likely? How Stable?, in ASSESSING THE THREAT: THE CHINESE MILITARY AND TAIWAN’S SECURITY 213 (Michael D. Swaine et al. eds., 2007) (suggesting that Chinese interest in TNWs did not survive Cold War).
C. TACTICAL NUCLEAR DETERRENCE: THEORY, DOCTRINE, AND POLICY

Due to the destructive power of nuclear weapons, the Cold War is distinguished in the history of international affairs by detailed theories of deterrence, which we can define as maintenance of an adversary’s preference against war or escalation via credible fear of unacceptable costs. The Western and Eastern blocs developed elaborate theories regarding TNWs in particular as deterrents to escalation, usable weapons, and political symbols. These concepts have been updated since the Cold War but remain relevant.

1. The United States and NATO

In the 1940s, 1950s, and 1960s, the American armed forces set about operationalizing and fielding the bomb largely as if it were a new conventional munition. A more enduring driver of tactical deployment was the theory that NATO TNWs would counterbalance perceived Warsaw Pact conventional superiority. In the terminology of U.S. and NATO strategy documents, TNWs provided a “link” in two respects. First, TNWs linked conventional forces and strategic forces. NATO TNWs deterred Soviet escalation to TNW use, while providing the United States and NATO with an alternative to escalating to an intercontinental strategic exchange. Second, TNWs linked European NATO members and the United States in political and military terms, reflected by the presence of U.S. TNWs in Europe and the readiness of allies to deliver U.S. TNWs. Both links underscored the seriousness with which the United States took extended deterrence under the U.S. nuclear umbrella elsewhere: the U.S. promise to defend its allies in Japan, South Korea, and elsewhere, with nuclear weapons if necessary.

In the 2010 Nuclear Posture Review (NPR), released with New START’s signing, the Obama Administration made significant policy changes, although not (yet) to TNW deployments nor to the deterrence theories undergirding the U.S. TNW emplacement in Europe. For the first time, an NPR listed preventing nuclear terrorism and proliferation as the nation’s top nuclear priory. The connection to U.S. forces was the theory—underlying the NPT and notably rearticulated by President Obama in Prague in 2009—that nuclear reductions by the major nuclear powers would facilitate keeping other states from getting or

55. The 2010 NPR definition is “to ensure that, in the calculations of any potential opponent, the perceived gains of attacking the United States or its allies and partners would be far outweighed by the unacceptable costs of the response.” 2010 NPR, supra note 34, at xi. For key discussions in the policy literature of deterrence, see generally, Alexander L. George & Richard Smoke, Deterrence in American Foreign Policy (1974), and Robert Jervis, Deterrence and Perception, 7 Int’l Security 3 (1982).
57. See 2010 NPR, supra note 34, at 2.
growing their arsenals.\textsuperscript{58} The 2010 NPR also endorsed reducing the role of nuclear weapons, maintaining strategic stability at lower levels, strengthening regional deterrence, reassuring U.S. allies, and sustaining the U.S. stockpile.\textsuperscript{59} Rather than being “schizophrenic” as some on the right and left have alleged, the Obama Administration’s new nuclear policy pointed toward an improved, smaller, more focused, and possibly redeployed force.\textsuperscript{60} The 2010 NPR called for modernizing the B61 bomb and left the door explicitly open to further TNW reductions depending on NATO decisions and U.S.–Russia talks.\textsuperscript{61}

The NATO Strategic Concept released in November 2010 tracked the 2010 NPR. It did not restate, however, NATO’s longstanding link language on TNWs, and it emphasized that \textit{strategic} forces are the “supreme guarantee of the security of the Allies.”\textsuperscript{62}

NATO in May 2012 released a Deterrence and Defence Posture Review (DDPR) that endorsed working with Russia to develop plans to increase transparency regarding tactical arms. The DDPR links further NATO cuts to “reciprocal steps by Russia” regarding its much larger stockpile.\textsuperscript{63} The DDPR is most notable for NATO’s announcement of an “interim” operational missile defense.\textsuperscript{64} NATO emphasized that the missile defense system is “not oriented against Russia nor does it have the capability to undermine Russia’s strategic deterrent.”\textsuperscript{65} Public comment on the DDPR by Russian officials focused mainly on missile defense, reiterating Russia’s demands that NATO’s defense system be scaled back and that Russia receive a legally binding commitment that the system is not targeted against Russia’s deterrent.

2. The Soviet Union and Russian Federation

We know less about Soviet and Russian theory, doctrine, and policy regarding TNWs. We can be relatively confident that during the Cold War the Kremlin

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\textsuperscript{58} President Barack Obama, Remarks at Prague (Apr. 5, 2009) (transcript available at http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/).
\textsuperscript{59} See 2010 NPR, supra note 34, at iii.
\textsuperscript{61} 2010 NPR, supra note 34, at 1–2.
\textsuperscript{62} NATO, \textit{Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization} 4 (2010) [hereinafter NATO Strategic Concept 2010]. The Concept referenced U.S. strategic warheads. The UK and France also have strategic arms that have a secondary role for NATO. See \textit{id}. For discussion of the Strategic Concept, see \textit{U.S. TNWs in Europe} 2011, supra note 3, at 72.
\textsuperscript{64} See \textit{id}. ¶ 19.
\textsuperscript{65} \textit{Id}. ¶ 21.
shared some Western views about the virtues of TNWs: destructive power, a wrung on the escalatory ladder between conventional war and strategic nuclear war, and—in their numbers, dispersion, and diversity of DVs—a survivable deterrent.66

Some analysts argue that the Soviet view of TNWs was different in important respects. The Soviets appear to have integrated TNWs more fully into their military plans.67 These ideas inform new post-Cold War differences in the Kremlin’s view of TNWs compared to the thinking of the United States and NATO. In an ironic turnabout from fifty years ago, TNWs provide Russia an offset to Western conventional superiority (and to the conventional and nuclear gains of China). As Moscow’s military has shrunk—including its TNW arsenal—Russian strategy statements have placed increasing emphasis on nuclear weapons and especially TNWs.68

One can reasonably infer that lurking behind these statements and Russian reluctance to negotiate regarding TNWs is Russia’s desire to deter or prevail against foreign military intervention to protect restive ethnic minorities in Russia’s “near abroad.” This scenario draws on a long series of post-Cold War developments that, in the Russian view, may together leave the United States or NATO undeterred. These include: the dramatic decline in Russian conventional forces,69 NATO expansion to Russia’s borders over Russian objections;70 NATO membership discussions with Ukraine, Georgia, and other near abroad states;71 NATO’s 1999 intervention in Kosovo to protect an ethnic minority analogous to those on Russia’s southern flank, against Russian ally Serbia and over Russian objections; the willingness of the West to intervene militarily in the internal affairs of authoritarian states like Iraq, Afghanistan, and Libya; U.S. objections to Russian wars in Chechnya and Georgia; reductions in Russian strategic forces and early warning capabilities that might in theory leave Russia vulnerable to a hypothetical preventive disarming U.S. strike;72 U.S. develop-

67. See Woolf, supra note 4, at 8.
68. See Woolf, supra note 4, at 9; Kristensen & Norris, supra note 19, at 74; Safranchuk, supra note 22, at 64–67; Joseph Cirincione, Strategic Turn: New U.S. and Russian Views on Nuclear Weapons (June 29, 2011), http://newamerica.net/publications/policy/strategic_turn.
69. See Steven Pifer, NATO, NUCLEAR WEAPONS AND ARMS CONTROL 10 (2011).
70. For scholarly discussion of the Russian view of NATO expansion generally, see Jeffrey Mankoff, RUSSIAN FOREIGN POLICY: THE RETURN OF GREAT POWER POLITICS 163–75 (2d ed. 2012).
ment of long-range conventional strike systems that hold out the theoretical possibility of U.S. destruction of Russian nuclear forces without crossing the nuclear threshold,73 and, following U.S. withdrawal from the ABM Treaty in 2003, deployment of missile defenses that, although limited, might one day in theory be able to mop up whatever strategic warheads Russia managed to launch in retaliation for a U.S. first strike.

NATO terms this reasoning “unrealistic,”74 but TNWs in theory solve a lot of problems for Russia. A Russian view may be that use, threat of use, or forward deployment of TNWs might shock a near abroad state or insurgent group into sudden capitulation. TNWs might deter or defeat Western intervention with superior conventional forces. And Russian TNWs would hold European NATO targets at risk even if U.S. strategic nuclear forces, conventional forces, and missile defenses together cancelled out Russia’s strategic forces.

Finally, there is Russian thinking at the intersection of strategy, politics, and psychology. Nuclear weapons guaranteed Soviet superpower status. Nuclear forces have received high-level attention and investment as the Putin-era Kremlin has worked to restore Russia’s great power standing—a drive that has yielded political benefits internationally, domestically, and bureaucratically.75

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73. For mention of similar potential Chinese fears, see generally Rudesill, supra note 49.


Recent Russian media mention of TNWs reflects the potent symbolism of this “last trump card.” Covariant with the nuclear saber rattling has been evident paranoia about the West unmatched since the Cold War. Russian officials have only fed the flames. In late 2011, General Nikolai Makarov, Chief of the Russian General Staff, linked NATO’s expansion to a sharply rising risk of border conflicts and warned that “local and regional armed conflicts could grow into a large-scale war, possibly even with nuclear weapons.”

In Kremlin thinking, TNWs may reassure Russians and deter adversaries. They are at once Soviet relics and Russian assets.

D. FOUR CHALLENGES: PRECEDENT, VERIFICATION, ASYMMETRIES, AND POLITICS

We conclude our definitional and factual orientation with a statement of the problem, reflecting the four main issues one can discern in the arms control conversation about TNWs.

One common assertion is that regulating tactical nuclear arms is legal terra incognita, lacking precedent. Although the broad spectrum of strategic DVs has been regulated in a slate of formal bilateral agreements stretching back four decades, there is no treaty meant to regulate tactical nuclear forces generally.

The dominant view that tactical nuclear forces have never been regulated raises concern about the second oft-mentioned regulatory challenge: verification. The tactical DV verification problem is that the only remaining U.S.-NATO tactical DVs—fighter jets—are dual-capable (that is, equipped to carry nuclear or conventional munitions), and many of Russia’s are, too. Verifying which DVs are nuclear-capable and which are conventional-only would require on-the-ground inspection. It could open sizable parts of the Russian and U.S. militaries to intrusive visits to sensitive sites. The warhead verification problem is even tougher. Capping, locating, counting, and verifying the dismantlement of individual warheads would require on-site visits to weapon storage areas and other sensitive sites. The small size of warheads also makes them easier to conceal than DVs, which are visible from space. As I explain in Part II, no bilateral treaty to date has allowed tracking or required dismantling warheads.

A third concern is that the positions of the parties are asymmetric. In


terms of numbers, Russia’s active TNW stockpile is four times the size of the U.S. TNW stockpile, and Russia’s total TNW inventory is six to seven times larger. In terms of context, Russia leads in TNWs, but trails in missile defense, conventional forces, and deployed and nondeployed strategic warheads. James Acton observes that each party is concerned about the other’s lead.\(^80\) In terms of role, Russia sees TNWs as conflict-termination tools and counterbalances to U.S. and Chinese conventional forces, while NATO sees U.S. TNWs as an Alliance political symbol and—as an escalatory wrung—deterrents to Russian TNWs. In terms of location, Russia’s TNWs are on Russian territory and officially all in storage, while reportedly 200 U.S. TNWs are in Europe and deployed near their fighter jet DVs. In terms of stockpile reconstitution capability, Russia continues to produce new warheads, while the United States does not. To this list we can add negotiating parties: Russia is one country, while twenty-eight states (with disagreements on TNWs) are NATO members and five host U.S. TNWs.

Finally, politics are a major challenge in their own right. Immediately after New START, the politics appeared reasonably favorable to a follow-on agreement. At present, strong domestic political factors in the United States and Russia run against a new round of negotiated nuclear reductions of any kind, especially the skepticism of Republicans in Congress to concessions of any kind to Russia, and the benefits to the Putin government of anti-Americanism and retaining nuclear systems. Additionally, relations between Presidents Obama and Putin personally and between their governments are relatively poor. Some Russian statements in response to Obama’s June 2013 Berlin nuclear arms control speech were dismissive.\(^81\)

Negotiating and securing ratification of an agreement on tactical nuclear arms would not be easy. It likely would be a multiyear project and may pull in other issues. Yet politics can and do shift, and the other challenges I identify may well be mitigated, starting with refutation of the conventional wisdom that tactical forces have never been regulated. I do that in Part II, while also explaining that the arms control regulatory regime provides informative precedents on verification that could make this challenge more manageable. In the Parts that follow,


I move on to the impending end of the tactical versus strategic distinction and to my recommended ultimate solution—a new treaty—and finally to a treaty’s theoretical implications.

II. THE REGULATORY REGIME’S RELATIVE NEGLECT OF TACTICAL NUCLEAR FORCES

Tactical arms represent nuclear arms control’s frontier. Like the American West in the 1800s, the tactical nuclear realm is not as regulated as areas in which law has been applied on a comprehensive, deep, and extended basis. But as with the Old West, allegations of lawlessness are inaccurate and a bit romantic.

It is true that there is no treaty focused specifically on regulating all tactical nuclear arms (and indeed, I argue for one). And the one treaty arguably focused on tactical nuclear arms—the 1987 INF Treaty—is narrowly bounded. But my analysis of the nuclear arms control regime demonstrates that a series of multilateral, bilateral, and national processes have regulated tactical arms, albeit in incomplete, thin, or expiring ways. These regulatory forays provide precedents for current efforts to regulate tactical nuclear weapons, although they are instructive rather than controlling precedents.

My argument in this Part is that tactical nuclear arms have been regulated on a limited basis when they have taken on strategic significance.

Section A analyzes the multilateral legal regime. This NPT-centered body of international law is animated by the idea that any nuclear warhead is a major—that is, a strategic—threat to peace and security. Accordingly, at this aspirational level, the regime has taken a categorical approach to regulating all nuclear warheads.

Moving from the softest to the hardest applicable law, section B presents the findings of my analysis of the bilateral Washington–Moscow nuclear treaty regime. It has regulated tactical DVs with arguable capability against strategic targets.

Fighter jets and other short-range tactical DVs are regulated by the 1990 Conventional Forces in Europe (CFE) Treaty, which is the focus of section C, and a second area of hard law. However, these tactical DVs are not regulated as nuclear DVs but as conventional weapons.

In section D, I review the single instance to date of arms control focused broadly on tactical nuclear systems, the single example so far of parallel unilateral administrative (presidential, non-treaty) action by Washington and Moscow: the 1991–1992 Presidential Nuclear Initiatives. The PNIs were “strategic” in the sense that they responded to enormous concern about Soviet warhead security, took tactical arms off the negotiating table for the moment, and cleared the way for the 1993 START II treaty on strategic DVs. Yet Russia’s implementation of the PNIs is uncertain.

In section E, I provide a legislative history of the U.S. Congress’s work on tactical nuclear arms. Although prescient, the U.S. national legislature’s efforts
to regulate another power’s weapons have, to date, been predictably limited in their effects.

A. MULTILATERAL NUCLEAR LEGAL REGIME

A body of multilateral treaty law concerning nuclear weapons and nuclear materials generally applies to tactical and strategic nuclear warheads without differentiation. This categorical approach stems from a core concept behind the NPT: any nuclear weapon is a major threat to peace and security. Restated, international law at its highest level of generality has regulated TNWs because they have strategic significance.

Today, no part of the multilateral legal regime is focused on TNWs. Efforts by opponents of nuclear weapons to argue for their per se illegality have proven unsuccessful and, in 1996, yielded an International Court of Justice (I.C.J.) advisory opinion perversely somewhat more favorable to TNWs than to their strategic siblings. The United Nations has studied TNWs. But U.N. resolutions—like the multilateral treaty regime and the I.C.J.—have not specifically regulated TNWs because of the aspirational, categorical approach to nuclear weapons at the multilateral level.

1. Treaties

The I.C.J. noted in its 1996 Nuclear Weapons advisory opinion that there is no international convention banning nuclear weapons, as there is for chemical and biological weapons.82 Instead, for the past half century, a growing number of multilateral treaties have governed generally the possession (including acquisition and manufacture), deployment, and in some cases use and threat of use, security, and testing of nuclear weapons.83

The foundation of the multilateral nuclear legal regime is the 1968 NPT.84 In Article II, the NPT bars acquisition of nuclear weapons by non-nuclear weapon states. Article VI requires the NPT-recognized nuclear weapon states—the P-5—“to pursue negotiations in good faith on effective measures relating to...nuclear disarmament.”85 Reflecting the treaty’s categorical opposition to nuclear proliferation and categorical support for nuclear disarmament, the NPT’s text draws no tactical versus strategic distinction. The regular NPT Review

82. Legality of Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 57, 58 (July 8).
83. Id. ¶ 58.
85. NPT, supra note 5, art. VI. For discussion of the NPT’s history, see David A. Koplow, *Bonehead Non-Proliferation*, 17 FLETCHER F. WORLD AFF. 145 (1993).
Conferences held every five years since 1975 have reflected this view. The Final Document of only one—the 2000 conference—referenced TNWs. Eight years after the PNI’s, it called for further reductions “based on unilateral initiatives.” In May 2012, the preparatory committee for the 2015 Review Conference did not repeat the 2000 Conference’s emphasis on unilateralism and instead emphasized “continue[d] negotiations to achieve greater reductions,” including TNWs.

A slate of treaties applies to where nuclear weapons may be located. They ban their deployment in space, on the seabed beyond a twelve-mile coastal zone, and in a series of terrestrial nuclear-free zones including Antarctica, Latin America and the Caribbean, South Pacific, Southeast Asia, Africa, and Central Asia. Regulating TNWs differently than other nuclear weapons...
would run against the exclusionary intent of these treaties. None reference TNWs.

Similarly, two multilateral treaties calling for protection of nuclear weapons and materials, written with proliferation and nuclear terrorism in mind, also reflect the categorical approach. Neither the 1980 Convention on the Physical Protection of Nuclear Material, nor the 2005 Convention for the Suppression of Acts of Nuclear Terrorism, mention TNWs, which in the U.S. and Russian arsenals are the warheads most attractive to terrorists.97

Finally, two multilateral treaties govern nuclear testing. Since 1963, the Limited Test Ban Treaty has banned nuclear tests in the atmosphere, space, and underwater.98 The Comprehensive Nuclear Test Ban Treaty (CTBT), signed in 1996, would ban all explosive nuclear weapons testing.99 The CTBT has not entered into force because the U.S. Senate has not consented to ratification, due in part to arguments by opponents that the CTBT’s verification system would not detect some low-yield testing—weapons most likely to be TNWs.100 Neither testing treaty references TNWs directly.

2. Judicial Process and Customary International Law

Nuclear weapon opponents have argued on the basis of this network of treaties that the use or threat of use of nuclear weapons is illegal per se under customary international law. Nuclear opponents also argue that nuclear use cannot respect the right of neutrality under international law, nor meet the foundational requirements of necessity, distinction, proportionality, and humanity in the use of force as required by international humanitarian law (IHL) and the law of armed conflict (LOAC),101 because nuclear weapon effects are hard to contain. Heat, blast, radiation, and fallout could bring harm far afield in space


101. For discussion of these principles generally, see GARY D. SOLIS, THE LAW OF ARMED CONFLICT: INTERNATIONAL HUMANITARIAN LAW IN WAR ch. 7 (2010).
and time to neutral nations and to persons and property protected under the Geneva Conventions. Nuclear opponents have also argued that any nuclear use also carries a heightened risk of escalation—to use of additional or larger nuclear weapons whose effects are yet harder to contain, or even to a nuclear holocaust.102

These arguments were considered by the I.C.J. in 1996. The court in its landmark Nuclear Weapons opinion was sympathetic, writing that “use of such weapons in fact seems scarcely reconcilable” with IHL and LOAC.103 However, the I.C.J. saw these arguments countered by “the fundamental right of every State to survival” and, therefore, to resort to self-defense under Article 51 of the U.N. Charter, the longstanding successful practice of nuclear deterrence, and the reservations many States have appended to multilateral nuclear treaties.104

Confronted by these countervailing considerations, the I.C.J. held that threat or use of nuclear weapons is neither specifically authorized nor universally prohibited under international law.105 On a 7–7 tie vote, the court replied to the General Assembly that nuclear threat or use would “generally be contrary” to international law but “the Court cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defense, in which the very survival of a State would be at stake.”106 Michael Reisman observes that the I.C.J.’s attempted finessing of its conflicted thinking failed, tending to legitimize nuclear weapons as an instrument of war.107 With the status quo characterized by P-5 possession of thousands of nuclear weapons and by decades of argument and evidence that deterrence is linked to state survival, a presumption of legality was the default in the wake of the deadlocked court’s dodge.

The I.C.J. majority had the opportunity to regulate TNWs separately, referencing them twice.108 But the I.C.J. dodged here too, falling back on categorical analysis. The court explicitly refused both to “enquire into the question of whether [TNWs] exist which are sufficiently precise to limit” risks to non-

102. For these arguments and discussion from the I.C.J., see Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 60 (July 8) (network of nuclear treaties “bear witness... to the emergence of a rule of complete legal prohibition”); id. ¶¶ 34–35, 41, 78, 92 (LOAC, IHL, and nuclear weapons); id. ¶ 93 (neutrality); id. ¶ 43 (escalation); id. ¶ 26 (genocide). For other arguments made to the court, see id. ¶¶ 27–33 (environmental damage); id. ¶¶ 54–56 (poison weapons); id. ¶ 24 (human rights).
103. Id. ¶ 95.
104. Id. ¶ 96; see also id. ¶ 73 (discussing the nascent opinio juris against nuclear weapons versus practice of deterrence).
105. Id. ¶ 105(2)(A)–(B).
106. Id. ¶ 105(2)(E); see also id. ¶ 97. For discussion of the opinion, see James D. Fry, Contextualized Legal Reviews for the Methods and Means of Warfare: Cave Combat and International Humanitarian Law, 44 COLUM. J. TRANSNAT’L L. 453, 461–62 (2006).
107. Reisman, supra note 84.
108. See Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. ¶ 60. In a third place, the opinion quotes one state’s view that a low-yield nuclear weapon—presumably a TNW—could be used under circumstances that “caused comparatively few civilian casualties.” Id. ¶ 91.
combatants, and to assess the argument that “the ‘clean’ use of smaller, low yield” TNWs could carry a sufficiently low risk of escalation so as to meet IHL and LOAC requirements.109

Note, however, that because the distinction, proportionality, and neutrality risks associated with nuclear weapons generally could be at their lowest ebb with small TNWs, the I.C.J.’s dodge ironically left TNWs with, if anything, a greater aura of legality than their strategic siblings. In a legal space as normative, aspirational, and contested as customary international law, arguments mentioned but not rejected can be reinforced, especially status quo arguments. For these reasons, tactical warheads arguably emerged from international judicial review less regulated than strategic warheads. This tracks the regulatory trend of strategic-focused nuclear regulation I have identified.

3. U.N. Resolutions

Discussed in the Nuclear Weapons opinion but rejected as creating an opinio juris on the illegality of nuclear weapons is another multilateral nuclear regulatory approach: U.N. resolutions.110 Starting with Resolution 1653 (XVI) of 1961, the U.N. General Assembly (UNGA) typically has passed an annual resolution stating both that nuclear weapons currently are illegal and that—as the NPT urges111—should be outlawed under a new convention.112 UNGA Resolution 1653 did not depart from the categorical approach to mention

109. Id. ¶ 43, 94. The court emphasized that it did not have “sufficient basis for a determination” about clean, low-yield TNWs because no state arguing for their legality had explained why TNW use would not escalate to “all-out use of high yield nuclear weapons.” Id. ¶ 94. Of course, in so doing, the I.C.J. left intact a status quo under which there is no legal authority holding that they are per se illegal. For discussion of the I.C.J. opinion and TNWs generally, see Charles J. Moxley, Jr. et al., Nuclear Weapons and Compliance with International Humanitarian Law and the Nuclear Non-Proliferation Treaty, 34 FORDHAM INT’L L.J. 595, 642, 660 (2011); see also Charles J. Moxley, Jr., The Unlawfulness of the Use or Threat of Use of Nuclear Weapons, 8 ILSA J. INT’L & COMP. L. 447 (2002) (assessing the U.S. position on TNWs against the Nuclear Weapons opinion); Burns H. Weston, Nuclear Weapons and the World Court: Ambiguity’s Consensus, 7 TRANSNAT’L L. & CONTEMP. PROBS. 371 (1997) (briefly considering TNW legality in view of the Nuclear Weapons opinion).

110. Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. ¶ 68–74. For a recent case for a nuclear weapons convention, see Peter Weiss, Taking the Law Seriously: the Imperative Need for a Nuclear Weapons Convention, 34 FORDHAM INT’L L.J. 776 (2011) (continuing the categorical approach to nuclear weapons regulation and not referencing TNWs).

111. NPT, supra note 5, art. VI.

TNWs. None did for four decades. In October 2004, one UNGA resolution—opposed by the United States—did squarely address TNWs, calling for further cuts below those underway by Washington and Moscow.113 This 2004 resolution was informed by a 2000 U.N. Institute for Disarmament Research report on TNWs that called for reductions unilaterally or by treaty.114 The 2004 resolution was not followed by others focused on TNWs. Instead, the UNGA returned to the categorical approach. TNWs did resurface around the time of the New START treaty. In 2009 and 2011 the UNGA passed a general disarmament resolution urging “further reduction of [TNWs]... based on unilateral initiatives and as an integral part of the nuclear arms reduction and disarmament process.”115 The resolution did not explain why it explicitly emphasized unilateral reductions instead of a bilateral treaty, the regulatory approach to which we now turn.

B. BILATERAL NUCLEAR LEGAL REGIME: SEVEN TREATIES AND SEVEN NUCLEAR SYSTEMS

David Koplow has observed that arms control’s key tools “are formal, negotiated agreements, implemented pursuant to internationally recognized legal procedures”116—in other words, treaties and congressional–executive agreements. Today, the latter are increasingly common overall.117 Yet in the arms control realm, treaties remain the strongest elements of the regulatory regime. The bilateral Washington–Moscow treaties are “the single most important component of international regulation of arms.”118 Seven bilateral nuclear treaties dating from 1972’s SALT I to 2010’s New START have focused intensively on


118. Koplow, supra note 116, at 234.
regulating strategic nuclear forces. This hardest of arms control law has enabled the parties to count, cap, and verify the dismantlement of strategic DVs and to calculate and cap the number of warheads associated with them. These accords have never allowed similar verification regarding warheads, much less reached nondeployed warheads.

These treaties have reached seven arguably tactical DVs with alleged strategic relevance. Although this regulation often has been thin and impermanent, it does provide an informative precedent: tactical DVs have been regulated by treaty, and their dismantlement has been verified. The New START inspection regime is the starting point for any tactical nuclear verification regime.

1. Geopolitical Purpose and Context

In the 1960s and 1970s, Washington and Moscow negotiated nuclear treaties to slow the superpower nuclear arms race in the context of détente, the reduction in superpower tensions initiated by the Nixon Administration. In the 1980s, Ronald Reagan and Mikhail Gorbachev negotiated treaties in order to end the arms race and facilitate the Cold War’s end. In the 1990s and 2000s, after the Cold War, the United States and Russia used arms control treaties to manage and ensure reductions. In recent years, the Obama Administration has additionally used the bilateral arms control process to buttress the global nonproliferation regime. Informing these regulatory drivers have been mutual interests in: improving bilateral relations generally; balancing nuclear forces in a way that enhances strategic stability (especially by disincentivizing shooting first in a crisis); progress on the NPT’s Article VI legal and political obligation of “negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament”; and budgetary cost avoidance.120

These factors might have resulted in treaties governing all nuclear DVs and warheads. However, threat, verification, and political considerations augured against inclusion of tactical systems.

In geographic, temporal, and moral terms, strategic DVs presented the most

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119. Washington and Moscow have concluded two bilateral treaties concerning nuclear testing, the Threshold Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty. See Treaty on Underground Nuclear Explosions for Peaceful Purposes, U.S.-USSR, May 28, 1976, 15 LL.M. 891; Treaty on the Limitation of Underground Nuclear Weapon Tests, U.S.-USSR, July 3, 1974, 13 LL.M. 906. These treaties were signed in the 1970s and entered into force in 1990. Reflecting the categorical approach in multilateral testing treaties, neither mentions TNWs. However, there is a TNW link: the TTBT limits test yields to 150 kilotons, a range embracing most TNWs and excluding most strategic warheads.

120. NPT, supra note 5, art. VI. For recent identification of many of these factors, see Stephen M. Walt, Whatever Happened to Arms Control?, FOREIGN POL’Y (Mar. 29, 2012), http://walt.foreignpolicy.com/posts/2012/03/29/whatever_happened_to_arms_control. For recent mention of the strategic ability, U.S.–Russian Relations, and budget drivers, see S. COMM. ON FOREIGN RELATIONS, REP. ON TREATY WITH RUSSIA ON MEASURES FOR FURTHER REDUCTION AND LIMITATION OF STRATEGIC OFFENSIVE ARMS (THE NEW START TREATY), EXEC. REP. No. 111-6, at 5–11 (2d Sess. 2010) [hereinafter SFRC Report on New START].
immediate threat. They can cross intercontinental distances in mere minutes (via ICBMs and SLBMs) or hours (via heavy bombers), typically carry the highest-yield warheads, and, when on continual alert, hold at continual risk strategic DVs, national leadership, industrial sites, and millions of lives on the home territories of the parties. Strategic DVs also present an easier verification challenge because they are big enough to be observable at a distance via satellites and other National Technical Means (NTM). For size reasons, strategic DVs are also readily observable by on-the-ground inspectors. Allowing strategic DVs to be inspected exposes only a discrete, special class of military forces to foreign eyes. Warheads, by contrast, are just a few feet in length and are nearly as easily concealed and transported as an individual person. Tactical DVs, for their part, are also generally dual-purpose, while strategic DVs have all been built for their primary nuclear mission. The prospects of intrusive, wide-ranging inspections for warheads, and of inspection of dual-capable but primarily conventional DVs including fighter jets, surface ships, and artillery, raised alarm in national security establishments. Additional U.S. political factors, which have periodically augured against extension of the bilateral regime to tactical nuclear arms, include the process challenge of involving NATO’s multitude of members in any tactical nuclear treaty, fear of Soviet nuclear superiority in the 1970s and 1980s, and a preference for “arms control without agreements” among some on the American right (the latter of which is periodically embraced by policymakers and arms control advocates across the political spectrum). On the Soviet-Russian side, factors working against a tactical nuclear treaty relate to fear of Western nuclear and conventional superiority, concern about China, and concern about Western espionage and hostility. For all of these reasons, for the past four decades, a treaty negotiation regarding tactical arms has appeared less urgent, more complicated, and politically more hazardous than arms control focused on strategic DVs.

2. Seven Nuclear Treaties and Seven Arguable Tactical Delivery Vehicles

As a functional matter, the bilateral nuclear arms control treaty regime has regulated strategic DVs by (a) capping strategic DV deployments; (b) in later treaties, requiring strategic DV dismantlement; (c) allowing verification via NTM and (later) on-site inspections; (d) providing agreed accounting methods for calculating the number of strategic warheads attributed on paper to, or oper-
ationally deployed with, strategic DVs, and on that basis, determining whether each side is under deployed strategic warhead caps; and (e) data exchanges and notifications. None of these treaties have allowed tracking of individual warheads, or capped total warhead stockpiles, to include tactical warheads and nondeployed strategic warheads.

Reviewing seven treaties (five of which entered into force), my analysis identifies seven instances of regulation of an arguably tactical DV. In each case, a party asserted it was a strategic DV or implicated strategic DVs or targets. These DVs were ABMs; three varieties of cruise missiles (Air-Launched Cruise Missiles (ALCMs), Sea-Launched Cruise Missiles (SLCMs), and Ground-Launched Cruise Missiles (GLCMs)); Air to Surface Ballistic Missiles (ASBMs); Theater Ballistic Missiles (TBMs); and the Tu-22M Backfire bomber.

a. SALT I. The talks that in 1972 produced the first bilateral Washington–Moscow nuclear forces agreement, the Strategic Arms Limitation Treaty (SALT I), owed their success in part to what John Lewis Gaddis theorized as the Nixon Administration’s asymmetrical grand strategy of containing Soviet power.123 Rather than respond in kind to Soviet achievement of rough equivalence in strategic forces, President Nixon and National Security Advisor Henry Kissinger used “negotiations as a means of reconstituting a power balance.”124 Capping U.S. and Soviet strategic forces would deny the Soviet Union strategic nuclear superiority, foster strategic stability, result in billions of dollars in cost avoidance, and facilitate détente.125 For the USSR, SALT I allowed consolidation of strategic nuclear parity and cost avoidance.

SALT I included two linked legal instruments.126 One concerned offensive forces and was contained in a congressional–executive agreement: a five-year Interim Agreement capping deployed ICBM silos and capping SLBM launch tubes and SSBNs at levels that left the Soviet Union with a quantitative edge in their qualitatively inferior strategic DVs.127 The USSR was permitted up to 1330 ICBM silos and 950 SLBM launch tubes on 62 SSBNs, and the United States was permitted up to 1054 ICBM silos and 710 SLBM launch tubes on 44

123. JOHN LEWIS GADDIS, STRATEGIES OF CONTAINMENT: A CRITICAL APPRAISAL OF POSTWAR AMERICAN NATIONAL SECURITY POLICY 304 (1982).
124. Id.
125. See id. at 324–26, 328. For congressional explanation of SALT I, see U.S.-USSR Strategic Arms Limitation Joint Resolution, Pub. L. No. 92-448, 86 Stat. 746 (1972) [hereinafter SALT I Resolution] (endorsing the Interim Agreement signed by the President).
126. For legal linkage, see SALT I Resolution, supra note 125, and SALT I Interim Agreement, supra note 6. For discussion during consideration by Congress, see H. COMM. ON FOREIGN AFFAIRS, REP. ON AGREEMENT ON LIMITATIONS OF STRATEGIC OFFENSIVE WEAPONS, H.R. REP. NO. 92-1324, at 2 (1972) [hereinafter HFAC SALT I Report].
127. SALT I Interim Agreement, supra note 6, arts. I, III, VIII(2). Gaddis reflects the U.S. and congressional consensus at the time that SALT I was to the United States’ advantage. See GADDIS, supra note 123, at 324; HFAC SALT I Report, supra note 126, at 6.
SSBNs. The Agreement’s preamble referenced the goal of reduced tensions and Article VI NPT obligations. The Agreement did not address bombers or cap warheads. The latter omission permitted unlimited multiple independent re-entry vehicles (MIRVs) on missiles, leading to warhead concentrations that could incentivize striking first in a crisis.

The other half of SALT I, which was contained in the ABM Treaty, was about defensive forces. It restricted each party to two ABM sites of one hundred missiles each, one protecting the capital and the other an ICBM field. A 1974 Protocol lowered the ABM site limit to one each.

The theory of the two halves together was that MAD (and therefore deterrence) would be maintained because neither side could achieve a dominant ballistic missile strategic DV lead nor an impregnable defensive ABM system. Protecting the capital and an ICBM field on each side would deter striking first by increasing the probability that the strike would be met by a devastating retaliatory strike.

Due to distrust, lack of transparency, and the shortcomings of verification technology, the parties agreed to rely on NTM capabilities that could observe strategic DVs and ABMs from a distance. The tactical nuclear verification problem also helped Washington resist Moscow’s efforts—to be often repeated—to include tactical arms that could reach the Eastern Bloc from Western Europe.

The legal and theoretical linkage of the offensive and defensive halves of SALT I made clear that, in 1972, Washington and Moscow saw ABMs as strategic forces. However, their regulation in bilateral nuclear arms control’s first agreement would not be repeated, and it would not endure. In 2003,

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128. The ICBM silo numbers were a matter of existing fact, while the SLBM and SSBN numbers were in the Interim Agreement’s Protocol. See SALT I Interim Agreement, supra note 6, Protocol.
129. Assuming arguendo that two warheads were fired at each target and that each side was fielding ICBMs with ten warheads each, one attacking ICBM could destroy five ICBMs and fifty warheads on the ground on the other side.
130. ABMT, supra note 6, art. III. The USSR deployed a nuclear-armed ABM system around Moscow, and the United States deployed a similar system around the Grand Forks, North Dakota ICBM field. The Moscow system continues to operate. The U.S. system was terminated by Congress after achieving operational status due to concern that it made little contribution to deterrence and was costly. Department of Defense Appropriations Authorization Act of 1976, Pub. L. No. 94-106, 89 Stat. 531 (1975). Subsequent U.S. missile defenses have not been nuclear armed.
131. ABMT, supra note 6, art. I.
132. SALT I Interim Agreement, supra note 6, art. V; ABMT, supra note 6, art. XII.
133. For discussion of SALT I talks as they relate to tactical weapons, see Safranchuk, supra note 22, at 47–49.
the United States withdrew from the ABM Treaty. That severed the legal link between ABMs and the bilateral nuclear arms control regime and ended even indirect regulation of the nuclear-armed ABM system around Moscow. Disagreement remains about whether its warheads are strategic or tactical.

b. SALT II. Moscow tried again, without enduring results, to bring U.S. tactical arms into the bilateral arms control regime during the SALT II talks. Moscow did get three new cruise missiles into the 1979 treaty. But the Soviets failed to persuade the Americans to bring the thousands of U.S. TNWs in Europe deployed with air and ground forces into the strategic DV-focused SALT II talks. The treaty never entered into force.

SALT II was to replace the five-year SALT I Interim Agreement with a comprehensive strategic DV treaty. SALT II had similar purposes to SALT I: facilitating détente, strategic stability, and cost avoidance. Washington achieved its main objectives of an equal strategic DV limit and beginning Soviet reductions. SALT II recognized heavy bombers as strategic DVs and called for an overall cap of 2400 strategic DVs initially and 2250 by 1981—requiring a Soviet cut and allowing U.S. increases. Like the SALT I Interim Agreement, SALT II did not reach actual warheads and allowed (under a cap) MIRVed strategic DVs, mostly because, like SALT I, it relied for verification on remote NTM that could not count warheads.

For the first time, SALT II regulated cruise missiles. SALT II capped ALCMs per heavy bomber, and barred SLCM and GLCM deployment until 1981, where these missiles had ranges greater than 600 kilometers. This low range threshold suggests that cruise missiles should be viewed as tactical. Also, none would have intercontinental range as SALT II defined it for ICBMs: 5500 kilometers. On the other hand, ALCMs, SLCMs, and GLCMs were strategic DVs in Moscow’s view because they arguably could hit Warsaw Pact strategic

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136. For example, leading open source authorities classify Russian ABM warheads as TNWs. See Kristensen & Norris, supra note 19, at 68.


138. MIRVs are referenced in many SALT II provisions. See SALT II, supra note 6, art. XV.

139. The Protocol only controlled deployment through 1981 and included in Article II its SLCM and GLCM bans. See SALT II, supra note 6, art. IV(14); Second Agreed Statement, supra note 134 (discussing the bomber and ALCM limit).

140. See SALT II, supra note 6, art. II(8); Common Understandings Related to Second Agreed Statement, supra note 134.
targets from nearby airspace, waters, and NATO territory. The United States saw ALCMs as strategic because they would be carried by intercontinental-range bombers but viewed SLCMs and GLCMs as tactical.

ASBMs were an additional system on the tactical/strategic DV line regulated by SALT II. As with cruise missiles, SALT II regulated ASBMs that had the tactical-looking range of 600-plus kilometers. However, like ALCMs, these ballistic missiles were carried by heavy bombers. SALT II’s Protocol barred ASBM deployment through 1981. Evidently, none were fielded.

The ASBM rule’s futility echoed SALT II’s ultimate fate. Political support within the United States waned, as did détente. President Jimmy Carter withdrew SALT II from Senate consideration after the December 1979 Soviet invasion of Afghanistan. Both parties informally observed its limits until 1986. SALT II’s forays into regulating arguably tactical DVs proved ephemeral. All but one took more than a decade to be revived.

c. INF Treaty. The 1987 INF treaty meant the verified end of the GLCMs in Europe that SALT II would have merely delayed—and more. Analysis of this accomplishment illuminates the several ways in which the INF Treaty was revolutionary and precedential for our purposes.

For the first time, a bilateral nuclear treaty required DV dismantlement.

Second, the treaty eliminated an entire class of DVs: ground-launched missiles with ranges from 500 to 5500 kilometers and their launchers. In effect, it banned GLCMs plus Theater Ballistic Missiles (TBMs) such as the U.S. 
Pershing II and its Soviet counterparts. The treaty led to the dismantlement of 846 U.S. missiles and 1846 Soviet missiles.

Third, the INF Treaty was focused on DVs that were arguably tactical because of their nonintercontinental range, rather than regulating tactical DVs at the edges of a strategic DV treaty.

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141. On SLCMs, for example, see Woolf, supra note 4, at 6.
142. SALT II, supra note 6, arts. III(1), II(3)(d); First Common Understanding, supra note 134, at art. II(4), (6). The Protocol, which was to remain in force through 1981 unless extended, banned ASBM flight testing and deployment. See SALT II, supra note 6, arts. IV, III.
143. See INF Treaty, supra note 6, pmbl. § I, arts. II, III. The treaty identifies two kinds of what it terms ground-launched ballistic missiles (GLBMs): “intermediate-range missiles” and “shorter-range missiles.” See id. art. II(5–6). These do not conform exactly with the widely accepted definitions of intermediate-range ballistic missiles (IRBMs) or short-range ballistic missiles (SRBMs)—much less medium-range ballistic missiles (MRBMs)—used by nongovernment authorities and the United States Government. See, e.g., Nat’l Air & Space Intelligence Ctr., Ballistic and Cruise Missile Threat 3 (2006), available at http://www.nukestrat.com/us/afn/NASIC2006.pdf. I use the more inclusive term Theater Ballistic Missile (TBM) for convenience, acknowledging Steve Pifer’s observation that in the different time of the early 1980s the United States disfavored this term out of respect for West German sensitivity about being regarded as a theater of war.
145. The literature reflects disagreement about whether the INF Treaty concerns tactical systems. See, e.g., Woolf, supra note 4, at 2, 6–7 (stating that INF Treaty not listed as strategic treaty); Lewis &
Fourth, the INF Treaty provided an on-the-ground “effective verification”
regime, realizing the principle “trust, but verify.”\textsuperscript{146} The model included five
kinds of on-site inspections, continuous monitoring of production facilities, data
exchanges and notifications, and cooperative measures, such as making missiles
observable by NTM.\textsuperscript{147}

And fifth, the treaty was at once bilateral and multilateral. The INF Treaty
proper and its missile bans applied to Washington and Moscow, and it allowed
inspections in the territory of other NATO and Warsaw Pact states.\textsuperscript{148} Meanwhile, the United States negotiated a detailed Basing States Agreement with
Belgium, West Germany, Italy, the Netherlands, and the UK, enabling Soviet
inspections of the U.S. missiles on their territory.\textsuperscript{149} Finally, Soviet successor
states joined the INF Treaty. The INF experience provides a clear precedent for
a new agreement on the last U.S. TNWs in Europe, which are in the same
basing countries plus Turkey.

GLCMs and especially TBMs were eliminated because these tactical-
range weapons had great strategic relevance. The \textit{Pershing II}s in West Germany
were a mere ten-minute flight time from Red Square, making them a first
strike “decapitation” threat in Soviet eyes.\textsuperscript{150} Eliminating GLCMs and TBMs
also demonstrated that Washington and Moscow could, via treaty, reduce
nuclear forces verifiably. That opened the door to the larger scale START
treaties, acceleration of the Cold War’s thaw, and military spending reduc-
tions.\textsuperscript{151}

The INF Treaty remains in force, and its ban on GLCMs and TBMs is the
only extant regulation of arguably tactical DVs in a bilateral treaty. However,
over the past decade Russia has signaled that its commitment to the INF Treaty
is waning. Tensions with Washington over missile defense and concerns about Beijing’s rising military power are likely explanations. Its future is uncertain.

d. START I. The 1991 Strategic Arms Reduction Treaty (START I) marked application of the INF Treaty’s reductions-plus-inspections model on a larger scale, and return to focus on strategic DVs. It accomplished its purpose of halting the nuclear arms race, while also facilitating the end of the Cold War, improved strategic stability of deployed forces, and cost savings.

The treaty capped ICBMs, SLBMs, and bomber strategic DVs at 1600 for each party, with sublimits. As in the INF Treaty, START I required that excess DVs be eliminated. START I provided a detailed verification process featuring on-site visits, remote viewing via NTM, and data exchanges and notifications. START I was also successfully multilateralized to include Russia, Ukraine, Belarus, and Kazakhstan after the USSR’s dissolution.

START I regulated three varieties of arguably tactical DVs that one or both parties claimed held at risk strategic forces or targets. ALCMs, which had intercontinental range by virtue of hitching a ride on long-range bombers, were capped in the treaty text itself on a per-bomber basis. In contemporaneous declarations, the parties pledged to limit SLCMs with ranges above 600 kilometers to 880 for each side, and to limit Soviet Tu-22M Backfire
medium-range bombers to 500. Exclusion of SLCMs and the Backfire from the treaty text exempted these systems from the inspection regime, which did apply to ALCMs.

The first START treaty was the first of the bilateral nuclear treaties to begin to regulate warheads, albeit indirectly, and in a way only accountants, nuclear theologians, and lawyers could love. Because the parties were uncomfortable with inspection and tracking of actual warheads, START I attributed warheads on paper to strategic DVs under complex counting rules. These often diverged from actual warhead loading. Yet they facilitated real reductions. As strategic DVs were dismantled, both sides reduced deployed strategic warheads from around 10,000 in 1991 to get under START I’s cap of 6000 attributed strategic warheads by 2001. START I expired in 2009. In 2011, it was replaced by New START.

e. START II. START II, signed in January 1993, continued START I’s work of capping, inspecting, and verifiably eliminating strategic DVs and of tabulating warheads on paper under complicated counting rules. START II lowered strategic DV caps and reduced the (attributed) deployed strategic warhead cap for each party to the range of 3000 to 3500. It refashioned counting rules and limits on strategic DVs to enhance strategic stability. But it never entered into force due to disagreeing ratification resolutions produced by delay, souring U.S.–Russian relations generally, and disagreement about missile defense.


161. Why the difference? The long-range bombers carrying ALCMs were strategic DVs that would already be subject to inspection under START I. In contrast, SLCMs were on mainly conventional naval vessels not subject to START inspection, and the U.S. Joint Chiefs of Staff expressed concern about SLCM verification. See SFRC Report on New START, supra note 120, at 22; U.S. Dep’t of Defense, START I Treaty Article-by-Article Analysis, supra note 160; OFFICE OF TECH. ASSESSMENT, MONITORING LIMITS ON SEA-LAUNCHED CRUISE MISSILES (1992), available at http://www.fas.org/ota/reports/9226.pdf.

162. START I, supra note 6, art. II(1)(b); Fact Sheet: START Aggregate Numbers of Strategic Offensive Arms, U.S. Dep’t of State (July 1, 2009), www.state.gov/documents/organization/130361.pdf.

163. START II, supra note 6, art. I.

164. Bans on first strike—incentivizing MIRVed ICBMs, and especially heavy MIRVed ICBMs such as the Soviet-Russian SS-18 Satan, were arguably START II’s greatest achievements and have never been revived. See START II, supra note 6, at arts. I–IV.

165. If Washington and Moscow had moved to ratify START II as quickly as START I, it may have survived. For key documents, see RESOLUTION OF ADVICE AND CONSENT TO THE RATIFICATION OF START II,
START II largely abandoned START I’s forays into regulating arguably tactical DVs. START II did extensively address ALCMs, but it counted bombers as “equipped” with warheads as declared by the parties rather than by stipulating ALCM loads.166 And the START II package of documents did not carry forward limits on SLCMs or the Backfire. Between START I and II, tactical arms had been taken off the negotiating table for the moment by the 1991–1992 PNIs (see section II.D below), including withdrawal of all nuclear SLCMs from U.S. ships.

In 1997 in Helsinki, Presidents Bill Clinton and Boris Yeltsin agreed in a joint statement that a START III agreement would cut 2000 to 2500 strategic warheads for each party, and provide for “transparency . . . and the destruction of [SNWs].”167 The Presidents “also agreed that in the context of START III negotiations their experts will explore, as separate issues, possible measures relating to nuclear [SLCMs] and tactical nuclear systems.”168 President Clinton and President Yeltsin stipulated, however, that START II had to come before START III.169 START II died, a second Bush Administration philosophically uncomfortable with formal arms control agreements assumed office in the United States, and the promising Helsinki ideas—warhead transparency, warhead destruction, and regulating tactical nuclear weapons—dropped off the bilateral agenda for a decade and a half.

f. SORT. TNWs—and especially Russia’s insufficiently secure stockpile—assumed greater strategic significance after the September 11, 2001 terrorist attacks as a potential source of warheads for Al Qaeda’s stated desire to inflict a new Hiroshima on the United States (see section III.A for discussion). The new George W. Bush Administration wanted friendlier relations with Russia and to reduce nuclear stockpiles. However, it also wanted to cut arms unilaterally in informal coordination with Russia, in accordance with its adoption of skepticism of international law and a preference for arms control without treaties, an approach that had been gathering strength on the right for several decades.170 The U.S. arms control community was on board for the practical reason of

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166. START II, supra note 6, art. IV.
168. Id.
169. Id.
170. See George W. Bush, Remarks by the President to Students and Faculty at National Defense University (May 1, 2001), http://georgew bush-whitehouse.archives.gov/news/releases/2001/05/20010501-10.html. Particularly influential on Republican thinking was Kenneth L. Adelman, supra note 122, at
reviving the arms reduction process.\footnote{See, e.g., Isaacs, supra note 122.} Russia, however, insisted on a legal commitment, as did influential U.S. Senators of both parties.

The net result was signature in 2002 of a three-page treaty with effect on one day, December 31, 2012. The Strategic Offensive Reductions Treaty (SORT or Moscow Treaty) provided that on that day the parties could each have 1700 to 2200 operationally deployed strategic warheads as pledged in earlier statements by President Bush and President Putin.\footnote{SORT Treaty, supra note 6, art. I.} Each party could define its terms and configure its forces as it preferred. START I would expire three years before SORT’s single regulatory day, so there would be no inspection even of strategic DVs on New Year’s Eve 2012. SORT did focus on warheads rather than DVs, but its self-regulatory approach was unsubstantial. Tactical arms were entirely absent.

g. New START. The administrations of Barack Obama and Dmitry Medvedev reinitiated the START process, hoping to extend the START I inspection regime and the transparency it provided, cut unneeded weapons, enhance warhead security, strengthen strategic stability, capture cost avoidance in the midst of a global recession, and facilitate a broader “reset” of again-soured relations.\footnote{See New START, supra note 6, pmbl.} The United States placed great priority on the effect of a treaty on buttressing the NPT-based global nonproliferation regime and thereby restraining the nuclear programs of Iran and North Korea. Russia had a strong interest in requiring the United States to follow it down to the smaller strategic force it could afford.\footnote{In the SFRC’s view, Russia’s motive was “probably to prevent the United States from taking the opportunity to maintain substantially larger strategic forces than [Russia] can afford to field,” and “it is very likely that Russian forces would be reduced with or without the treaty.” SFRC Report on New START, supra note 120, at 23.}

The resulting New START treaty plus protocol and annexes runs 365 pages, with hard strategic DV limits of 700 deployed strategic DVs and 800 total by 2018, a cap of 1550 deployed strategic warheads, and detailed counting rules.\footnote{New START, supra note 6, art. II(1) (strategic DV and strategic warhead caps); id. art. III (counting rules). Note that some of the counting rules are quite artificial. For example, as under START I, bombers are counted as only having one warhead, when one B-52H, for example, can carry twenty ALCMs, each armed with a nuclear warhead.} New START repealed SORT and revived the START verification regime, at once simplifying and enhancing it.\footnote{New START, supra note 6, art. XIV(4) (SORT repeal); id. arts. VI–XII (transparency and verification). See also the treaty’s Protocol and its annexes on Telemetric Information, Notification, and Inspection. For discussion of the treaty generally, see Paul Rusman, New START: A Preliminary Analysis, 15 J. CONFLICT & SECURITY L. 557, 563, 571–72 (2010) (early academic treatment); Peter Baker, Twists and Turns on Way to Arms Pact with Russia, N.Y. TIMES, Mar. 26, 2010, http://www.nytimes.com/2010/03/27/world/europe/27start.html (negotiation overview focusing on Obama’s role).} New START increased annual inspections
of active strategic DVs, allows up to ten inspections per year of ICBMs and SLBMs to count actual warhead loadings on missiles (rather than attributed warheads as under START I), creates a joint strategic DV database, calls for strategic DVs to be labeled and tracked with unique identifiers (analogous to serial numbers), and provides for additional data exchanges and notifications of missile and bomber movements.\textsuperscript{177}

The treaty does not cap nondeployed strategic warheads, or provide for any transparency, much less warhead tracking or dismantlement. New START does not address TNWs or even follow many of its predecessor treaties in regulating arguably tactical DVs in limited ways.\textsuperscript{178} Negotiators decided early to leave tactical arms to a subsequent agreement.

New START and its enhanced verification regime serve as a starting point for tactical nuclear negotiations.\textsuperscript{179} One is definitional: any DV not regulated by New START ought to be considered tactical. Also, especially important are New START’s precedents of a common DV database and adding unique identifiers to DVs that allow individual pieces of nuclear hardware to be tracked. These verification steps mark a transformative conceptual step forward—from individual parties observing undifferentiated examples of types of hardware (for example, B-52 bombers on a flight line) and extrapolating from them an estimate of the full inventory of such hardware under caps and often artificial counting rules, to having a discrete list of the full universe of individually identified pieces of hardware and tracking them via a database available to both parties. This is essentially cooperative inventory tracking. There is no major conceptual jump from doing this with strategic DVs to doing this with tactical DVs. Both have been regulated already to at least some extent in bilateral treaties, and both are observable remotely from space and the air via NTM. The jump from verifying DVs to verifying warheads is more significant because warheads are smaller and therefore easier to conceal, but the basic inventory management task is similar.

C. BIPOLAR NONNUCLEAR LEGAL PRECEDENT: CONVENTIONAL FORCES IN EUROPE (CFE) TREATY

In addition to limited regulation of arguably tactical DVs in bilateral nuclear treaties and the on-site verification regimes in the INF and START treaties, there are two other informative superpower precedents of regulating tactical nuclear weapons. One is the 1990 Conventional Forces in Europe (CFE)
Treaty, representing regulation via bipolar multilateral non-nuclear treaty. The second is the Presidential Nuclear Initiatives (PNIs) discussed in section III.D below.

The CFE was an effort by Warsaw Pact and NATO states to manage the drawdown in conventional forces at the end of the Cold War, balance their reduction and withdrawal from Central Europe in a way that promoted stability, and eliminate the risk of surprise attack. CFE caps troop levels and five categories of air- and ground-based treaty-limited equipment (TLE) in a series of nested zones and overall East/West bloc caps. CFE does not regulate naval units.

CFE is a strong precedent on tactical nuclear arms: it regulates key tactical nuclear DVs via force limits, subject to robust verification, imposed via a multilateral treaty. The treaty caps fighter jets—the one remaining U.S./NATO tactical DV and a major part of Russia’s tactical DV force. CFE regulates these dual-capable aircraft not for their nuclear capability but because their conventional capability was relevant to the broader strategic (in its broadest sense) reduction of tensions in Europe at the Cold War’s end. In this respect, CFE regulation of jet fighters tracks the broad trend I have identified: at the moment when tactical nuclear arms are brought into the regulatory regime, those systems have strategic relevance in some way. Since the Cold War’s end, TNW-capable jet fighters have been subject to the CFE’s verification regime, which includes data exchanges and inspections of declared TLE sites (with no right of refusal) and other areas where a party believes TLE might be located (with a right of refusal). As Washington, its NATO allies, and Moscow contemplate tactical nuclear talks, CFE is also notable because all NATO states were involved in negotiations and it was expanded to thirty members to include Soviet successor states.


184. Crawford, in one of the few published treatments of CFE in light of potential tactical nuclear talks, makes a similar observation. Crawford, supra note 180, at 437 (observing that regional conventional arms control agreements, like CFE, provide a better framework for tactical nuclear weapons agreements than strategic nuclear weapons agreements between two superpowers).
Several notes of caution, however, are in order. First, CFE’s TLE ceilings are too high to limit tactical DVs meaningfully, especially for NATO. The combat aircraft cap for NATO is 6800, although only several dozen aircraft would be required to deliver the roughly 200 TNWs remaining in Europe. The Russian jet fighter cap\(^\text{185}\) also likely exceeds Russia’s active stockpile of air-deliverable TNWs.

Additionally, CFE’s restrictions on the locations of forces within Russia echoes a U.S.-NATO priority for tactical nuclear arms control—withdrawal of Russian TNWs away from NATO’s borders. Russia now wants relief from CFE’s limits on conventional deployments within Russia, citing sovereignty concerns.\(^\text{186}\)

A third cautionary note that could cut either way is the balance-of-forces link between conventional and tactical nuclear forces. Russia has soured on the CFE in part because it does not bring NATO conventional forces down to the Kremlin’s lower cash-limited level. That same conventional imbalance is also one of Russia’s reasons for retaining TNWs. Russia wants conventional forces included in any TNW talks.

Russia also cited other concerns, including planned NATO missile defenses in Eastern Europe, when it announced in 2007 that it was suspending its obligations under CFE.\(^\text{187}\) In 2011, the United States and other NATO states followed Russia in suspending their participation.\(^\text{188}\) As with the INF Treaty, the future of the CFE is uncertain but its precedent of regulation of tactical DVs endures.

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\(^{185}\) CFE Treaty, supra note 180, art. VI.

\(^{186}\) See NATO Strategic Concept 2010, supra note 62, ¶ 26 (discussing future agreement on Russian relocation of TNWs bordering NATO states, greater transparency, and steps addressing the numerical TNW imbalance); Crawford, supra note 180, at 447–48 (discussing Russian objections to CFE).


The other examples of regulation of tactical nuclear weapons I have analyzed have involved limited, partial, or indirect inclusion of tactical DVs in the arms control regime. There is one regulatory precedent focused specifically and broadly on tactical nuclear forces, and yet it has the least strength legally, and zero precedential value regarding verification. With the exception of the Soviet and U.S. missile withdrawals after the Cuban Missile Crisis, it is the single example to date of parallel unilateral administrative (presidential, nontreaty) nuclear arms control by Washington and Moscow, or “arms control without treaties”: the 1991–1992 Presidential Nuclear Initiatives (PNIs).

In a September 1991 speech, U.S. President George H.W. Bush announced “the most fundamental change in nuclear forces in over 40 years” regarding tactical arms. All ground-launched TNWs would be eliminated, all TNWs would be removed from naval aircraft and vessels, and many naval TNWs would be destroyed. The only remaining U.S. TNW deployment would be the one that endures today: dual-capable aircraft in Europe.

President Gorbachev responded for the erstwhile USSR in October 1991, reciprocating President Bush’s tactical arms moves with the potential exception of leaving TNWs aboard Moscow’s SSBNs. He also advanced a raft of other proposals, including eliminating all naval TNWs and storing all air-delivered TNWs. After the Soviet Union’s dissolution, in January 1992 President Yeltsin reiterated and expanded President Gorbachev’s proposals, while also promising Russian elimination of all ground-launched TNWs, one-third of naval TNWs, and half of TNWs on air-defense missiles and aircraft.

The PNIs gave tactical arms strategic relevance at their regulatory moment. They responded to concern—that President Bush explicitly mentioned—about

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189. The implicit deal struck by Kennedy and Khrushchev through a series of exchanged letters was that the United States would go through with its planned withdrawal of Jupiter nuclear missiles from Turkey and pledge not to invade Cuba, in exchange for Soviet withdrawal of missiles from Cuba. For the famous practitioner memoir, see ROBERT F. KENNEDY, THIRTEEN DAYS: A MEMOIR OF THE CUBAN MISSILE CRISIS (1968).


191. Id. at 169.

192. President Bush also announced several moves on strategic forces, including that the U.S. strategic bomber force and all ICBMs scheduled for dismantlement would be immediately taken off alert, cancellation of several modernization programs, and invitations to Moscow to talk about strategic nuclear cuts and missile defense. Id. at 169–71.

193. Soviet President Mikhail Gorbachev, Address to the Nation on Reducing and Eliminating Soviet and United States Nuclear Weapons (Sept. 27, 1991), in TACTICAL NUCLEAR WEAPONS, supra note 2, at 173.

194. Id.

195. Russian President Boris Yeltsin, Address to the Nation on Russia’s Policy in the Field of Arms Limitation and Reduction (Jan. 29, 1992), in TACTICAL NUCLEAR WEAPONS, supra note 2, at 175, 178. Yeltsin reiterated many of Gorbachev’s suggestions and added more.
the security of Soviet nuclear warheads in the wake of the abortive coup against
President Gorbachev in August 1991 and the accelerating dissolution of the
Soviet state.\textsuperscript{196} Any loose nuke was a strategic—that is, major—threat. Also, the
PNIs took tactical weapons off the negotiating table for the moment. President
Bush explained that talks between the blocs on tactical forces were being
readied in 1990 and 1991. They promised to be protracted if they were going to
verify warhead removal and dismantlement. The PNIs cleared the way for the
1993 START II treaty on strategic DVs.\textsuperscript{197}

The PNIs are successes by the lights of “arms control without treaties”
theory.\textsuperscript{198} They were fast in creation and implementation. They led to down-
ward arms racing, with President Gorbachev’s promised cuts coming the week
after President Bush’s. They got results. In their wake more tactical DVs and
warheads were dismantled than as a result of any of the treaties, with TNWs
falling on each side from the tens of thousands to just a few hundred or few
thousand.\textsuperscript{199} As noted previously, the PNIs even facilitated an arms reduction
treaty, START II, by taking a contentious issue off the negotiating table. They
were coordinated, not adversarial. They offered flexibility.

But flexibility has another face, one that reflects the failure of the PNIs as
parallel unilateral arms control. They were gauzy policy promises rather than
law and lacked any verification regime.\textsuperscript{200} Neither side could inspect, so both
sides were denied the transparency and predictability virtues of arms control.\textsuperscript{201}
The United States did fully implement President George H.W. Bush’s PNI, and
the Obama Administration will go beyond when it eliminates the last naval
TNWs for SLCMs.\textsuperscript{202} Russia’s implementation has been murky, in contrast.

Estimates of Russia’s inventory and its security have varied vastly over the past
two decades, which matters in the loose nuke context. Russian statements about
implementation have shifted, and recent years have seen reports of TNWs being
returned to multipurpose submarines and deployed with Iskander missiles in
Kaliningrad.\textsuperscript{203}

\textsuperscript{196} President Bush Address, supra note 190, at 171.
\textsuperscript{197} President Bush mentioned both the loose nuke and tactical arms negotiation avoidance ratio-
nales for his unilateral moves. Id. at 169, 171. All of the three PNI speeches referenced moving beyond
START I to deeper reductions in a presumptive START II.
\textsuperscript{198} See Adelman, supra note 122, at 240 (arguing for unilateral and reciprocal unilateral cuts).
\textsuperscript{199} See KRISTENSEN, supra note 24, at 65 (stating that a State Department official criticized Russian PNI implementation in 2004,
Note also that the PNIs in two decades never led to a treaty on TNWs. The treaty they did facilitate, START II, never entered into force. They did not lead to more PNIs on TNFs. The parallel unilateralism stopped. The PNI record, in sum, is mixed.

E. UNILATERAL LEGISLATIVE REGULATORY EFFORTS BY THE U.S. CONGRESS

With the exception of the 1997 Helsinki Declaration on the START III framework, U.S. and Russian presidents placed little priority on tactical nuclear arms control efforts in the two decades after the PNIs. The U.S. Congress paid more attention. To be more precise, a number of legislatively active Members of Congress paid attention, and in several instances in the two decades after the PNIs, they tried to use the Congress’s legislative, spending, treaty, and oversight powers under the Constitution to secure and reduce Russian TNWs, press for a treaty, or at least focus the attention of the Executive Branch. We can understand the activity I document as a unilateral legislative regulatory campaign. Because its objective has been reducing some of the most prized military forces of another state, the U.S. legislature’s efforts have been predictably limited in their effects, despite its prescient recognition that the tactical versus strategic distinction is eroding.

In the U.S. legislative process, we find the same regulatory pattern as in the international, bilateral nuclear treaty, bipolar nonnuclear treaty (CFE), and PNI parallel unilateral policy processes analyzed in sections A–D above: regulatory efforts have reflected the arguable strategic significance of tactical arms. They have been most effective when tactical arms have been most closely tied to strategic forces.

Here, that happened via Congress’s creation of the Nunn-Lugar Cooperative Threat Reduction (CTR) program. Presidents George H.W. Bush and Mikhail Gorbachev mentioned cooperative efforts to secure nuclear warheads in their PNI speeches, but the initiative came instead from U.S. Senators Sam Nunn, a Democrat from Georgia, and Richard Lugar, a Republican from Indiana. Their amendment to the fiscal 1992 NDAA was prompted by concern about loose nukes as the Soviet Union cracked up, and the inability of the economically collapsing former Soviet states to follow through on strategic DV reductions required by START. Any loose Soviet warhead represented a strategic threat if acquired by terrorists, criminals, or rogue officers. A U.S.-assisted “nuke roundup” (reportedly memorialized on insignia patches depicting lassoed

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in one of the second Bush Administration’s only known expressions of concern about tactical arms), Handler, \textit{supra} note 21, at 25–31, 40, and Safranchuk, \textit{supra} note 22, at 60–64.


205. For discussion of Nunn’s concern and legislative work with Lugar, see generally Hoffman, \textit{supra} note 72.

warheads) in 1991–1992 returned thousands of TNWs to storage in Russia. CTR was later expanded to include technical and financial assistance regarding warhead security; nuclear material protection, control, and accounting; reduction of fissile materials (uranium and plutonium) from nuclear weapons; reducing chemical and biological weapons stockpiles; and finding new nonweapons work for former Soviet weapons scientists and facilities.207

The results are remarkable. In addition to the nuke roundup, and up through its reduction in scope in 2013 to exclude reduction of Russian warheads and DVs, CTR helped deactivate 7616 strategic warheads.208 It facilitated the destruction of several thousand strategic missiles, launchers, submarines, and bombers.209 And CTR helped dismantle 906 air-to-surface missiles—tactical DVs armed with TNWs.210

CTR represents not regulation in the sense of limitation, but rather legislatively authorized and funded assistance. It has helped to stabilize the Washington–Moscow relationship and reduce threats. CTR has provided only a degree of transparency, however, and no inspection rights. The proof of this legislative program not being a substitute for a treaty with verification is that U.S. estimates of Russia’s TNW inventory have ranged in the thousands.211

CTR’s broad focus on the security and reduction of former Soviet nuclear systems was echoed in a declaration in the U.S. Senate’s 1992 resolution of advice and consent to ratification of START I. The declaration commended Belarus, Kazakhstan, and Ukraine for transferring TNWs on their territory to Russia, called for those states to transfer strategic warheads as well, and urged the President to pursue negotiations on “destruction of all nuclear warheads


208. Nunn-Lugar CTR Scorecard, DEF. THREAT REDUCTION AGENCY (May 2013), http://cms.dtra.mil/docs/system-documents/20130501_fy13_ctr-scorecard_slides_may13.pdf. Russia increasingly objected to CTR’s suggestion of the Kremlin’s inability to keep its own nuclear house in order. In 2013, the United States and Russia agreed to limit the program to work regarding Russian nuclear and radioactive material. See Calmes, supra note 9.

209. Nunn-Lugar CTR Scorecard, supra note 208.

210. Id.

from eliminated systems and to facilitate secure safeguarded storage” of fissile material.212 No warhead agreement resulted.

CTR and the START I resolution’s declaration were focused on reducing nuclear threats in the former Soviet Union generally and, in the case of CTR, got results regarding TNWs when tactical arms were included in the program along with strategic arms. In contrast, the 1998 Conrad Amendments reflected Congress’s first post-Cold War legislative effort focused squarely on Russian TNWs.213

In April 1998, Senator Kent Conrad, a Democrat from North Dakota, offered an amendment to the resolution of advice and consent to the first post-Cold War NATO expansion treaty, which brought Poland, Hungary, and the Czech Republic into the Alliance.214 Senator Conrad offered the amendment out of concern that expanding NATO would needlessly strengthen anti-Western sentiment in Russia, and complicate efforts to reach an agreement on a higher national security priority: securing and reducing Russia’s TNWs.215 The amendment included findings about the loose nuke risk associated with Russia’s TNWs, expressed the Sense of the Senate that Russia’s orders of magnitude lead over the United States in tactical arms was giving its TNWs strategic significance, and conditioned ratification on the President initiating talks with Russia on securing, reducing, and dismantling the excess Russian tactical arms in a verifiable manner.216 There was no guarantee that Russia—which opposed NATO expansion—would agree to talk, of course. Accordingly, the Conrad Amendment was defeated by the large bipartisan Senate majority in favor of the Alliance’s enlargement.217


213. Full disclosure: as Senator Conrad’s Legislative Assistant, I prepared drafts of his tactical nuclear forces amendments and advised him on policy and legislative strategy.


216. See Conrad Amendment, supra note 215.

In June 1998, that amendment was largely revived in a second amendment by Senator Conrad, this one to the 1999 NDAA. Senator Conrad emphasized the lack of an arms control agreement focused on TNWs, that “terrorist use of a tactical nuclear warhead could be devastating,” and that Al Qaeda leader Osama bin Laden had made attempts to purchase Russian warheads. The second Conrad Amendment passed by unanimous consent and was enacted. It put Congress on record as concerned about the security and strategic implications of the size and security of Russia’s TNW stockpile, urged the President to call on Russia to expedite TNW reductions under the PNIs, and required a report on Russia’s tactical arms.

Nunn-Lugar and the Conrad Amendments were uses of Congress’s legislative, funding, treaty, and oversight powers that reflected a view of Russian TNWs as having strategic significance. They provided assistance to Russia, brought the issue before the Executive Branch, and informed Congress. However, Congress politically could not push and constitutionally could not direct Presidents Clinton, Bush, or Obama to the negotiating table with Russia.

Despite heightened concern after the September 11, 2001 Al Qaeda terrorist attacks about potential terrorist acquisition of Russian TNWs, this pattern held when the Senate in 2003 considered the minimalist SORT Treaty that failed to address TNWs. The Senate’s advice and consent resolution included a declaration expressing concern about Russian TNW security and calling for the President to “engage” Russia on “establishing cooperative measures to give each party to the Treaty improved confidence regarding the accurate accounting and security” of TNWs and providing assistance. Senator Lugar, then Chairman of the Foreign Relations Committee, noted that the resolution did not call for a verifiable bilateral agreement on reducing TNWs because the Bush

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220. See 144 Cong. Rec. S6850 (Conrad Amendment approved by Senate by unanimous consent); Second Conrad Amendment, supra note 218.

221. See S. Amend. 2947, supra note 218.

Administration said the Putin government would not negotiate. The public record shows no evidence that the Bush or Putin governments wanted to tackle the TNW challenge. Senators Conrad; Feinstein, a Democrat from California; and Reed, a Democrat from Rhode Island, voiced their concern about the treaty’s failure to include TNWs in view of the enormous size and comparative insecurity of the Russian stockpile. With few Senators willing to endanger SORT ratification over the issue, Senator Conrad withdrew a related amendment after Senator Lugar and Senator Joseph Biden, a Democrat from Delaware and Committee Ranking Member, joined Senator Conrad in a colloquy endorsing Senator Conrad’s concern about terrorist interest in Russian TNWs and pledging Committee oversight. In subsequent years, Congress passed legislation authored by other Members that re-emphasized Congress’s concern about Russian TNWs, required reports, and authorized funding to help Russia complete a TNW inventory.

When the Obama Administration concluded a treaty—New START—that also failed to include tactical arms, that omission and the U.S.–Russian TNW imbalance became rallying cries of congressional Republicans critical of New START. Discussion in Congress of TNWs continued to raise the concerns Nunn-Lugar and the Conrad Amendments sought to address, but—reflecting the politics of the time—that discussion increasingly acquired a partisan edge. Among the voices raising alarm about Russia’s tactical stockpile were some Members who had voted against the Conrad Amendment on the NATO Expansion Treaty and expressed little concern over the second Bush Administration’s failure to include tactical arms in the SORT.

Despite the partisan acrimony, Senators of both parties remained convinced of the strategic relevance of tactical arms and cooperatively advanced the regulatory cause. Compared to the advice and consent documents generated in connection with the SALT and START treaties, an unprecedented number of provisions on tactical nuclear arms were included in the Foreign Relations Committee’s bipartisan committee report on New START and in the resolu-

227. As an example of legislative process, this was remarkable. A committee chairman, backed with an overwhelming Senate majority (59–41), set aside his own draft resolution in favor of the draft of the
tion of advice and consent drafted by Ranking Member Lugar and supported by Chairman John Kerry, then a Democratic Senator from Massachusetts. New START advocates joined the Obama Administration in arguing that New START set the stage for getting Russian TNW reductions by improving relations generally, fostering U.S.–Russian nuclear cooperation, and dealing first with strategic DV reductions so that a subsequent round of treaty negotiations could address TNWs.

Most notably, Senators Kerry and Lugar worked with Senator George LeMieux, a Republican from Florida, to craft a consensus amendment similar to the first Conrad Amendment. Rather than requiring talks before ratification, the LeMieux Amendment allowed the President to promise to act after ratification:

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.

In February 2011, President Obama certified his intent to pursue such a TNF agreement. A year later, in February 2012, President Obama reported as required on the Administration’s initial efforts, which included consultations within NATO and talks with Russia to prepare for “a future negotiation.” These talks are possible in the coming months and years.
After Republicans took control of the House and New START was ratified in 2010, the House has included a series of legislative provisions on tactical nuclear systems in its versions of the 2012, 2013, and 2014 NDAA. The final version of the 2012 NDAA expressed the sense of the Congress that any arms control talks with Russia should focus on reducing Russian TNWs, and imposed nuclear reporting requirements. The enacted version of the 2013 NDAA included a reworked House provision limiting withdrawal of U.S. tactical nuclear weapons from Europe and calling for negotiations with Russia in view of the “asymmetry” in U.S.–Russian TNW arsenals. The House-passed 2014 NDAA bars changes to U.S. tactical DVs in Europe until Russia has similarly consolidated or reduced and NATO has achieved a consensus on the matter; frames a potential strategic/tactical tradeoff accord by prohibiting U.S. reductions below New START strategic DV levels unless a new treaty or congressional–executive agreement enters into force providing for proportional Russian reductions to its TNWs, and the intelligence community has “high confidence” about China’s nuclear posture; and expresses the Sense of Congress that the President should consider not seeking further arms reductions with the Kremlin because of alleged Russian violation of existing agreements. Although the impact of Congress’s efforts to regulate Russian TNWs have necessarily been constrained by Congress’s own limited regulatory capacity as a national legislature, there is no question that tactical arms and especially Russian TNWs have become issues of strategic importance in the view of Congress. The institution has been farsighted in recognizing the strategic significance of TNWs and the failure of the multilateral nuclear legal regime, the bilateral nuclear treaty regime, the non-nuclear CFE Treaty, and the parallel unilateralism of the PNIs to eliminate verifiably the dangers they present.

III. THE CASE FOR REGULATION: THE END OF THE TACTICAL VERSUS STRATEGIC DISTINCTION

With an understanding of the problem—the facts and the regulatory regime’s limited, but informative, precedents governing tactical arms alleged to have strategic significance—we can turn to solutions. Should tactical nuclear forces...
be regulated generally? By what means? And what might choice of regulatory method mean theoretically? The next three Parts address these questions.

The United States and Russia have deeply reduced their tactical DVs and warheads without coordinated policy pledges more recent than the two decade-old PNIs and without a verifiable treaty any more recent than the narrowly focused 1987 INF Treaty. Warhead security in Russia has improved. The United States, NATO, and Russia continue to articulate rationales for TNWs. Meanwhile, we know that regulating tactical arms in a formal agreement would not be easy. In this context, is it worthwhile to try to bring tactical weapons into the bilateral nuclear arms control regulatory regime?

I believe it is. My core contention in this Part is that the tactical versus strategic distinction in nuclear weapons is anachronistic. It should be abandoned. Tactical nuclear weapons have strategic significance. Because TNWs are just as, if not more dangerous than, what we currently regard as strategic systems, tactical forces should be regulated along with strategic nuclear forces and warheads. Doing that will require going beyond strategic DV-focused New START to regulate tactical DVs and all warheads, a project to which I turn in Part IV.

Here in Part III, I discern, appraise, and largely endorse six reasons why TNWs have acquired strategic significance. The first two reasons for this “nuclear bracket creep” apply to both the United States and Russia but have a common nexus in the large number of Russian TNWs: the loose nuke risk and the greater relative significance of tactical weapons as strategic weapons have been reduced. Third, whether one accepts the NPT’s theory that cuts by nuclear states will strengthen the global nonproliferation regime, its advocacy by the Global Zero movement as well as its endorsement by the Obama Administration and a growing number of states have made all nuclear weapons relevant to the renewed disarmament drive. Fourth, the line between tactical and strategic weapons is nearly obliterated by globalization’s reality that any nuclear use would have strategic effects. For this and other reasons, I argue fifth that the tactical nuclear mission is obsolete. Sixth, Washington and Moscow have been changing their military forces in ways that have brought about a convergence in nuclear hardware.

These reasons for regulating tactical nuclear weapons are broadly consistent with the pattern I identified in Part II: tactical nuclear forces that are regulated have arguable strategic significance. The reasons for tactical/strategic convergence I identify in this Part resonate with the reasons why tactical arms that have been regulated have strategic significance: warhead security, stockpile asymmetry, and relevance to other arms control negotiations or geopolitical developments. Note also that the reasons discussed in this Part for regulation of TNWs track reasons theoreticians and practitioners have identified for why states acquire or abandon nuclear weapons: changes in their security, moves by other nuclear states, the trajectory of the global nonproliferation regime, techno-
logical change, and domestic factors. Regulation that brings reductions and verification captures the fiscal cost avoidance, transparency, and predictability benefits of arms control.

In view of nuclear bracket creep, the only enduring differences among tactical and strategic nuclear arms are the intercontinental range of strategic DVs, the greater verification challenge associated with tactical DVs and warheads, the political role of U.S. TNWs in NATO, and the bilateral treaty regime’s more robust regulation of strategic versus tactical DVs. I argue in Part IV that verification can be provided through a new treaty, and I argue in Part V that an intrusive verification regime will have broader benefits that could potentially justify NATO agreeing to withdraw the last U.S. TNWs.

A. THE (RUSSIAN) LOOSE NUKE RISK: ANY WARHEAD IN TERRORIST HANDS, OR AT REASONABLE RISK OF TERRORIST ACQUISITION, IS STRATEGIC

Concern about the security of nuclear warheads has existed since the dawn of the nuclear age. It applies to all arsenals. No security system is perfect, including that of the United States. Nevertheless, most experts agree that U.S. warheads are at lower risk of acquisition by criminals or terrorists than those in Russia. Two decades after the Soviet collapse, many analysts still see security as the number one concern associated with Russian TNWs. This section explains the issue and reassesses the threat. The TNW loose nuke risk has been a net result of supply-side (warhead insecurity) and demand-side (warhead acquisition interest) factors operating in synergy.

1. Supply-Side and Demand-Side Factors

There are several supply-side aspects of the Russian warhead security problem generally: human (the Soviet collapse impoverished soldiers, raising risk of payoffs for warheads), hardware (Moscow’s storage sites have had serious


239. Concern about warhead security in the former Soviet Union has been well documented. See, e.g., TACTICAL NUCLEAR WEAPONS, supra note 2, at 12; BUNN, supra note 36, at 39.

240. WOOLF, supra note 4, at 24.

241. See BUNN, supra note 36, at 32–34 (stating that, in the 1990s, soldiers guarding nuclear sites would leave their posts and forage for food).
security shortfalls), and accounting (Moscow’s record keeping was comparatively unsophisticated). Distinct from these arsenal-wide concerns are problems with the security of tactical warheads in Russia: the size of Russia’s TNW stockpile and the large number of storage sites (the more parts there are in a system, the more potential there is for one to fail); the design (many TNWs are built to be easily transported and detonated); and the reasonable belief that operational nuclear combat units are better secured than warhead storage facilities, and the majority of Russia’s strategic warheads are deployed while all of Russia’s TNWs are officially in storage (meaning Russian TNWs are more likely to leak than Russian strategic warheads).

On the demand side, Al Qaeda has stated its interest in inflicting a “Hiroshima” on the United States. President Obama stated in 2010 that the “single biggest threat to U.S. security, both short term, medium term, and long term, would be the possibility of a terrorist organization obtaining a nuclear weapon.” Open sources have reported Al Qaeda efforts to buy Russian nuclear warheads. Chechen terrorists have surveilled warhead storage sites.

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242. See id.
244. Charles Ferguson makes the numbers point. See Charles D. Ferguson, Three Nuclear Threats ‘Put the United States in Peril’ Interview with Bernard Gwertzman, COUNCIL ON FOREIGN REL., Oct. 26, 2004, www.cfr.org/publication.php?id=7474. Another way in which the staggering number of Russian TNWs presents a risk is that there are too many to be preventively seized by an outside power in the event of state instability as has been discussed regarding Pakistan’s much smaller nuclear arsenal. For discussion of the latter, see U.S. Prepared to “Snatch” Pakistani Nukes, Report Claims, GLOBAL SECURITY NEWSWIRE, Aug. 4, 2011, http://gsn.nti.org/gsn/nw_20110804_7784.php. Bunn also highlights the large number of Russian storage sites as a risk. See BUNN, supra note 36, at 32–34.
245. See SFRC Report on New START, supra note 120, at 57; see also ALLISON, supra note 243, at 49, 91.
248. See Jeffrey Goldberg & Marc Ambinder, The Pentagon’s Secret Plans to Secure Pakistan’s Nuclear Arsenal, NAt’l J., Nov. 9, 2011, http://gsn.nti.org/gsn/nw_20111104_8533.php; see also WHITE HOUSE, U.S. NATIONAL SECURITY STRATEGY (2010) at 23 (stating that nuclear terrorism is the number one national security threat and “[t]errorists are determined to buy, build, or steal a nuclear weapon”).
249. See BUNN, supra note 36, at 13 n.1. For open sources concerning U.S. intelligence on Al Qaeda’s efforts regarding nuclear weapons, see id. at 32, 13 n.1.
250. Id. at 14.
2. The Loose Nuke Risk Reconsidered and the Risk of Uncertainty

The good news, of course, is that to date there have been no nuclear terrorist attacks. This happy, if probably impermanent, reality flows from other good news—that the Al Qaeda threat has waned and Russian nuclear security has improved. Bin Laden was killed by U.S. special forces in May 2011. Obama said in the Spring of 2012 that defeat of Al Qaeda’s original core is “within our reach,” and senior U.S. intelligence officials stated that Al Qaeda is no longer capable of September 11-scale major attacks. Meanwhile, Russia has made physical security improvements and has made significant progress contracting and consolidating its TNW stockpile and storage sites. The Russian economic recovery has greatly reduced desperation among Russian troops. Matthew Bunn estimates that “[o]verall, the risk of nuclear theft in Russia has been reduced to a fraction of what was a decade ago.”

However, Bunn notes that “there can be no room for complacency.” On the demand side, Al Qaeda has spawned franchises and self-radicalized cells. Anti-American sentiment among Muslims remains higher than on September 11, 2001. Deep anger at the Kremlin persists among Chechens and


255. Bunn, supra note 36, at 22; Bunn & Morozov et al., supra note 254, at 15 (“If current approaches toward eliminating the threat are not replaced with a sense of urgency and resolve, the question will become not if, but when, where, and on what scale the first act of nuclear terrorism occurs.”).


Islamic extremist groups with networks inside Russia. On the supply side, as recently as 2008, then-U.S. Defense Secretary Robert Gates warned that Russia may not know the numbers or locations of “old land mines, nuclear artillery shells, and so on.” Russia still has not upgraded security at many sites. Former U.S. Senator Nunn, former Russian Defense Minister Igor Ivanov, and German diplomat Wolfgang Ischinger warn that “the risk of terrorist groups acquiring [a Russian TNW] is high.” Terrorist possession of a TNW would endanger many thousands or millions of people and the continued functioning of the government and economy, and therefore would by definition be an immense strategic threat.

Perfect security and zero uncertainty are impossible. Eliminating demand for loose nukes is also impossible. What policymakers should also consider, I argue, is the information and knowledge angle of the loose nuke risk. In a crisis, significant uncertainty about whether a TNW has leaked is itself a distinct risk, separate from warheads terrorists might actually possess or use.

Uncertainty makes threats more credible, bluffs harder to call. The Obama White House reportedly concluded that a hypothetical credible but empty threat by the Pakistani Taliban to set off a Pakistani warhead in the United States could cause mass panic that could kill more people than an actual detonation. In short, both the actual security of Russian TNWs and persistent uncertainty about their security give tactical nuclear arms strategic significance. Russian TNWs present a worse loose nuke risk than the strategic warheads mounted on relatively well protected strategic DVs. Because terrorists—particularly suicidal religious fanatics—are more likely to detonate nuclear weap-

259. See Bunn, supra note 36, at 32, 34.
264. I made these points at the U.S. Strategic Command in 2004. See Dakota S. Rudesill, Getting to Zero Loose Nukes: Where the “Grand Bargain” Fell Short and a Proposal to Fix It, Presentation Before the U.S. Strategic Command (Oct. 14, 2004) (slides available at http://csis.org/images/stories/poni/2004_STRATCOM_Rudesill.pdf); see also Bunn, supra note 36, at vi (“After a nuclear weapon...has been stolen, every later step on the terrorist pathway is easier for terrorists to take and harder for governments to stop.”).
ons than states because the latter are deterrable, it stands to reason that TNWs are more likely to be used in anger than strategic warheads. As I explain below, any nuclear detonation would now produce strategic effects. Therefore, tactical warheads are now more likely than strategic warheads to produce strategic effects, in the broad sense of the term.

B. CONCERN ABOUT THE STRATEGIC SIGNIFICANCE OF TACTICAL NUCLEAR WEAPONS

As strategic warheads have been reduced dramatically, the relative importance of all TNWs has gone up for both the United States and Russia. TNWs generally and Russia’s lead specifically have become more relevant to national security planning and a more obvious next step for arms control—both strategic matters in the broad sense.

Another way Russia’s TNWs look more strategic is because they are in range of NATO states. This is a mirror of Moscow’s longstanding argument that NATO TNWs are strategic because they are in range of the USSR-Russia. The stockpile imbalance raises the question of whether in a crisis the Kremlin might be emboldened—that is, less deterred—at the first, tactical wrung of nuclear escalation thanks to its superior numbers of TNWs.

The persistence of attention in policy and practitioner discussions to the idea that the size of the Russian TNW stockpile is giving tactical arms strategic significance is self-reinforcing. In other words, if the question of whether the Russian TNW stockpile matters strategically receives attention in discussions of national security strategy, then it does matter strategically. The 2010 NPR put it this way: “large disparities in nuclear capabilities could raise concerns on both sides and among U.S. allies and partners, and may not be conducive to maintaining a stable, long-term strategic relationship, especially as nuclear forces are significantly reduced.”

C. THE NPT-GLOBAL ZERO NUCLEAR DISARMAMENT DRIVE

Another reason for the eroding tactical versus strategic distinction that is similarly both normative and numbers-related is the growing acceptance of the nuclear nonproliferation theory underlying the NPT’s Article VI requirement

265. See Balmasov, supra note 76.

266. The Conrad amendments reflected this concern. Senator Conrad also highlighted the big-picture views of General Eugene Habiger, then commander of the U.S. Strategic Command, who testified in 1998 that “it is time for us to get very serious” about TNWs because of the stockpile imbalance. 144 CONG. REC. S7088, S7089 (daily ed. June 25, 1998) (statement of Sen. Conrad).

267. See 2010 NPR, supra note 34, at xi.
that the P-5 nuclear weapon states move toward disarmament.\footnote{268} 

As pushed anew by “Global Zero” advocates and embraced with caveats by the Obama Administration,\footnote{269} the idea is that as the P-5 states make good on their obligation to reduce their nuclear arsenals, the international nonproliferation regime will be strengthened.\footnote{270} In their international legal normativist thinking,\footnote{271} cutting their own arsenals will give the United States and other NPT-compliant states—together with the United Nations and other international organizations—greater standing to press North Korea and Iran to abandon their nuclear ambitions, to urge restraint by India and Pakistan, and to prevent other states from initiating nuclear programs. This greater clout manifests in greater moral authority and in more willing help from other similarly-minded states.\footnote{272} 

The Global Zero theory has credible advocates but is also controversial and untested. Critics allege its futility (U.S. nuclear reductions will have no impact on states that have nuclear weapons for reasons not linked to U.S. or Russian warheads),\footnote{273} perversity (U.S. cuts increase the value of the warheads of NPT violators),\footnote{274} and jeopardy risks (low and high numbers of warheads incentivize striking first in a crisis).\footnote{275} In his 2009 Prague speech, President Obama

\footnote{268. See NPT, supra note 5, art. VI.}

\footnote{269. The Obama Administration now includes former Senator Chuck Hagel as Defense Secretary, who was criticized during his confirmation by critics of Global Zero for his association with the movement’s work.}

\footnote{270. See GLOBAL ZERO, www.globalzero.org (last visited Apr. 13, 2013); Douglas Birch, Disarmament Group to Call for Nuclear Club Talks, ASSOC. PRESS ONLINE, Oct. 8, 2011 (Global Zero calls for multistate talks on elimination of all nuclear warheads by 2030); Gorbachev, supra note 150 (following through on NPT Article VI disarmament obligation would facilitate non-proliferation).}

\footnote{271. International legal normativism as a school of thought is a “wide umbrella,” but its adherents “share the conviction that the interest-based models [of state behavior] overlook the persuasive power of legitimate legal obligations. . . . A complete description of state action in the international realm, they argue, requires an understanding of the influence and importance of ideas and norms,” which adherent practitioners work to build and strengthen. OONA A. HATHAWAY & HAROLD HONGJU KOH, FOUNDATIONS OF INTERNATIONAL LAW AND POLITICS 111 (2005).}

\footnote{272. For discussion of these two points, see SFRC Report on New START, supra note 120, at 10–11 (stating that U.S. cuts “may only indirectly encourage rogue states” to cut but “could encourage non-nuclear-weapon states to assist the United States”—and indeed Secretary of State Clinton saw the logic working in practice after New START’s negotiation).}


\footnote{274. See, e.g., Harold Brown & John Deutch, The Nuclear Disarmament Fantasy, WALL ST. J., Nov. 19, 2007, at A19; Robert Joseph et al., PONI Debates the Issues—Future Arms Control, CENTER FOR STRATEGIC INT’L STUD. (June 29, 2011), http://cis.org/attachments/PONI%20Debates%20the%20Issues%20%20The%20Future%20of%20Bilateral%20Arms%20Control.pdf (U.S. and Russian cuts have not made North Korea and Iran more willing to abandon their nuclear programs). But see Sagan & Vaynman, supra note 237 (stating that U.S. disarmament is unlikely to prevent Iran or North Korea from nuclearizing but other states have been strongly influenced by U.S. policy).}

\footnote{275. But see Ivo Daalder & Jan Lodal, The Logic of Zero: Toward a World Without Nuclear Weapons, 87 FOREIGN AFF. 80, 85 (2008) (noting that strategic stability will be strengthened at lower levels as each state needs fewer weapons to deter other smaller arsenals). The futility, perversity, and jeopardy theses are three classic lines of argument against policy. See generally ALBERT O. HIRSCHMAN, THE RHETORIC OF REACTION: PERVERSITY, FUTILITY, JEOPARDY (1991).}
tempered his endorsement by emphasizing that it is unlikely that zero would be reached in our lifetimes.276

One need not resolve this debate to recognize that the Global Zero drive makes tactical arms more strategic in a few ways. As the P-5 cut their arsenals, individual TNWs become more significant parts of smaller stockpiles.277 Additionally, the Global Zero campaign makes all nuclear weapons—and, to be precise, the retirement of any nuclear weapon—relevant to a global campaign to prevent rogue states from getting the bomb, a matter of obvious strategic import.

The Obama Administration’s 2010 NPR for the first time ranked “preventing nuclear proliferation and nuclear terrorism” as the top U.S. nuclear priority, ahead of the nuclear balance with Russia.278 This puts TNWs in new strategic light, as potential warheads for terrorists and, in their reduction, evidence of progress toward a no-nuke norm.

D. GLOBALIZATION MEANS ANY NUCLEAR USE HAS STRATEGIC EFFECTS

The world has changed dramatically since the advent of the tactical versus strategic distinction. Separately and together, several interconnected aspects of our globalized world have magnified the direct effects and potential consequences of a nuclear detonation. Any hostile nuclear use—and particularly a nuclear terrorist attack—would have strategic significance.279

A short list of these nuclear effects-magnifying aspects of globalization includes: (a) economic interdependence, running on just-in-time global supply chains of fuel, raw materials, food, and other necessities that would be disrupted as states increased security and closed borders after a nuclear terrorist attack, which would likely have been carried out by smuggling the warhead through international commerce; (b) economic and social dependence on computers and other information technology (IT) systems and the critical infrastructures (for example, power, transportation, banking) that are vulnerable to the electromagnetic pulse (EMP) emitted by nuclear weapons;280 (c) global spread of ideas of

276. See President Barack Obama, Remarks at Prague, supra note 58. President Obama’s stance on nuclear issues informed his selection for the Nobel Peace Prize and his acceptance speech. See Barack Obama, Nobel Lecture, Oslo, Norway (Dec. 10, 2009), http://www.nobelprize.org/nobel_prizes/peace/laureates/2009/obama-lecture_en.html. The Obama Administration and NATO have emphasized that as long as there are nuclear weapons, the United States and NATO will be nuclear powers. See 2010 NPR, supra note 34, at 48; NATO Strategic Concept 2010, supra note 62, at 14.
277. For example, 7000 tactical warheads in a total inventory of 20,000 warheads are arguably more tactical and less significant than 70 warheads labeled “tactical” in a total inventory of 200 weapons.
279. A growing number of thinkers about nuclear matters are making this point. See Michael May, Remarks at Georgetown University Law Center (Mar. 1, 2011), at 4 (on file with author) (noting that any nuclear detonation would have strategic effects).
280. A commission chartered by Congress warned of the risk of “catastrophic consequences” to “the very fabric of U.S. society, as well as the ability of the United States . . . to project influence and
human rights and dignity of all people, and concordant lower tolerance for
civilian casualty levels; (d) growing concern about human damage to the en-
vironment, which would be stoked by the ash, dust, and fallout from a nuclear
attack; and (e) advent of a global journalism and social media system that would
bring alarming images and reports, rumors, fear, and suffering to everyone with
IT access.

A terrorist nuclear attack would have strategic implications even if it used
a tactical nuclear bomb. It could be expected to kill and injure many thousands,
and destroy via EMP within a wide area the computers and electronics on
which advanced economies, governments, and societies now depend. In turn,
the reactions of markets, governments, and individuals worldwide would have
awful implications for the prosperity, security, and liberty of people world-
wide.281 Vulnerable populations of the poor, the sick, and scapegoated ethnic
minorities would suffer disproportionately. Restriction of civil liberties as states
rushed to find those responsible and prevent further attacks could make contro-
versial post-September 11, 2001 legal steps relative footnotes. Markets for food,
medicine, and other vital products would be disrupted as states closed borders
and otherwise suddenly increased security. Hoarding would exacerbate inflation
and scarcity. Former U.N. Secretary General Kofi Annan warns that even one
nuclear terrorist attack in the developed world would stagger the world economy
and “would thrust tens of millions of people into dire poverty,” creating “a
second death toll throughout the developing world.”282 In sum, even a single
terrorist TNW detonation could produce one of the worst human rights calami-
ties since World War II, and the worst economic crisis since the Great Depres-
sion—plainly a strategic event.

281. The current U.S. Strategic Command Commander, General Robert Kehler, put it this way:
“That is all the more reason to be concerned about national security and its implications on the popula-
tion.” Top U.S. Nuclear Commander Signals Modest Track on Updating Forces, GLOBAL SECURITY

282. Kenneth C. Brill & Kenneth N. Luongo, Nuclear Terrorism: A Clear Danger, N.Y. TIMES,
scp=2&sq=nuclear&st=cse.
State TNW use would also have strategic effects. It is all but impossible to imagine TNW use except in the case of a profound security threat to a state. The world would see the first nuclear use since Nagasaki, and see the human suffering, disruption, and fear it would generate. “A nuclear weapon is a nuclear weapon. It will not look tactical when it goes off . . . ”

E. OBSOLESCENCE OF THE TACTICAL NUCLEAR MISSION

Another trend contributing to nuclear bracket creep is the growing obsolescence of the “tactical” military missions for which TNWs were designed. The scope of situations calling for TNW employment—the tactical nuclear bracket—has narrowed dramatically.

The lower end of the bracket—the threshold for TNW use—has been moving up, as many battlefield military targets formerly targeted by TNWs, such as bridges and armored formations, can now be reliably serviced with conventional precision guided munitions (PGMs). PGMs have been in heavy use by the U.S. military since the 1990s and increasingly are being acquired by other NATO states and Russia. Because the law of war’s necessity, distinction, and proportionality principles together require minimization of collateral damage, the law of war would require the use of a weapon carrying less risk of harm to protected persons and property, all else being equal. The battlefield role for TNWs is over.

At the top end of the tactical nuclear bracket, the increasing reality that any nuclear use would have strategic implications is a reasonable argument for deeming the use of TNWs against more vital theater targets to be strategic use of a nuclear weapon. The same is true for use of a bunker buster nuclear warhead. Any such bunker would not be a mere tactical target, the threat would have to be strategic for the United States to cross the nuclear threshold, and the effects (direct and diplomatic) would assuredly be strategic in the geopolitical sense of the term. Meanwhile, virtually any Cold War tactical nuclear target can now be struck by lower yield, more precise strategic arms. NATO strategy


[285. Some scholars have made this argument about PGMs versus unguided “dumb” bombs. See, e.g., Michael Schmitt, Bellum Americanum: The U.S. View of Twenty-First-Century War and Its Possible Implications for the Law of Armed Conflict, 19 MICH. J. INT’L L. 1051, 1088 (1998). The case is clearer yet if the question is conventional PGMs versus TNWs.
emphasizes that the “supreme guarantee” of deterrence is provided by the strategic nuclear forces of the United States, and to a secondary degree the “independent” strategic forces of the UK and France.286

Strategic nuclear warheads could be launched against traditionally “tactical” nuclear targets or at short “tactical” range from forward deployed submarine or bomber strategic DVs. Indeed, since the withdrawal of U.S. TNWs and ships from South Korea twenty years ago the United States has provided nuclear “extended deterrence” of North Korea primarily via U.S. strategic forces. That point was driven home in March 2013. In the teeth of a tense crisis with North Korea, the United States flew strategic nuclear DVs—B-2 and B-52 bombers—to within short “tactical” range of North Korea and reportedly moved SSBNs at sea forward as well.287 This nuclear signaling makes the point that the Cold War deterrence theory that separate tactical arms are needed to provide extended deterrence and an escalatory wrung between conventional and strategic nuclear war is highly questionable.288

Today, little remains of the tactical nuclear bracket, at least for the United States and NATO. This is what the former Vice Chairman of the U.S. Joint Chiefs of Staff was getting at when he stated that U.S. TNWs in Europe no longer have unique military utility.289 Half of NATO may agree.290

We know less in the case of Russia. Russia does appear to be investing in the

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287. The B-2 and B-52 have both conventional and nuclear capability. The bombers received attention—at a cost of millions of dollars in maintenance—precisely because they are nuclear capable. See Bill Gertz, U.S. B-52 Bombers Simulated Raids Over North Korea During Military Exercises, WASH. TIMES, Mar. 19, 2013, http://www.washingtontimes.com/news/2013/mar/19/us-b-52-bombers-simulated-raids-over-north-korea-d/?page=all (B-52s and SSBNs used as part of forward deterrence of North Korea); John Hudson, Intimidating Kim Jong Un with B-2 Bombers Is Expensive (Mar. 28, 2013), http://blog.foreignpolicy.com/posts/2013/03/28/intimidating_kim_jong_un_with_b_2_bombers_is_expensive.
288. The B-2 flight also suggests that returning U.S. tactical arms to South Korea is unnecessary. Some Members of Congress have called for such redeployment. The 2013 NDAA requires the Defense and State Departments to study sending additional forces, including “forward-deployed nuclear capability,” to the Western Pacific. 2013 NDAA, supra note 10, § 1046.
289. See Pifer, supra note 12, at 419.
short-range Iskander ballistic missile. But the realities shrinking the U.S.-NATO tactical bracket would also shrink Russia’s tactical bracket: increasing availability of PGMs, any nuclear use would have a strategic rationale and effects, and strategic forces could hold at risk traditional tactical nuclear targets.

F. TECHNOLOGICAL CONVERGENCE

As Russia and the United States have retired TNWs, they have deeply slashed the number of types of TNWs and tactical DVs in service. Both powers say their most classically tactical bombs are retired: satchel bombs, mines, and artillery shells.

By the end of this decade, under current policy the United States will no longer have any warheads that are exclusively TNWs. The B61-12 bomb, the single TNW envisioned under the 2010 NPR, will be carried by tactical DVs in Europe (fighter jets)—and by strategic DVs in the United States (B-2 bombers).291 We know far less about Russia, which may plan to retain a slate of exclusively tactical warheads and a larger number of tactical DVs. As its military shrinks and the Great Recession continues to take its toll, Russia may also embrace multi-use nuclear warheads as cost-efficient.

Meanwhile, warhead yield has converged. Over the decades, improvements in strategic forces’ accuracy have allowed the United States, the UK, France, and Russia to reduce the destructive power of their strategic warheads. NATO states no longer field megaton-yield strategic warheads on missiles. The lower end of strategic warhead yield well overlaps with the higher end of tactical warhead yield.292 Once the new variable-yield B61-12 is fielded, the low end of strategic warhead yield in the U.S. arsenal will drop to include the entirety of the tactical warhead yield range: 0.3 to 50 kilotons.293 For the United States, no exclusively “tactical” nuclear yield range will remain.

The fuzzy line between tactical and strategic nuclear arms is becoming fuzzier at a faster rate. One can envision the distinction blurring beyond recognition for warheads. That suggests that warheads ought to be regulated simply as warheads. U.S. and Russian strategic forces will continue to be regulated for


292. Senator Conrad made this point during debate on his amendments. See 144 CONG. REC. S3851 (daily ed. Apr. 30, 1998). Consider that the warhead in the U.S. B61 TNW has a variable yield from 0.3 kilotons (one-fiftieth the yield of the Hiroshima bomb) to 170 kilotons, much greater than the 100-kiloton yield of the W76 strategic warhead carried on the Trident II SLBM. See Benjamin Loehrke, A Nuke by Any Other Name, BULL. ATOMIC SCIENTISTS ONLINE (May 17, 2012), http://thebulletin.org/web-edition/op-eds/nuke-any-other-name.

293. See Kristensen, supra note 291 (discussing B61-12 yield range).
the foreseeable future, and erosion of the tactical versus strategic warhead distinction argues for bringing tactical nuclear arms into the bilateral nuclear regulatory regime in a focused way, as well.

IV. THE CASE FOR REGULATION BY TREATY

Since New START’s signing, the Obama Administration’s position has been that the United States will “[a]ddress non-strategic nuclear weapons, together with the nondeployed nuclear weapons of both sides, in any post-New START negotiations with Russia.” Obama’s 2013 Berlin speech used different language but continued to press for U.S.–Russian negotiations and deep reductions by both parties in TNWs. I have argued in the last three Parts that the starting point definitionally should be New START (any warhead not carried by a DV regulated by New START is a TNW), the arms control regime includes limited but valuable precedents for regulation of tactical arms, and erosion of the tactical versus strategic distinction argues for its ultimate elimination and regulation of all warheads and their DVs.

Talks on tacticals can be expected in the months and years to come, but the way ahead is far from clear. Discussions of nuclear issues and missile defense among the United States, NATO, and Russia in recent years have so far yielded little. A formal negotiated agreement regulating tactical nuclear arms may well be years away. Consequently, government officials and the policy literature have focused of late on treaty alternatives or antecedents. These include confidence building measures to increase transparency and unilateral steps, including parallel unilateral moves—a new round of PNIs. State practice and the legal literature remind us that other options are an executive agreement or a congressional–executive agreement not subject to Senate advice and consent to treaties.

I argue for a formal legal agreement—a congressional–executive agreement or treaty—with the treaty option slightly better in my judgment. Section A below sketches such an accord’s goals and content regarding tactical arms. Section B explains how a treaty is the preferable approach in view of precedent, verification, force asymmetry, and political challenges.

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294. 2010 NPR, supra note 34, at xi.
A. TNF TREATY GOALS AND CONTENT

1. Goals

Arms control for the sake of arms control makes as much sense as building arms for the sake of building arms. It is helpful only to the extent that it serves security interests.

The longstanding goals of arms control are applicable to a potential formal agreement regulating tactical nuclear weapons. One is that any potential agreement should manage force reductions to reflect changes in the nature of the international security environment. Here, that means acknowledging the erosion of the tactical versus strategic distinction, particularly the end of the idea that TNWs could be anything but strategic in their effects and erosion of Cold War rationales for maintaining large numbers of TNWs. It also means acknowledging that the top danger today associated with TNWs (especially Russia’s) is nuclear terrorism.

This relates to the second goal, enhancing strategic stability. In classic Cold War strategy theory, fostering strategic stability means balancing forces in a way that aligns incentives against initiating or escalating war. That goal is still relevant to strategic forces and somewhat relevant to TNWs, although less than ever as the end of the distinct tactical nuclear mission comes into view. Strategic stability regarding the use of TNWs may well be enhanced by warhead reductions. TNW reductions and redeployments may also enhance strategic stability by increasing warning and decision time, as Sam Nunn has argued.296

Strategic stability theory needs to be updated, however. It is still possible, however unlikely, that Washington and Moscow could find themselves in a nuclear crisis: a crisis in which the parties reluctantly start thinking seriously about nuclear employment scenarios. In anticipation of that possibility, Washington and Moscow should balance their strategic forces in a way that disincentivizes striking first.297 Yet what is more likely than a state-actor nuclear crisis is one involving nonstate actors, and particularly terrorists claiming to have acquired a warhead (most likely a TNW) and threatening to use it. Strategic stability here, I submit, means being sufficiently confident in warhead security (together with day-to-day border security) that the terrorist claim can be rejected, with government officials not feeling pressured to strike against their own economy and people in the form of sealing borders or violating civil liberties in a desperate attempt to prevent a warhead’s arrival or to find it.298 Of

296. Nunn, supra note 295, at 8–11.
297. This is “first-strike stability.” James Acton notes that it matters “[g]iven the ongoing possibility of crises involving Russia and the United States” and must be buttressed in future reductions and arms control efforts. See Acton, supra note 80, at 63.
298. Stephen Flynn makes the point in connection with homeland security efforts. See Stephen Flynn, America the Vulnerable: How Our Government Is Failing to Protect Us from Terrorism 31–34 (2004). However, relying on detection of warheads on their way to the United States is not
course, terrorists could potentially steal warheads from Pakistan or other sources. However, Russia’s TNW stockpile continues to present a significant loose nuke threat and therefore warrants serious attention.

Another arms control goal, served by all Washington–Moscow treaties to date, is facilitating improvement in relations generally. The acts of negotiating and implementing agreements facilitate confidence, trust, reduction of tensions, and cooperation. Improvements in predictability and transparency that come with verification and lower arms caps facilitate confidence about nuclear forces and in diplomatic relations more broadly.

The bilateral treaties discussed in Part II have also been negotiated with fiscal cost avoidance in mind. Both Washington and Moscow face national budget shortfalls and rising nuclear modernization costs, meaning that this arms control purpose remains relevant.

2. Content

With this Article’s findings and these goals in mind, I recommend a treaty as follows.

First, it should count, cap, and reduce TNWs and tactical DVs to the lowest levels consistent with the parties’ security needs. Due to the Cold War’s end and the TNW mission’s contraction, the United States and Russia have more TNWs than needed, Russia considerably more. How much more effective in achieving “conflict termination” would be detonation in Russia’s near abroad of 100 TNWs versus 10, or 1? It is the difference between inflicting 100 Hiroshimas or 1, or (assuming an average 10-kiloton yield) inflicting 70,000 Cherno-byls, or merely 700.

Second, the treaty should adopt a single cap for nuclear warheads, with the tactical versus strategic distinction completely eliminated and potentially with subcategories under a single ceiling. As I proposed at the U.S. Strategic Command in 2004 and others including Steve Pifer have also suggested, a single cap would allow the parties flexibility in allocating warheads in a way that reflects their distinct security needs. The single cap would not force
Washington to Moscow to make their nuclear forces symmetrical, despite their different circumstances. Instead, it would regulate asymmetry. To maintain a rough balance in intercontinental-range forces and align incentives against striking first in a nuclear crisis, the parties could include sublimits for warheads deployed on ICBMs and SLBMs, the most rapidly launchable strategic DVs. With the strategic versus tactical distinction gone, these warheads could be termed “long-range missile warheads.” Other sublimits could apply to warheads deployed with aircraft, in nondeployed active status (including spares), and in the dismantlement queue.

Third, the treaty should add what are now tactical DVs to New START. It could do so either under the existing DV limits, or by providing a higher ceiling to accommodate the addition of tactical DVs. Russia is already below the New START caps of 800 total and 700 deployed strategic DVs and may find it advantageous to make up the difference with jet fighters, naval vessels, and short-range missiles it declares as tactical DVs. The United States and NATO would need, and could designate, a limited number of fighter jets to deliver its TNW arsenal of B61 bombs, and therefore might be able to live with the New START caps on DVs even as tactical DVs are added. The planned B61-12 version will also be carried by B-2 long-range bombers already counted under New START, suggesting an option for elimination of fighter jets as tactical DVs, assuming agreement within NATO on that point.

Fourth, if the treaty is to do effective verification regarding warheads it will need to take several steps beyond the regime in New START. Because warheads are much harder to observe from space compared to strategic DVs like bombers, the parties cannot fall back on traditional NTM to supplement what they learn from the data exchanges, notifications, and limited on-site inspections. For the first time in bilateral arms control, individual warheads would likely need to be identified. This could be done by adding to warheads the unique identifiers added to strategic DVs under New START. Otherwise, inspectors would have no way to know they are not seeing the same warheads again and again and never seeing others. Additionally, the New START notification regime, under which the parties inform one another of movements of strategic DVs, would need to be expanded to include warheads. And, inspectors would need to be provided access beyond the military bases at which operational DVs are located, to include warhead storage locations and perhaps assembly and dismantlement facilities. The warhead verification literature suggests strategic forces for tactical weapons, counting rules could prove challenging, and Russia might want the warhead totals to include the 15,000 “pits”—nuclear triggers—from dismantled warheads the United States keeps in storage).

302. Note that it would make no clear sense to have the identifiers on strategic DVs and all warheads but not on tactical DVs.

303. Whether the inspectors could search private property and individuals is also a concern. In the United States, such searches raise constitutional questions. For analysis, see David A. Koplow, *Back to the Future and Up to the Sky: Legal Implications of “Open Skies” Inspection for Arms Control*, 79
other potential steps to be used alternatively or in tandem with these steps, such as continuous monitoring of warhead storage facilities (to note warheads coming and going) or of the warheads themselves via on-site inspectors and remote monitoring systems. These include video, motion detection, and other technology. It would be reasonable for joint demonstrations and validations of verification technology to precede its deployment or adoption in a formal agreement.304

Together, these steps may be sufficient to provide effective verification of and confidence about warhead security—contributors to strategic stability as newly understood in the context of terrorism—during a nuclear terrorism crisis, and to facilitate warning and decision time in bilateral relations.

A more revolutionary idea warranting very careful analysis is tracking warheads and DVs in as close to real time as possible. Unique identifiers on warheads and DVs could include technology analogous to secure GPS tracking, with information sent over secure data links to joint nuclear information centers. A particular challenge would be the reasonable desire of the parties to remove or disable the trackers on warheads loaded aboard operating SSBNs, which are survivable precisely because they can disappear into the ocean depths. A similar option ought to be analyzed for bombers in-flight.

The new agreement I sketch could proceed in stages. A first bilateral accord could regulate all TNWs and tactical DVs. A second might eliminate the tactical versus strategic distinction. A first or subsequent treaty could reflect a grand bargain bringing in missile defense, CFE, or additional nuclear states or NATO allies involved in nuclear sharing.

To be clear, a treaty could come after—and be facilitated by—confidence building measures or unilateral moves, to include parallel unilateral moves akin to the PNIs. Potential confidence-building steps include agreed definitions, data exchanges, declarations of where TNWs are stored, declarations of which DVs are nuclear capable (of thousands of jet fighters, how many can carry nuclear weapons?), site visits, static displays, and cooperation among U.S. and Russian nuclear labs in generating and analyzing verification ideas.305

Subject to U.S. consultation with Congress and NATO, a new PNI round might include pullback of TNWs from Europe, or agreement to cut to one type of jet

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305. See, e.g., ISAB Options Report, supra note 295, at 6–7 (mentioning data exchanges, “pilot programs to verify the absence of” TNWs at former bases, and lab-to-lab contact); Arbatov, supra note 301, at 168–71; Frank Klotz et al., Unfinished Business, N.Y. TIMES, Dec. 13, 2011, http://www.nytimes.com/2011/12/14/opinion/unfinished-business.html?_r=1 (calling for data exchanges on TNWs, including systems deactivated under PNIs).
fighter tactical DV each. A potential executive agreement focused on former TNW deployment locations—leaving cuts to a congressional–executive agreement or a treaty—might facilitate TNW-related inspection of jet fighters already subject to CFE. It might also allow inspection of sites the parties declare as former TNW storage or deployment locations, to confirm that they no longer host TNWs. This measure could be expanded to all former TNW sites.

B. TNF TREATY BENEFITS

Why not rely on informal arms control efforts? That is the general drift of discussion in Washington in recent years. It is the thrust of a November 2012 report from the U.S. Department of State’s International Security Advisory Board (ISAB), chaired by William Perry, addressing both strategic and tactical forces. The report, Options for Implementing Additional Nuclear Force Reductions, observes that the tradeoff between a new PNI round and a treaty is one of expediency versus verification certainty. Indeed, a treaty can provide a stronger agreement in terms of precedent, verification regime, resolving asymmetries, and politics. These benefits justify the longer timeline and greater negotiation challenge. Parallel unilateral steps can precede and might facilitate a treaty. In taking this view, I maintain that, in part for U.S. political reasons, nuclear arms control should continue to be an exception to the pattern in U.S. international agreements identified by Oona Hathaway: the use of congressional–executive agreements rather than formal treaties. Otherwise, however, a congressional–executive agreement is at least as good an outcome as a treaty.

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306. The United States would want to consult with Japan, in particular, about a TNW pullback from Europe, because it could see Moscow shift TNWs to the Far East. Japan has already raised concerns regarding this issue. Consultation with China might be good politics as well.

Arms control theory draws distinctions among several varieties of parallel unilateral reductions, or reciprocal unilateral measures. These include graduated reciprocation in tension reduction (GRIT) (one party makes moves hoping to induce reciprocation), tit-for-tat (one party makes a move and waits for reciprocation before making another), and conditional reciprocity (reciprocation is negotiated and specified). Coordinated unilateral moves can be expressed in a variety of means, from declarations to communications, both public and private. See George Bunn & David Holloway, Arms Control Without Treaties? Rethinking U.S.-Russian Strategic Negotiations in Light of the Duma-Senate Slowdown in Treaty Approval 9–11 (Ctr. for Int’l Sec. & Arms Control, Working Paper, 1998). Washington and Moscow could employ any combination of these approaches.


308. ISAB Options Report, supra note 295, at 5.

309. See Hathaway, supra note 117, at 1261 n.56, 1270 (acknowledging that arms control has generally been accomplished via treaty, especially since the Arms Control and Disarmament Act). Louis Henkin warns against using a congressional–executive agreement in an area “traditionally dealt with by treaty and that seems to ask for the additional ‘dignity’ of a treaty, for example, a major alliance or disarmament arrangement.” LOUIS HENKIN, FOREIGN AFFAIRS AND THE UNITED STATES CONSTITUTION 217 n.* (2d ed. 1996), quoted in Hathaway, supra note 117, at 1241 n.8.
1. Precedent

I explained in Part II that the bilateral nuclear treaty regime has ventured to regulate a number of tactical DVs. It is wrong to conclude that tactical arms represent a variety of nuclear forces exempted from treaties’ reach and properly left to the parallel unilateralism of the PNIs. By tradition, Washington–Moscow agreement on nuclear matters is done by legally binding treaty.\(^{310}\) The INF and CFE treaties teach that the same is true where the agreement with Russia involves NATO forces.\(^{311}\) U.S. practice is one of the criteria the U.S. State Department must consider when deciding between treaty and nontreaty agreement routes. Respecting the treaty tradition in nuclear arms control will pay benefits in verification, resolving asymmetries, and political support.\(^{312}\) In the ramified context of reducing tactical nuclear dangers, these benefits would justify the democracy costs (treaties are considered only by the Senate, while congressional–executive agreements are considered by both Houses) and ease-of-use costs (treaties require a two-thirds supermajority in the Senate, while congressional–executive agreements are approved by Congress by simple majority).\(^{313}\)

2. Verification

In the history of bilateral nuclear arms control, the INF and START treaties have allowed intrusive inspections by resolving actual and potential disagreements in detailed treaty text, protocols, and annexes. The treaty is a proven instrument for the task. Compliance is relatively high,\(^{314}\) due, \textit{inter alia}, to the specificity allowed by treaties, the memorialization of agreement on sensitive and contested issues in advance, the reluctance of the parties to disrupt the overall treaty “deal” and formally withdraw over a later disagreement, and the treaty’s designation of dispute resolution fora.\(^{315}\) The significant steps I outline

\(^{310}\). \textit{See, e.g.,} SALT I Interim Agreement, \textit{supra} note 6. However, coming at the inception of the bilateral nuclear regime, it represents a point at which the tradition had not yet taken hold.

\(^{311}\). To this list one could add the Open Skies Treaty, which allows overflight of the territory of NATO states.

\(^{312}\). \textit{See} 22 C.F.R. § 181.4 (2006) (incorporating U.S. Dep’t of State, Office of the Legal Adviser, Treaty Affairs, and Circular 175 procedure); 11 U.S. Dep’t of State, \textit{Foreign Affairs Manual} § 720 (2006) (same); \textit{see also} Hathaway, \textit{supra} note 117, at 1249 n.32, 1250–52 (“The Circular 175 was a 1955 Department of State circular that prescribed a process for coordination of approval of treaties and other international agreements. . . . [Regulations leave] a great deal of room for the exercise of discretion [and provide little guidance on the ultimate choice].”).

\(^{313}\). \textit{See} Hathaway, \textit{supra} note 117, at 1307–16. Hathaway also argues that congressional–executive agreements are more reliable commitments because they are self-executing and give Congress greater power over the creation and termination of the agreement. \textit{Id.} at 1316–38. Although the former argument presents no issue regarding arms control treaties, the latter argument does. The President can withdraw the United States from a treaty, but Congress can by statute cancel a congressional–executive agreement.

\(^{314}\). Compliance is not perfect, but there is good reason to conclude it is sufficient to provide “effective verification.” \textit{See} SFRC Report on New START, \textit{supra} note 120, at 21.

\(^{315}\). For New START, this is the Bilateral Consultative Commission. \textit{See} New START \textit{supra} note 6, at Protocol, pt. 8.
beyond the enhanced New START verification regime would reach weapons (warheads) and facilities (for example, storage sites and factories) of even greater sensitivity than deployed forces in a manner that is more intrusive and enduring than current monitoring of strategic DVs. It is logical to expand, amend, and build on New START’s verification regime in the context of the bilateral treaty relationship. A congressional–executive agreement could do so as well but would represent a step (however short) away from arms control tradition. A new PNI round could attempt to include a verification element, either new and ad hoc or building on the New START verification regime. But to go into the new territory of verifying warhead status, numbers, and dismantlement, the verification regime would need to be sufficiently detailed to be tantamount to a formal and negotiated agreement. Because parallel unilateralism represents a policy rather than a legal commitment, one could reasonably expect greater risk of noncompliance with or abandonment of its most intrusive verification procedures.

3. Asymmetries

Relying exclusively on a new round of PNIs to regulate tactical nuclear weapons also carries serious risk regarding reversibility, and what Circular 175 means by the desired formality of an agreement as a criterion when choosing among agreement options. Parallel unilateralism places agreements of reductions, dismantlement, and inspector access in the realm of policy rather than law. Promises are more easily adjusted when policymakers change their minds or are replaced. Achieving the goals regarding tactical arms that I outline will likely require a grand bargain that will address asymmetries in the U.S.–Russian security relationship concerning not just tactical weapons but other issues as well. That in turn means that the parties will need to bargain and make concessions. These concessions, however, may be much harder to make, and likely would be harder to rely upon and enforce if they do not have the imprimatur of the law.316

The asymmetries start with Russia’s four- to seven-orders-of-magnitude lead in TNWs and their different purposes. As noted in Part I, Russia sees TNWs as potentially usable “conflict termination” weapons in its near abroad regions and as compensation for conventional inferiority to NATO and China, whereas U.S. TNWs under the rubric of extended deterrence reflect the U.S. political commitment to NATO. The United States has B61 bombs deployed on allied territory, whereas Russian TNWs of several types are officially all in storage in Russia.

Russia wants a legally binding commitment that NATO missile defense will not be focused on Russia’s strategic deterrent and wants any tactical talks to

include missile defense. The Obama Administration has been trying to revive CFE, and Russia maintains (and scholars such as James Acton agree) that CFE-covered weapons have to be on the table. Russia also seeks removal of U.S. TNWs from Europe (“withdrawal to national territory”) as a precondition to talks. Among others, Steve Pifer recommends using the B61s in Europe as a bargaining chip, while others such as Hans Kristensen call for their unilateral withdrawal. The Obama Administration said often in the years after New START that it wants a future agreement to address TNWs as well as deployed and nondeployed SNWs. In the latter categories, the United States has an advantage, and Obama in his 2013 Berlin speech announced that a review had concluded that the United States could further reduce deployed strategic warheads by one-third. The United States already has a modest current lead in deployed strategic DVs, deployed strategic warheads, and nondeployed strategic warheads, leads that may increase over the next ten years as Russian hardware ages out. Russia is expected to fall below New START’s caps of 700 deployed strategic DVs and 1550 deployed strategic warheads as its forces reach the end of their service lives, falling to an estimated 400 strategic DVs and 1100 deployed strategic warheads by 2020. In this context, it is hardly surprising to see a trade of U.S. strategic DVs for Russian TNWs implicitly posited in the House-passed 2014 NDAA.

318. ACTON, supra note 80, at 63–64.
320. See PIFER, supra note 69 (calling for a treaty with Russia drawing down to a unified warhead cap and trading U.S. TNW withdrawal from Europe for Russian concessions before NATO is faced with “disarmament by default” due to probable failure of European NATO states to procure new aircraft capable of carrying TNWs); see also KRISTENSEN, supra note 30, at 43–44 (calling for withdrawal either via an agreement or new PNIs).
321. ISAB Options Report, supra note 295, at 4 (citing Alexi Arbatov, New START: Gambit or Endgame, Carnegie Endowment for International Peace 13–15 (Mar. 2011)). In the interest of crisis stability, care ought to be taken in any future strategic DV reductions to avoid concentrations of warheads or contraction of target sets in a way that might align incentives toward striking first.
322. See House 2014 NDAA, § 1054(b), supra note 10. The ideal time for this trade was just over a decade ago, when the United States had even greater similar leverage. The United States was able to maintain its START I fleet of strategic DVs carrying 6000 deployed strategic warheads for the foreseeable future. Meanwhile, Russia’s strategic DVs were aging out. Russian deployed strategic warheads were expected to fall to around 1500 within a decade. Despite its disinterest in talking about TNWs in 2001, Russia would not have tolerated such an imbalance. But the Bush Administration chose not to use its strategic forces leverage to get verifiable reductions in the Russian TNWs that were so attractive to the Al Qaeda organization that had just carried out the 9/11 attacks. Instead, the Bush Administration in the SORT agreed to follow Russia down to 2200 to 1700 deployed strategic warheads. The implicit exchange was Russian acquiescence to U.S. withdrawal from the ABM Treaty without a larger breach in the Washington–Moscow relationship. The United States got no Russian concessions on TNWs and got more than it needed on missile defense: an amendment to the ABM Treaty permitting a limited national missile defense focused on North Korea and Iran. The George W. Bush Administration significantly reduced TNWs unilaterally, as did Russia. However, the U.S. failure
The precise contours of a grand bargain, or series of smaller agreements, need not be dictated here. It is sufficient to observe that one can envision a number of potential deals that serve the goals regarding tactical arms that I outline and that address asymmetries through a package of concessions on both sides that the parties find broadly beneficial on a net basis. That process would require the careful forecasting and risk balancing that is the essential and inevitable task of national security planning in an imperfect world. That deal-making process might also take longer as a formal negotiation, but once its outcome is reflected in law and included in a larger agreement, its provisions and compromises may be more enduring.

4. Politics

Finally, a treaty is the better ultimate vehicle for regulating tactical nuclear weapons for reasons of politics and political process. This preference comes despite the time and political capital investments required for signature and ratification by all NATO members if the treaty were to include them.

State Department Circular 175 identifies the preferences of Congress as a criterion in deciding among legal instruments. The Senate is an important reason an agreement on tactical arms ought to be embodied in a treaty, particularly if it pulls in other issues. The Arms Control and Disarmament Act bars implementation of agreements that obligate the United States to reduce its forces in a militarily significant manner unless approved by treaty or otherwise legislatively authorized,\textsuperscript{323} permitting congressional–executive agreements, and permitting unilateral reductions provided they are not part of a legally binding agreement. It is also true that a related provision in the Senate’s New START advice and consent resolution requiring use of the treaty mechanism for any “further arms reduction agreements” is limited by its caption to “[f]urther \textit{strategic} arms reductions” and is a declaration merely expressing the “intent of the Senate.”\textsuperscript{324} Yet since the New START ratification debate, a number of Members have become seized by the issue.

\textsuperscript{323} 22 U.S.C. § 2573(b) (2006).

\textsuperscript{324} Treaty with Russia on Measures for Further Reduction and Limitation of Strategic Offensive Arms, 156 Cong. Rec. S10982, § (c), (c)(11)(B) (daily ed. Dec. 22, 2010) (emphasis added). The text does not specify strategic nuclear arms. However, a title of a paragraph “can aid in resolving an ambiguity in the legislation’s text.” INS v. Nat’l Ctr. for Immigrants’ Rights, 502 U.S. 183, 189–90 (1990) (citing Mead Corp. v. Tilley, 490 U.S. 714, 723 (1989)) (holding the phrase “employment” to be limited to the “Unauthorized employment” referenced by a paragraph’s heading). Also, any textual ambiguity ought to be resolved in favor of the Executive’s foreign relations discretion. \textit{See} Haig v. Agee, 453 U.S. 280 (1981) (holding that statutory silence regarding passport revocation should be resolved in favor of the Executive because of the Executive’s foreign relations role). Note also that the LeMieux Amendment’s ratification condition in § (a)(12)(A)(i) of the Congressional Record also references “an agreement” on tactical nuclear weapons. It is based on a declaration in the Committee’s version of the resolution in § (c)(11) that also references an “agreement.” The Committee report’s discussion of § (c)(11) references “discussions.” SFRC Report on New START, \textit{supra} note 120, at 61.
Congress has sent signals against unilateral reductions and specifically in favor of the treaty mechanism, ones that ought to be heeded. The 2013 NDAA expressed the Sense of Congress that a treaty is the only acceptable kind of binding agreement with Russia regarding nuclear forces, missile defense, or long-range conventional arms.325 The Republican Ranking Member of the Senate Foreign Relations Committee sent the same message verbally after Obama’s 2013 Berlin speech.326 Meanwhile, the House has acted repeatedly. The House-passed 2014 Department of Defense Appropriations bill includes amendments barring funds for strategic force reductions under New START and new force cuts inconsistent with the Arms Control and Disarmament Act, while the House-passed 2014 NDAA bars unilateral cuts to U.S. tactical DVs in Europe and strategic DVs, subject to conditions including (in the case of the latter) a treaty or congressional–executive agreement on Russian TNWs.327

On the Russian side, President Putin’s centralization of power suggests he could likely win ratification of a treaty or sell a new set of PNIs. A treaty’s probable benefit from the Kremlin’s view is that it suggests that Russia enjoys equal standing with the United States or NATO. TNW cuts that Russia’s security establishment might find distasteful might also be easier to swallow when packaged with legal limitations on Western arms.

Because of “poor conditions for trust and dialogue” between Washington and Moscow, the ISAB Options Report is right that “Russia may simply say no, due in large part to cultural or bureaucratic barriers to transparency and further reductions” to any further nuclear steps.328 But politics can change, and regulation along the lines I suggest is warranted because of the dissipation of the tactical versus strategic distinction in the context of continued regulation of strategic forces combined with enduring threats associated with tactical arms. As I discuss in the next Part, treaty-facilitated expansion of the verification regime holds transformative potential for deterrence theory and for the security of all parties to the Washington–Moscow balance and beyond.

V. THE PROMISE OF REGULATION BY TREATY: NUCLEAR INFORMATION STABILITY

The November 2012 Options Report of the ISAB, and another August 2012 report, Mutual Assured Stability: Essential Components and Near Term Actions (“MAS Report”), represent initial responses to the State Department’s request for study of the path away from reliance on mutually assured destruction (MAD) “to a world of mutual assured stability,” one closer to the world without

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325. 2013 NDAA, § 1282(b), supra note 10.
326. See Calmes, supra note 9.
328. ISAB Options Report, supra note 295, at 7.
nuclear weapons envisioned by Presidents Reagan, Obama, and others.\textsuperscript{329} This context for the ISAB’s recommendation of new parallel unilateral steps on TNWs underscores the potential theoretical significance of tactical arms control efforts for the broader future of bilateral nuclear relations and global peace. I suggest that a formal arms control agreement’s intrusive verification regime could facilitate a condition I conceptualize as Nuclear Information Stability (NIS) and create a bridge from daily reliance on MAD to Mutual Assured Stability (MAS).

Mutual Assured Stability has its roots in other MASs. Mutual Assured Security was articulated by President Reagan as an alternative to MAD and, combined with deep nuclear reductions, was “the purpose” of his Strategic Defense Initiative (SDI) ballistic missile defense.\textsuperscript{330} As Secretary of Defense, ISAB Chairman William Perry coined a new term in connection with the 1994 Nuclear Posture Review: Mutual Assured Safety.\textsuperscript{331} This MAS emphasized nuclear cuts via the START treaties and cooperation under the Nunn-Lugar CTR program.\textsuperscript{332} In 1996, Perry reverted to Reagan’s term Mutual Assured Security, focused on preventing, deterring, and defeating proliferation by including a limited missile-defense system that focused on “rogue states” rather than Reagan’s Russian-focused SDI.\textsuperscript{333} Recently, in a series of newspaper op-eds with Henry Kissinger, George Schultz, and Sam Nunn, Perry returned to the idea of Mutual Assured Security. These “[f]our [h]orsemen of the [n]uclear [a]pocalypse” view MAS as part of the nuclear abolition process, requiring warhead cuts together with “greater cooperation, transparency and verification.”\textsuperscript{334} In 2011, former Russian Foreign Minister Igor Ivanov referenced both Mutual Assured Security and Stability. But he meant something different. Rather than abolition or missile defense against rogue states, Ivanov suggested MAS meant that Washington and Moscow, and perhaps the other “nuclear club” members, use their “common [nuclear] assets” to “deter third parties.”\textsuperscript{335}


MAS is tantalizing in its suggestion of MAD’s end but is barely theorized. The ISAB MAS Report, a mere fourteen pages long at its core, appears to be MAS’s most extensive open source treatment. With an eye to stimulating more substantive thought, I close this Article with responses to the ISAB and suggestions.

First, note that the words safety, security, and stability suggest similar but different notions of what an alternative to MAD looks like. Second, thinking on MAS has been driven by practitioners, as is evident in its treatment by the ISAB. Accordingly, it has been preoccupied with their policy agendas: missile defense in the near-term and nuclear abolition in the long-term. I suggest that arms control theorists ought to grapple with the immediate circumstances and mechanisms that would allow the parties to assure one another mutually of their nuclear safety, security, and stability despite the continued existence of nuclear weapons during our lifetimes and the underlying reality of deterrence. That MAS (pick your “S”) would get at the psychological and perceptual nature of deterrence as recognized by the four horsemen and 2010 NPR. Further, MAS need not eliminate MAD until nuclear weapons are eliminated (if that is possible) but might supplant MAD as a day-to-day state of affairs.

The ISAB’s exploration of MAS is wanting in these respects. The MAS report proposes an end state for the purposes of discussion of MAS that, as the ISAB acknowledges, may not ever be achievable with Russia: a relationship among states akin to those within the European Union “in which nuclear weapons are no longer a central feature for their security, deterrence based on nuclear destruction is no longer necessary, and the likelihood of nuclear war is treated as remote because their relationship is free of major, core security issues.” ISAB sketches essential but not sufficient components of a MAS relationship. These include “Effective Clarity” that “would signal the appearance of nuclear weapons or any of its early indicators, anywhere not expected or declared, in each nation or its allies’ territory,” and even “Public Health Cooperation” on healthy lifestyles, to provide “entanglement” of values reflecting “Beneficial Interdependence.”

The ISAB’s instincts are sound: this is probably asking too much of the U.S.–Russian relationship in our lifetimes, maybe several. It is also asking more than we need for a day-to-day condition that is sufficiently different than MAD that we can conceive of it as MAS. The MAS Report’s overreach reflects the ISAB study’s understanding of MAS as fully displacing MAD rather than existing in the context of MAD’s ultimate reality.

337. ISAB MAS Report, supra note 329, at 3.
338. Id. at 2, 3, 6, 12 (internal quotation marks omitted).
More productive, in my view, is focusing instead on the immediate circumstances and mechanisms that could facilitate MAS, and particularly what I term Nuclear Information Stability (NIS): stability and predictability in the quantity and quality of information that parties in a deterrence relationship have about the nuclear hardware on both sides. NIS would be characterized by continual communication and common recognition of the number, location, and status of existing DVs and warheads, potentially enabled by secure, shared twenty-first century surveillance systems and data links. Washington and Moscow are moving in the direction of NIS regarding strategic DVs via the New START inspection regime, having “[a]t any given time . . . a reasonable understanding of where each . . . ICBM, SLBM, and heavy bomber is based and whether that missile or bomber is deployed or in maintenance.”

339 NIS could be more fully realized for all DVs—plus warheads—by the intrusive verification regime required and enabled by a formal legal agreement that mandates counting, capping, reducing, and confirming the destruction of warheads.

NIS could reduce uncertainty about nuclear capabilities and intentions—uncertainty that played a major role in driving the superpowers to build 100,000 warheads during the Cold War and informs nuclear policy and arms control today. With greater transparency, predictability, warning, and decision time, the parties to NIS would face lower risk of surprise—a serious information failure—in the form of destabilizing nuclear force increases, threatening redeployments, or a first strike. 340 Such a constant condition of NIS, evident via modernized, expanded, and jointly staffed Nuclear Risk Reduction Centers (originally established pursuant to the INF Treaty), would mutually reassure the parties of their individual and common safety, security, and stability. NIS simultaneously would buttress the reality of MAD underlying MAS, strengthening strategic stability in the classic sense—alignment of incentives against striking first—especially during crises. All of this equates to less pressure to keep stockpiles unnecessarily high.

NIS could also reduce the likelihood of nuclear use against a third party by alerting the other NIS partner to nuclear movements at an early stage and allowing time for discussion, dissuasion, and, if necessary, deterrence.

NIS could buttress strategic stability in the expanded sense I suggested in Part IV during a loose nuke crisis. Stable and reliable information about warhead security means greater confidence in evaluating assertions and intelligence about terrorist possession of a warhead. That translates to less pressure to take self-harming homeland security steps, such as closing borders and carrying out searches and detentions that imperil constitutional rights.


340. For discussion of warning and decision time, see Nunn, supra note 295, at 6–8.
I would like to suggest a few closing thoughts about this initial exploration of NIS, MAS, and MAD. First, it is legitimate to ask whether increased transparency plus lower warhead numbers would mean greater concern about a disarming first strike and therefore less crisis stability. This could, however, be mitigated by the greater warning and decision time provided by NIS, together with agreed times—such as SSBN deployment—when transparency would be reduced. Second, the legal instrument is a key enabler. A formal accord clarifies and memorializes agreements about access and monitoring and insulates the entire package within a single legally binding agreement that can be changed only by amendment. Arms control law as of New START is already intensely focused on information sharing, a focus that a successor accord on warheads would expand. Finally, once demonstrated, NIS might be exported. If Washington and Moscow were able to reduce to lower levels due to NIS-informed MAS (especially in TNWs), that could increase the strategic significance of China’s rising nuclear forces and those of the UK and France. Washington and Moscow may be reluctant to cut their nuclear forces much deeper until they have NIS with China. That is unlikely to be quick or easy. MAD is the easy and longstanding default, and the costs of revising it in the wrong way could be terrible. Achieving MAS may take as long as we have lived with MAD. A formal agreement regulating tactical nuclear weapons is a necessary but not sufficient first step.

CONCLUSION

Tactical nuclear arms may represent the next frontier in bilateral nuclear arms control, but they do not represent *terra incognita*. The American Western Frontier was known and traveled on a limited basis before it was fully brought under the rule of law. Similarly, the nuclear legal regime has made limited forays to include tactical systems that one or both parties assert have strategic significance. These regulatory forays provide informative precedent for comprehensive and focused talks on regulating tactical nuclear weapons. The context of those talks is the rapidly eroding tactical versus strategic distinction with all nuclear weapons having strategic implications and effects. The end of that bifurcation argues for the regulation of tactical DVs and warheads, along with strategic warheads and warheads in reserve, as the Obama Administration has suggested since New START. Because the primary leverage for verified, required Russian TNW cuts is found in other systems that are currently, or have been, regulated by treaty—including conventional arms, strategic DVs, and missile defense—plus nondeployed warheads, tactical arms ought to be regulated via a formal agreement and ideally a treaty. Confidence-building measures such as data exchanges and unilateral force adjustments (including those in parallel) may facilitate a new formal agreement. But the risk of relying entirely on informal, nonlegal regulatory methods is evident in the legacies of the 1991–1992 PNIs and omission of tactical arms from the 2002 SORT and other strategic-focused treaties: lack of verification and lesser likelihood of cuts,
especially by Russia. That translates to less confidence about warhead security in a loose nuke crisis and a missed opportunity to begin to move from MAD to Mutual Assured Stability through Nuclear Information Stability. The path toward MAS is unlikely to be short, but a new treaty regulating tactical nuclear weapons could mean a less perilous world.