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*The Evolving Nuclear Nonproliferation Regime:
Challenges and Opportunities*

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Thank you Dr. Baykov and Dr. Orlov for your thoughtful remarks and kind words. As always, it is a great privilege to speak to our dual degree students and other Russian colleagues. Although it is hard for me to believe, I first gave a lecture in Moscow at the Soviet Diplomatic Academy in 1988 if my memory serves me, and at MGIMO in 1990. I suspect that I was more optimistic about many things in those days, including nonproliferation.

Today, when I contemplate the future of the nuclear nonproliferation regime, I am reminded of the famous opening line from a novel by the great 19th century English author Charles Dickens: “It was the best of times; it was the worst of times.”

Like Dickens, I am of mixed minds about the state of our current predicament. On the one hand, I would like to believe that it still may be possible for the United States and the Russian Federation to find a way out of their downward spiral, at least with respect to the existential threat posed by nuclear competition, and again cooperate in stemming the spread of nuclear weapons. In that sense, we may be “doomed to cooperate” – a phrase coined by my friend Sig Hecker. On the other hand, I also recognize how we have squandered past opportunities for cooperation in nuclear arms control, and unless things change dramatically and very quickly, we may simply be doomed.

As I am a pessimist by nature and tend to fixate on the bleaker aspects of nuclear developments, let me begin my assessment by observing several **positive features of the current nuclear proliferation scene.**

- The first positive point I would emphasize is that the **size of past nuclear proliferators involves a relatively small number of countries, and the pace of proliferation also has been slow.** In this respect, it is useful to contrast the number of countries today with nuclear arsenals—NINE—with the much larger numbers repeatedly forecast in the past. [Note the famous press conference in 1963 at which President John F. Kennedy predicted that the world could see 15-20-25 new nuclear weapons states by the 1970s. Also note the repeated prognoses about forthcoming rampant nuclear weapons spread, few of which materialized. In addition, note most how popular analyzes rely heavily on “doom and gloom” metaphors involving proliferation dominos, cascades, and waves. Time and time again we are told that we are at a “tipping point.”]

- Secondly, I would note that **proliferation is not a one-way street**; it can be reversed (e.g., South Africa, Ukraine, Kazakhstan, and Belarus).
- The third positive point is that **technical capability is not equal to the exercise of that capability**. In other words, many countries with the technical capability to acquire nuclear weapons and which were previously regarded as prime candidates for proliferation have chosen to forego that option – e.g., Sweden, Switzerland, Egypt, Yugoslavia, Turkey, Norway, Brazil [Furthermore, note how this fallacy of equating technical capability with the exercise of that capability gave rise to many inaccurate forecasts by national intelligence agencies, as well as scholars. The declassified U.S. National Intelligence Estimate for 1957, for example, identified a list of ten leading nuclear weapons candidates, including Canada, Japan, and Sweden. Sweden, it predicted, was “likely to produce its first weapons in about 1961,” while it was estimated that Japan would “probably seek to develop weapons production programs within the next decade.”]
- An important fourth positive point is the **near universality of NPT – The NPT is the second most widely subscribed to arms control treaty with 190 members** [The Chemical Weapons Convention has the most states parties – 193]. Depending on how one counts the DPRK, there are only 4 (or 5) non-parties to the NPT – India, Pakistan, Israel, and South Sudan. The growth of membership in the NPT also is dynamic. [Note a number of important accessions in the 1990s, including France, China, South Africa, Algeria, Kazakhstan, Belarus, Ukraine, and Brazil. Probably many of you are not aware of the fact that the most recent member of the NPT is the State of Palestine (April 2015).]
- One also might wish to categorize the **extension of the NPT indefinitely in 1995** (and the adoption at that time of 2 other important decisions on “The Strengthened Review Process” and the “Principles and Objectives for Nuclear Non-Proliferation and Disarmament,” as well as a Resolution on the Middle East) as a positive development – although that point may not be shared by all states-parties.
- And finally for my short list of positive nonproliferation developments, I would point to the **growth of NWFZs**. In my view, NWFZs are among the most important but overlooked approaches for promoting both disarmament and non-proliferation. Today, the entire Southern Hemisphere is nuclear weapons free and, with the entry-into-force of the Central-Asian NWFZ in 2009, zones now also extend into the Northern Hemisphere.

If I had more time, I could expand on the positive side of the nonproliferation ledger, but for now let me turn my attention to new and continuing **proliferation challenges**, which necessitate the evolution of the NPT regime.

Let me set the stage for my prognosis about this evolution by addressing what I regard to be the nature of the human condition in the post-WWII era of nuclear weapons. It is succinctly captured by General Omar Bradley, the first Chairman of the U.S. Joint Chiefs of Staff and the senior military commander at the start of the Korean War. He observed that: “We live in an age of nuclear giants and ethical infants; in a world that has achieved brilliance without wisdom, power without conscience. We have solved the mystery of the atom and forgotten the Sermon on the Mount. We know more about war than we know about peace, more about dying than we know about living.”

I couldn’t agree more. I am too young to remember first-hand the Korean War, but I am old enough to recall vividly the Cuban Missile Crisis of October 1962 (what Russians refer to as the Caribbean Crisis)—a time when every day when I left for school I wondered if the world was about to end. It was the time when Robert Kennedy would recall that “World War III would be fought with atomic weapons and the next war with sticks and stones.”

That close call in 1962 had major implications for nuclear arms control and led both the U.S. and Soviet leadership to conclude that they shared an important interest in avoiding a nuclear holocaust and pursuing nuclear arms control.

I dwell on this historical point because it has great significance for the current nuclear predicament. The first thing I wish to emphasize – and it is surprisingly not well known even by many foreign policy practitioners – is that not only did Washington and Moscow start to engage in nuclear arms control negotiations following the Cuban Missile Crisis but beginning in 1974 – following the first Indian nuclear weapons explosion – the United States and the Soviet Union began routine cooperation to stem the spread of nuclear weapons. This cooperation, which persisted over both Democratic and Republican administrations and during some of the most frigid moments of the Cold War, occurred in many different fora, including at the International Atomic Energy Agency, the Nuclear Suppliers Group, and the review conferences of the Treaty on the Non-Proliferation of Nuclear Weapons. In addition, every six months high-level bilateral meetings were held at which the United States and the Soviet Union informally reviewed the entire range of contemporary nuclear proliferation challenges. Perhaps most extraordinary was the manner in which the United States and the Soviet Union even shared highly sensitive intelligence information and acted cooperatively to prevent South Africa from proceeding with what Moscow and Washington believed to be a planned nuclear weapons test in the Kalahari Desert in the summer of 1977.

Another feature of this period during which the US and the Soviet Union were ideological and military adversaries but nonproliferation partners, was the close personal relationships that developed between Soviet and American diplomats, who often became individual and institutional advocates for arms control and nonproliferation in their respective countries. I had the good fortune to know two of the key diplomats very well: Ambassador Roland Timerbaev (a leading Soviet negotiator of the NPT) and Ambassador George Bunn (his U.S. NPT counterpart). In fact, after leaving the IAEA as the last Soviet ambassador, Timerbaev came to work at my Center in Monterey as a Diplomat-in-Residence for three years. During that period his closest friend was Ambassador Bunn – then at Stanford – and the two of them would hang out together in Monterey, with me as a fly on the wall, and talk about their past negotiations and what needed to take place now that they had left the diplomatic scene.

One of the most important new forms of US-Russian nuclear cooperation that began after the collapse of the Soviet Union was the so-called “Nunn-Lugar” Cooperative Threat Reduction Program designed to secure and dismantle weapons of mass destruction in order to prevent what some referred to as the problem of “loose nukes” and “nuclear anarchy.” I served as a member of several joint US and Russian Academy of Sciences committees during the 1990s dealing with that subject, and I had the opportunity to visit many nuclear facilities in Russia, as well as in Belarus, Kazakhstan, and Ukraine). Based on what I saw, I would say it is a miracle that there are not more known cases of nuclear theft and diversion. [I can tell you some stories of my adventures on various trips to nuclear facilities, including how I got locked inside the main room holding Highly Enriched Uranium in Belarus, if we have time in the Q & A.] For now, I would simply note that for a period of approximately 20 years beginning in the early 1990s, one witnessed extraordinary cooperation in the nuclear sector between the US and Russia, leading Sig Hecker – the former director of Los Alamos National Laboratory – to proclaim that the two nuclear powers were “doomed to cooperate.”

What then has happened since that has made me despair that we may simply be doomed?

First and foremost, we are experiencing an **overall state of disarray in global affairs, including with respect to nonproliferation**. At a time when every nation on this planet is beset by an extraordinary affliction provoked by a virulent but nearly invisible adversary, we are more disunited than ever—at least more so than I have witnessed during my 40 years in the nonproliferation business. These cleavages are growing day by day, as are attendant nuclear risks. The bilateral and multilateral arms control architecture that served us very well for the past half century is crumbling

and is on the verge of total collapse, something that almost certainly would have transpired had Donald Trump prevailed in last year's presidential election. Yet we seem at a loss about how to take corrective action. To quote UN Secretary General Antonio Guterres in his address at the U.N. last month, "We are on the edge of an abyss—and moving in the wrong direction," "Our world," he observed, has never been more threatened or more divided. We face the greatest cascade of crises in our lifetimes." The world, he said, "must wake up."

In the context of the **U.S.-Russian nuclear relationship, this division is reflected in the conviction by both sides of the righteousness of their own positions and the demonization of the other's**. It finds expression in a loss of civility in personal interactions as well as a total absence of trust and respect and empathy on the part of negotiators on both sides. Since 2018, this poisonous atmosphere has been on regular display at meetings of the NPT review process, the UN First Committee (which deals with disarmament matters), and at the IAEA Board of Governors. It not only affects the tone of these meetings, but it makes it virtually impossible for parties to find any common ground even when an objective observer might believe that it should be in the interests of all parties to do so.

This disarray has profound implications in many areas, but it is especially dangerous in the nuclear sphere. While I applaud the US and Russian leadership at the Geneva Summit for affirming the Reagan-Gorbachev principle that "a nuclear war cannot be won and therefore must never be fought", and I praise the efforts to regularize US-Russian meetings in such fora as the Strategic Stability Dialogue, these actions are not enough. In my view it remains the case that the most acute nuclear danger today is the potential for the United States and the Russian Federation to stumble – through accident, miscalculation, or misperception – into an escalatory process in which regional crises involving their forces might actually result in the use of nuclear weapons. [Describe the 1995 sounding rocket incident off the coast of Norway and how it might play out today.] Regrettably, this dire situation involving the US and Russia now appears to be emerging in US-Chinese relations as well, a development that can only increase the odds of a nuclear catastrophe. If we are unable or unwilling to revive the prior tradition of US-Soviet and US-Russian cooperation in the nuclear sector, I fear that the pandemic we are experiencing in the biological sphere will only be a prelude to a far more devastating nuclear nightmare.

The risk of nuclear war by accident is but one of many dimensions of the evolving nuclear predicament. Others include:

1. the **continuing danger posed by non-state actors**, an issue that the negotiators of the NPT chose to ignore [In addition to four well-known facets of NT (attacks on or sabotage of nuclear facilities, dispersal of radioactive sources by conventional explosives (i.e., "dirty bombs"), fabrication of crude but real improvised nuclear devices), and seizure or purchase of NWs from military arsenals) today one also needs to be attentive to the possibility that a non-state actor could precipitate a catastrophic nuclear exchange without ever acquiring nuclear material or fabricating a nuclear device [Explain concept of spoofing.]
2. In addition to the dangers posed by cyber threats, **rapid advances in other disruptive technologies** such as additive manufacturing, advanced conventional systems, nano technology, and autonomous weapons, to name a few, greatly complicate arms control, and yet receive only limited attention in traditional arms control fora, including in the NPT review process.
3. The well-being of the NPT also is jeopardized by the **diminished presence and influence of regional and political coalitions** who have an interest in and ability to serve as bridge builders across the nuclear and non-nuclear weapons states. We badly need but don't have any current grouping such as NAC that played an important role in securing a consensus final document at the 2000 NPT Review Conference.

4. Demise of the JCPOA may be the straw that breaks the camel's back and could lead Iran and possibly other states to reassess the value they derive from the NPT [Could prompt defections.]

If these are some of the new and continuing challenges faced by the NPT, what, if anything can be done to **mitigate these threats** and strengthen the regime?

1. If we are to succeed in **preserving the NPT** – not to mention strengthening it – all of the key stakeholders will need to demonstrate **greater flexibility** than they have in the recent past. I am quite certain that if we were to start from scratch today and try to renegotiate the NPT the final product, if it were possible to produce one, would be far weaker with respect to each of the three key pillars than was the case when the treaty was concluded in 1968. [That certainly was the case in a semester long simulation I conducted in Monterey about fifteen years ago when conditions were much more favorable.]
2. Among other things that could usefully be done in the forthcoming Review Conference would be to **stick to factual comments about what has transpired** – including with respect to the entry into force of the **Treaty on the Prohibition of Nuclear Weapons (TPNW)**. In my view, we need to focus on a relatively small number of issues going forward where the interests of most states parties converge and where agreements are possible. It might be possible, for example, to revisit some of the Principles and Objectives from the Decision taken in 1995 and some of the 64 Action Items from the 2010 Final Document and agree on those that should receive priority action before the next Review Conference.
3. Personally, I attach great importance to **nuclear risk reduction**, and I would hope that it might be possible at the next Rev Con to **multilateralize the Reagan-Gorbachev principle** and adopt consensus language consistent with that principle. A decision by the P-5 to endorse that principle, which already has been supported by Russia, the US, and China, would contribute significantly to that outcome.
4. I previously noted the debilitating effect on the review process of the lack of civility and respect on the part of several key delegations at the 2018 and 2019 Preparatory Committee meetings. A simple but important way in which to create a more positive atmosphere at the next Review Conference would be for the **United States and Russia to abandon their recent practice of making toxic and unnecessary “rights of reply” at the end of the regular daily sessions.**
5. Finally, I would be remiss in a talk of this kind sponsored by MGIMO and the PIR Center not to emphasize the very positive role that can be played by more countries investing in Disarmament and Nonproliferation Education – an approach that Dr. Orlov and I have long championed and is epitomized by the **Dual Degree Program in Nonproliferation Studies of the Middlebury Institute, MGIMO, and the PIR Center.** As I have said on many occasions, there are few things about which I am optimistic, but one beacon of light is our youth, who bring energy, enthusiasm, and idealism to a subject that is in urgent need of rejuvenation.