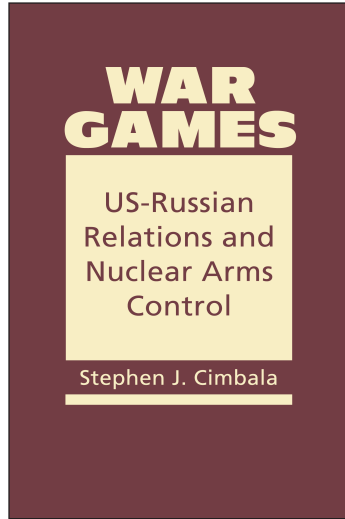


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US-Russian Relations  
and Nuclear Arms Control

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# 1

## US-Russian Relations and Nuclear Arms Control

**Professors are ill advised to preempt politicians and pundits** in day-to-day policy debates. Politicians and pundits can always steal a march with respect to timely commentary and media pizzazz. On the other hand, the role of academics and other scholars is to provide background, perspective, and above all context for important issues in national security policy and international relations.

The present book was motivated by such a desire. In the aftermath of Russia's takeover of Crimea in March 2014 and destabilization of eastern Ukraine, the United States and Russia have been at loggerheads with respect to many parts of their respective national security agendas. In Europe, the collision course is understandable. The United States and its European allies in the North Atlantic Treaty Organization (NATO) viewed the Russian annexation of Crimea and Russia's support for rebel enclaves in southeastern Ukraine as more than a temporary provocation. It was, in the minds of many political and military leaders on both sides of the Atlantic, a rewriting of the post-Cold War rules of the road for European peace and security.<sup>1</sup>

Putin's use of unconventional military operations and political warfare against Ukraine was seen by NATO as an imminent threat to a number of its member states, especially the Baltics (Estonia, Latvia, and Lithuania) and post-Soviet states in Eastern Europe. Accordingly, NATO responded with atypical unity in moving to formulate both political responses and military countermeasures against Russia. In February 2016, President Barack Obama and Secretary of Defense Ashton Carter announced that the United States would more than quadruple its European Reassurance Initiative to strengthen allies and partners and to deter Russia from further aggression.<sup>2</sup> NATO ministers approved troop deployments on the eastern flank of the alliance for the first time since the end of the Cold War, and plans were laid down for increased "forward presence" by means of allied maritime forces in the Baltic Sea and land forces to reinforce defenses in Estonia, Latvia, Lithuania, Poland, Bulgaria, and Romania.<sup>3</sup>

The disagreements between NATO and Russia over Ukraine were part of a larger picture of worsening relations that accelerated with Vladimir Putin's return to the Russian presidency in 2012. The "reset" in US-Russian relations that took place during President Obama's first term in office was on the rocks by the end of his second term. In this climate of mistrust and rivalry between the two powers, nuclear arms control returned to hibernation. The optimistic momentum surrounding the conclusion of the New START (Strategic Arms Reduction Treaty) agreement in 2010 (going into effect in February 2011) gave way to stasis and neglect at the political level in Washington and Moscow for the remainder of Obama's term in office. Meanwhile, Russia moved to increase its defense budgets and reform its armed forces with more modern equipment, with better personnel obtained through contract service, and with revised military doctrine and organization to move away from the former Soviet model toward forces that were lighter, more rapidly deployable, better equipped, and supported by improved command-control and communications. Russia also indicated its desire to modernize its strategic and other nuclear forces with newer generations of weapons and launchers.<sup>4</sup>

US-Russian and NATO-Russian political disagreements on Ukraine, on Russia's military intervention in Syria in 2015–2016, and on some other contentious security issues showed little sign of resolution as Obama entered his final year in the White House. Nevertheless, there were exceptions to the doom and gloom as between Washington and Moscow. In summer 2015, Russia supported the United States, the European Union, and the United Nations Security Council in reaching an international agreement with Iran to restrain the latter's nuclear program. And the United States and Russia worked to "deconflict" their respective air sortie zones over Syria in 2015 and 2016 even as they supported opposite sides in that raging civil war. As well, Presidents Putin and Obama brokered a temporary "cessation of hostilities" in Syria in the last week of February 2016 in order to provide for humanitarian relief to threatened civilians and to create a temporary breathing space from continued fighting.

Despite the negativity that dominated US-Russian and NATO-Russian relations on security issues from 2012 through 2016, I argue in this book against the "conventional wisdom" in US government and public commentary. Conventional wisdom holds that nuclear arms control is politically impossible, or unnecessary, and strategically misguided, given the temperature of US-Russian and NATO-Russian relations, now and for the foreseeable future. To the contrary: cooperative security measures and political collaboration on nuclear arms control, disarmament, and nonproliferation are necessary and continuing responsibilities for the United States and for Russia. These two great powers must understand correctly the overall inter-

national security context that privileges a need for their leadership on nuclear arms control and nonproliferation. Simply put: if Washington and Moscow do not lead, nothing good will happen. Absent their leadership, we can expect that nuclear weapons will continue to spread among more states; that some existing nuclear weapons states will increase the size of their nuclear arsenals and supporting infrastructure; that the risk of terrorists getting their hands on nuclear materials or weapons will increase; and finally that the risk of nuclear war between states already armed with nuclear weapons, especially but not exclusively outside Europe, will become greater as time passes. We can do better. This book explains why and how.

### **Structure of the Book**

The focus of Chapter 2 is the relationship between the information age and nuclear weapons. Much if not most of our “canon lore” about nuclear weapons and nuclear-related issues (including arms control, disarmament, and nonproliferation) comes from the technological environment of the Cold War. In the twenty-first century, nuclear weapons will be embedded in organizations and polities that are “wired” for decisionmaking by information systems and networks. This info-impacted environment for nuclear decisionmaking calls into question some of the more important policy theorems and military shibboleths of the first nuclear age. For example, cyber intelligence probes, or cyber attacks on networks or other components of strategic information systems, may precede or accompany kinetic attacks (conventional or nuclear) in military and defense planning. However, cyber deterrence and nuclear deterrence are different paradigms for influence: first, the identity of cyber attackers may not be known; second, cyber does not require an expensive industrial infrastructure; and third, cyber attacks, however destructive and malicious they might be in the digital domain, do not approximate the physical destruction of nuclear weapons.

In matters having to do with strategic nuclear weapons, the United States and Russia are permitted to walk and chew gum at the same time. Chapter 3 considers how the United States in particular might be able to reconcile the goal of modernizing its long-range nuclear weapons and launchers with the continued pursuit of US-Russian nuclear arms reductions. Modernization need not imply a larger force: a force smaller in size but with enhanced performance characteristics might serve equally well as the basis for stable deterrence. Analysis shows that the United States and Russia could maintain a stable equilibrium of second-strike retaliatory forces even at post–New START levels lower than those agreed in that treaty, signed in 2010 and entering into force in 2011. Admittedly, conflicts

as between NATO and Russia in 2014–2015 over the status of Crimea and Ukraine reduced the likelihood of prompting forward movement on a post–New START accord. Notwithstanding political tensions over Ukraine, and enhanced alliance responsiveness by NATO in order to support deterrence and stability in Europe, expert dialogues on nuclear matters continued and arms control advocates awaited a more propitious political climate.

In Chapter 4, the problem of expanding US-Russian strategic nuclear arms reductions to include China as an equal participant is addressed. There are good reasons to do so. China is the world's second largest economic power. Its military, including the number and diversity of its nuclear capable launch platforms, is growing. China's political influence and military reach in the Pacific basin are waxing, and China's territorial ambitions in the region have already clashed with those of other regional powers as well as the United States. On the other hand, compared to the United States and Russia, China has less experience than they do with respect to Cold War or post–Cold War style nuclear arms reduction talks. Whether China would be agreeable to increased transparency with respect to the numbers, operational deployments, and other aspects of its nuclear-military complex, as required in past US-Russian arms agreements, is uncertain. Regardless of these asymmetries in perspectives on nuclear arms control, failure to engage China on this issue could result in the deployment by China of increased numbers of offensive long-range nuclear weapons and launchers to the detriment of stable deterrence on all three sides of the Washington-Beijing-Moscow triangle. Isolation of China in this regard could also increase the probability of misperception in a crisis as between China and the United States, or China and Russia, contributing to the stronger likelihood for a mistaken nuclear preemption.

Chapter 5 examines how nuclear crisis management might differ in the information age from the assumptions on which pre-digital crisis management was assumed to have operated. First, nuclear crisis management in the Cold War setting required that states have secure and reliable means of communication. Second, the fidelity of these means of communication (such as hotlines or other means for candid exchanges between leaders) was not to be tampered with by the other side. The United States preferred that Soviet crisis-time communications work well and vice versa. A third aspect of successful crisis management required that the pace of events be slowed to allow leaders time to more clearly comprehend one another's objectives and motives. And fourth, it was taken for granted that, if crisis management failed and an attack were launched, the identity of the attacker would be obvious and therefore accountability would be easy to assign. However, in a digital world, nuclear crisis management might differ from the preceding assumptions. Cyber war or software malfunctions might interfere with reliable communication; cyber attacks could take place more rapidly than deci-

sionmakers are able to interpret the results or resolve upon an appropriate response; and the identity of a cyber attacker might remain unclear for the duration of a crisis, and indeed a third party could “impersonate” a US or Russian communication or create an information embolism in either state’s networks. In an extreme case, a state-directed hacker or individual malware malcontent might trigger an incorrect attack warning or trigger an inauthentic launch command.

In Chapter 6, the subject of controlling or terminating a nuclear war is taken up. During the height of the Cold War, marked by extravagant numbers of nuclear weapons and launchers deployed by the Americans and Soviets, the very idea of controlling or limiting a nuclear war resembled a fool’s errand. Since the end of the Cold War and the beginning of the second nuclear age, however, the issue of nuclear war termination merits more careful scrutiny. The principal Cold War danger of a massive US-Soviet nuclear conflict has now receded in favor of nuclear risks arising in the regions outside Europe: in the Middle East, South Asia, and East Asia. In a case of nuclear first use or a nuclear exchange outside Europe, the United States and Russia could have a shared interest in preventing additional attacks, in limiting the geographical spread of the conflict, and in bringing about a ceasefire or other war termination as rapidly as possible. The sensitivity of this subject matter makes it difficult to coordinate scenario planning and war gaming as between Washington and Moscow. But some tabletop exercises of the “what if” kind, including policymakers as well as analysts from both the United States and Russia, would do no harm. The problem of containing a nuclear war is particularly acute in Asia, where the possibility of military outbreaks between India and Pakistan, or between North and South Korea, cannot be ignored. And failure to prevent Iran from becoming a *de facto* nuclear weapons state could lead to regional nuclear proliferation (Saudi Arabia, Turkey) and later to nuclear conflict between regional powers.

Could the United States and Russia reduce their current numbers of operationally deployed strategic nuclear weapons and launchers to levels significantly below the New START levels agreed upon by the two states in 2010? This issue is taken up in Chapter 7. Some academic and military experts have argued that the United States and Russia could maintain stable deterrence at so-called minimum deterrence levels. Although there is no universally accepted definition of minimum deterrence, advocates usually have in mind reductions in the numbers of operationally deployed warheads for each state to several hundreds of weapons. Critics of minimum deterrence raise several points of concern. First, minimum deterrence limits the range of targeting options for commanders and political leadership, should deterrence fail. Second, smaller nuclear forces compared to larger ones lack flexibility and resilience neces-

sary for the conduct of nuclear force operations. Third, minimum deterrence for the United States could fall short of protecting its extended deterrence commitments to allies in Europe, Asia, and the Middle East. Fourth, minimum deterrence forces might be neutralized by even modest breakthroughs in missile defense technologies. Fifth, the United States and Russia cannot afford to downsize their respective arsenals unless other nuclear weapons states are included and required to make proportionate reductions in their respective inventories. Despite these doubters, advocates of minimum deterrence contend that it is a necessary way station toward the ultimate objective of a nuclear-free world and, in the interim, a less dangerous and expensive nuclear-strategic posture for the larger nuclear weapons states.

The preceding discussion brings us to the problem of nuclear abolition, discussed in Chapter 8. Nuclear abolition has been the dream of scientists, policy advocates, and some governments almost since the dawn of the nuclear age. Experts and lay observers recognized that reliance on nuclear deterrence to preserve peace and security was at best a necessary evil—and at worst a bargain with the devil. The challenge of nuclear abolition is twofold: Is it desirable? And is it feasible? Disagreement exists on both issues. Some argue that nuclear deterrence helped to stabilize US-Soviet relations during the Cold War and will continue to do so among present and prospective nuclear weapons states. Others contend that nuclear weapons actually made the Cold War more dangerous and that the preservation of the nuclear taboo in international relations was more a matter of luck than of successful management. Whether the preservation of nuclear arsenals is desirable or undesirable, the second issue is the feasibility of getting states to dismantle their nuclear weapons and supporting nuclear infrastructure. The existing nuclear weapons states would almost certainly have to empower some international authority to conduct intrusive inspections and to provide independent verification of disarmament and dismantlement. Giving a briefing to this effect in Moscow, Islamabad, Beijing, or Tel Aviv would be challenging, to put it mildly. On the other hand, feasibility is fungible. Before World War II a US military superpower astride the globe seemed inconceivable. Numerous experts denied that an atomic bomb could ever be built or that it would work as intended even after having been constructed. Many experts failed to foresee the timing of the end of the Soviet Union. Where there's a will, there's a way, as the saying goes. The problem is that states that now have nuclear weapons don't want to give them up. Perhaps it will take a catastrophic nuclear accident or a deliberate nuclear first use for the idea of nuclear abolition to increase in feasibility as well as in desirability.

If nuclear abolition falls short of realization (and it's worth emphasizing that, even if this controversial end state materializes, the knowledge of how to manufacture nuclear weapons and delivery systems cannot be for-



gotten), it will remain the task of the international community to limit the spread of nuclear weapons. Not everybody agrees with the preceding statement, as noted in Chapter 9. Some academic commentators and military experts feel that the spread of nuclear weapons is to be more welcomed than feared. To be fair, these commentators do not favor random and altogether undisciplined proliferation. It matters who owns the weapons as much as it does how many nuclear weapons states there are. For example: everyone worries about North Korea's nuclear weapons because of its revisionist pronouncements and frequent threats to international peace and security; but almost no one worries about British or French nuclear weapons, because they are status quo powers without systemically revisionist objectives and are also democracies with public accountability. Nevertheless, the "more is better" school with respect to the spread of nuclear weapons expects that nuclear deterrence will work in the twenty-first century about as well as it did in the twentieth. Other academics and military experts are skeptical that the spread of nuclear weapons among more state actors can be anything other than destabilizing to the international order. Future quarrels between nuclear weapons states may be based on political issues like nationalism, religion, or other questions of identity that are not so easily resolved by negotiation and compromise. Then, too, new nuclear powers will have a steep learning curve with respect to the management of nuclear force operations, especially during crisis or conventional war. This is a challenge with respect not only to learning on the part of top political or military leaders, but also to "organizational" learning. Too little respect is paid to the distinction between individual and organizational learning in the literature of international relations. Leaders must institutionalize their desires into the procedures and behavioral routines of government bureaus and organizations, including military organizations. Otherwise, organizations will repeat those procedures and routines that are already embedded in their memory banks, regardless of their applicability to the exigent circumstances. Another organizational issue that requires attention from new and older nuclear powers is that organizations will be operating in an information-rich environment and doubtless be flooded with misleading or useless indicators, apart from intentional cyber sabotage, that complicate accurate intelligence, warning, and response.

These issues of organizational learning and their implications for deterrence also appear in Chapter 10, which considers the role of weapons other than strategic nuclear weapons in US and Russian nuclear strategy and policy. During the Cold War, the assumption was that US operational or tactical nuclear weapons deployed in Europe were important symbols of the US extended deterrence guarantee to its NATO allies against Soviet attack. In addition, substrategic nuclear weapons involved the European members of

NATO in the dialogue about policy, with respect to the role of nuclear weapons in deterrence or (presumably) for escalation in the face of an otherwise successful Soviet attack with conventional forces. Third, Soviet planners of an attack would have to preemptively target and destroy nuclear weapons storage sites and launchers, among other targets, thereby immediately escalating the conflict from a “conventional” toward a “nuclear” threshold even if the weapons used by the Soviet Union were conventional missiles or bombs. Nonstrategic nuclear weapons also posed some dilemmas for NATO. First, a decision in favor of nuclear first use would presumably require alliance unanimity; such political unity might not be available, especially under the duress of a crisis or of a conventional war already in progress. Second, escalation might take place gradually, with the firebreak between conventional and nuclear war obscured by a series of ambiguous incidents and contradictory after-action reports. Third, would a more credible deterrent posture for NATO be a clear firebreak between the employment of tactical nuclear weapons and weapons of longer ranges, including strategic nuclear forces, or, to the contrary, should the Soviets be persuaded that such a firebreak cannot be maintained and that a rapid jump from theater to intercontinental nuclear forces was more likely? The Soviet Union no longer casts its brooding omnipresence over Europe, but a revived Russia has caused NATO to ramp up its budgets and deployments in the Baltics and Eastern Europe following Russia’s annexation of Crimea and destabilization of eastern Ukraine. It’s hard to see how NATO tactical nuclear weapons add to the credibility of its deterrent against Putin’s new form of “hybrid war” based on unconventional and political warfare, deception, and covert action. It’s equally hard to imagine NATO as currently organized (twenty-eight members compared to its Cold War membership of sixteen) making a prompt decision for nuclear first use, as opposed to a decision made by an individual nuclear weapons state member of the alliance.

Chapter 11 considers the issue of missile defense in terms of its relationship to US-Russian nuclear deterrence and arms control. Even before Russia’s annexation of Crimea and destabilization of eastern Ukraine roiled relations with Washington, friction had developed over US plans to deploy its components of the European Phased Adaptive Approach (EPAA) on the territories of allied NATO members and at sea. Russia complained that the system was intended not as a deterrent against attacks from rogue states such as Iran; instead, according to President Putin and others, it was designed to negate Russia’s deterrent by nullifying its second-strike nuclear retaliatory forces. US technical demonstrations that NATO missile defenses would not pose a meaningful threat to Russia’s strategic nuclear retaliatory forces were met with Russian disbelief and hyperventilation (meanwhile, Russia continued working to develop its own advanced missile defense and

air defense systems). Russia attempted to include in the New START agreement of 2010 a provision that would limit further US missile defense deployments, but the United States resisted on the grounds that missile defense was a separate issue, and in any case the United States and NATO were committed to deployment of at least the first three phases of the EPAA. US critics of missile defense argued that current and immediately prospective technologies were flawed and unnecessarily provocative of Russian distrust. Meanwhile, technologies for theater as opposed to strategic missile defense were improving apace, and US efforts to encourage allies in Asia such as Japan and South Korea to adopt US systems for antimissile defense (either land- or sea-based) were meeting with favorable reviews, albeit annoying to China. With regard to the role of strategic defenses as between the United States and Russia in a post-New START world, existing and near-term missile defenses for both sides are at least theoretically compatible with the preservation of second-strike capability and stable deterrence.

Geography is an important context for the making of all strategy, including nuclear strategy, as Chapter 12 explains. Nuclear weapons have launch sites and intended trajectories with geographical and geostrategic parameters. States' definitions of their vital interests are determined in part by their geographical shapes and locations: for example, being landlocked versus having ready access to seas and oceans, or having a smaller or a larger territory to defend. States with larger territories, like the United States and Russia (also China), have more options with respect to the operational deployment and use of nuclear weapons. If states with larger territories also have easy and defensible access to the world's major waterways, they can deploy not only land-based and airborne nuclear weapons, but also sea-based ballistic and cruise missiles aboard submarines and surface craft. There are physical and other limits to what can be done with force deployments even in continental-sized countries. For example, a proposed MX/MPS basing system for shuttling moveable nuclear ballistic missiles around a "racetrack" located in the southwestern United States came under fire and was eventually ruled out due to environmental objections from politicians and publics in several states. Strategic depth (or lack thereof) will become a more important issue if there is an increase in the number of smaller-state proliferators, with implications for escalation control and war termination. Larger territories also allow states to spread out potential military targets and to deploy more different kinds of launchers, as in the case of US and Russian land-based missiles and bombers. On the other hand, nuclear weapons can be great equalizers when used by a smaller state as a deterrent against another state with larger territory and more capable conventional forces, as in the case of Pakistan with respect to India. More

important than territory with respect to the research and development and deployment of nuclear weapons and launchers is the state's level of advanced technology, education, and bureaucratic management for strategic effect. Given the dependence of all modern polities on advanced technology and infrastructure that is vulnerable to nuclear destruction, a small number of nuclear strikes, even against a country with a large territory, can immobilize its government and economy in addition to causing large loss of life. Nevertheless, geography still matters in nuclear deterrence and arms control, as demonstrated by recent US claims that Russia is violating the Intermediate-Range Nuclear Forces (INF) Treaty of 1987 by having tested a cruise missile of prohibited range. Intermediate and shorter-range ground-launched missiles were banned by treaty because, in Europe's geographical space, their reach was sufficient to cause considerable nuclear-strategic instability across the breadth of NATO and Warsaw Pact membership. At the same time, Russia may now be having buyer's remorse about the INF Treaty as it faces a growing arsenal of Chinese ballistic missiles of various ranges and deteriorated political relations with NATO Europe.

Russia's desultory detour into sparring with NATO Europe came with the return of Vladimir Putin to Russia's presidency in 2012. As Chapter 13 notes, Putin's seizure of Crimea and destabilization of eastern Ukraine unleashed a tide of military uncertainty and political hostility as between NATO and Russia. Russia saw the annexation of Crimea as part of its historical birthright and as necessary to keep the Black Sea Fleet as its southern maritime bastion afloat. Russia also acted to support separatists in eastern Ukraine in order to bring to heel the political ambitions of the Petro Poroshenko government. Russia would tolerate an "independent" Ukraine but not one whose regime, from the Kremlin's perspective, was anti-Russian and a vector for spreading the Orange Revolution from Kiev to Moscow. The nuclear aspect to Putin's more assertive behavior was two-sided. Russia's strategic nuclear forces guarantee it admission to the top table of world powers, regardless the ups and downs of its conventional force modernization or of its petro-dependent economy. Therefore Russia's strategic and tactical nuclear weapons provide nullification of NATO military aggression or coercive diplomacy based on NATO's conventional military superiority, as Russia sees it. Russian military doctrine has long averred that Russia will not forswear the first use of nuclear weapons when the survival of the state is in question or otherwise vital interests are at risk. This argument that the limited use of nuclear weapons could serve as a means of strategic "de-escalation" seems grotesquely inappropriate for the purpose intended, but until Russia's conventional military forces are sufficiently modernized, Russia sees this contradiction as a matter of military necessity in declaratory policy. In practice, it is hard to imagine that NATO and Russian leaders would not find some

means of political settlement for any conflict before resorting to the use of any nuclear weapons, which would open the door of uncertainty to the loss of modern European civilization and more.

Chapter 14 summarizes some of the major challenges to nuclear security in the second nuclear age. Two challenges stand out for international relations theorists, for policymakers, and for military planners. The first of these challenges is the growing significance of nuclear risk management in regions outside Europe, especially in East and South Asia. Of course, Russia's annexation of Crimea was a reminder that peace and stability can no longer be taken for granted in Europe. On the other hand, Russia and its NATO interlocutors have had considerable experience in nuclear risk management as a result of their Cold War and post-Cold War experiences. The second key challenge is the anticipated enhancement and more widespread availability of low-yield nuclear weapons, mated to increasingly accurate delivery systems. These technologies might tempt otherwise risk-averse decisionmakers in a crisis to climb higher on the ladder of diplomatic coercion in the expectation that there were "winnable" moves involving low-yield nuclear exchanges. Added to these two major challenges are two others that intersect with nuclear dangers per se: first, the growing significance of cyber and information warfare and deterrence, supposing that the term *deterrence* applies to the cyber realm; and second, the increasing sophistication of both conventional and nuclear C4ISR systems (command, control, communications, computers, intelligence, surveillance, and reconnaissance). Advanced tools for seeing and knowing the battlespace, for connecting shooters and sensors, and for automating decisions in real time or nearly so, pose decision dilemmas and ethical conundrums for future leaders. Are robo-nukes, mini-nukes, or cyber-nukes in the future of US, Russian, or other states' weapons development? Regardless of the complexity of technology, the source of problems in nuclear instability or proliferation is politics, and therein, for better or worse, lie the remedies.

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