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Has the NPT's Future Run Out?¹

This year marks the 50th anniversary of the entry into force of the Nuclear Nonproliferation Treaty (NPT) and the 10th five-year review of its status at the United Nations. It is one of the few treaties to enjoy almost universal adherence (191 states are parties). Its supporters already are talking about the treaty's next half century.

But will it see out the next decade? There are plenty of reasons to argue it won't.

North Korea (no longer a member) is estimated to have 20 to 60 nuclear weapons (Brunnstrom

2019) and Iran has long been positioning itself to be ready to sprint for the bomb if it decides it needs to do so. But compared to other urgent worries – such as cyber-terrorism, global warming, and Islamic extremism – nuclear proliferation today is so old and familiar, it hardly seems urgent. If states were going to proliferate massively or use nuclear weapons again, this surely would have happened by now. But it hasn't. The NPT may be partly responsible. That said, it can be argued that the treaty has done all the good it might and that Washington's declining cache of diplomatic capital would be best spent on more urgent concerns.

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Then there's the complaint that the NPT is no longer the best way to achieve its grandest promise, to get the recognized nuclear-armed powers – the United States, Russia, China, France, and the United Kingdom – to eliminate their nuclear arsenals. China is building up its nuclear arsenal and the United States and Russia are upgrading theirs. The NPT formally recognized them as nuclear-armed states, and they are permanent members of the UN Security Council. Meanwhile, the number of nuclear-armed states outside of the treaty has grown since 1970 from zero to four (Israel, Paki-

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stan, India, and North Korea). About this, the treaty and its supporters have said relatively little. These inconsistencies are significant. In recognition of them, a new treaty on the prohibition of nuclear weapons was negotiated in 2017 and will enter into force in January 2021. Might the NPT's best days be behind it?

Perhaps, but the most profound reason to worry about the treaty's future cuts in a very different direction. In the next decade, it is all too likely that the NPT's past success in preventing the further spread of nuclear weapons among the world's nations will be reversed. That is because of three trends that have received too little attention.

First, there has been a decay of nuclear taboos. Long emphasized by anti-nuclear-weapon groups in states such as Japan as a legal-political barrier to the acquisition of nuclear weapons, the NPT has lost much of its legal luster. In 2005, the Bush administration announced it would share nuclear technology and uranium fuel with India in violation of the NPT's prohibition on such commerce, and the world mostly went along.

More recently, Saudi Crown Prince Mohammed bin Salman publicly announced in a *60 Minutes* interview that Saudi Arabia, a member of the NPT, would "follow suit as soon as possible" if Iran developed

nuclear weapons (CBS News 2018). Not long after, South Korean legislators, anxious that the United States might reduce troop levels there, called on their government to develop options to make nuclear weapons. South Korea is a member of the NPT.

Iran has also threatened to withdraw from the treaty. But if Tehran does, so too would Saudi Arabia, Turkey, Egypt, Algeria, and the United Arab Emirates (UAE) might later follow suit. All of these states except the UAE claim they have an "inalienable" right under the NPT to enrich uranium and to recycle plutonium – activities that can bring states within weeks of acquiring nuclear weapons.

Perhaps because of Iran's threat to pull out, Turkish President Recep Erdogan complained that it was "unacceptable" that Turkey could not have nuclear weapons (Toksabay 2019; Gilinsky and Sokolski 2019). At the UN General Assembly, he went much further, making the case that the NPT regime of five recognized nuclear-armed states was illegitimate. There are more than five important states, he explained and said either no one should have nuclear weapons or all states should be free to acquire them. His comments were met with applause (Hafezi and Pamuk 2019; *PBS News Hour* 2019).

Second, and arguably worse, renewed vertical proliferation in China, Russia, and North Korea is threatening to fuel the bomb's spread. Combine this with possible Middle Eastern withdrawals and fraying US security ties with its East Asian allies – South Korea and Japan – and you have the ingredients for additional withdrawals by Seoul and Tokyo, and, in short order, the NPT's collapse. After a Japanese withdrawal, nuclear weapons pursuit by Australia, Vietnam, Indonesia, Brazil, Argentina, South Africa, and even Germany would seem conceivable.

Third, there's more on tap technically than ever before to fuel these nuclear breakouts and ramp-ups. Detailed nuclear weapon design information once was scarce. Now, after publication of Saddam's designs by the International Atomic Energy Agency (IAEA), the shopping of the designs for China's implosion device by Pakistani nuclear of-

ficial A.Q. Khan, Iran's pilfering of US and Russian design information, and the natural leakage of a 75-year-old technology, it is relatively plentiful.

Meanwhile, surplus military and civilian stockpiles of separated plutonium and enriched uranium, which were nonexistent a half century ago, now are measured in thousands of bombs' worth in Japan, India, China, the United States, Russia, France, and the United Kingdom. These surpluses took decades to acquire. Converting them into thousands of weapons, though, would take less time than it took the United States to acquire its first nuclear explosive.

Compounding this prospect are states' increasing capabilities to produce massive amounts of enriched uranium and separated plutonium. Japan plans in 2021 to open a large, long-delayed reprocessing plant at Rokkasho that could produce over 1,500 bombs' worth of plutonium a year, roughly as many potential bombs as the United States has in its entire deployed force (Royce, Engel, Ros-Lehtinen, and Sherman 2018). Japan is also completing a uranium enrichment plant that could annually produce approximately an additional 500 bombs' worth of highly enriched uranium.

China is doing even more. It's planning on adding enough enrichment capacity to its "peaceful" nuclear program to meet all of its domestic civilian reactor requirements and still have enough in

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surplus to produce more than 1,000 bombs' worth of weapons uranium a year (Zhang 2016). Beijing also is building enough reprocessing capacity to produce 2.5 tons of plutonium – enough for 500 weapons a year – and finalizing a deal with France to import a plant that would produce over 1,500 additional bombs' worth of plutonium annually.

India, which is completing a fast reactor that can make scores of bombs' worth of weapon-grade plutonium, also has a new, large uranium enrichment plant that will significantly increase its ability to make weapon-grade uranium.

Fortifying these nuclear proliferation trends is US, Russian, Chinese, Japanese, South Korean, and Indian enthusiasm for "advanced" reactors, most of which demand the recycling of plutonium and the enrichment of uranium to nearly 20 percent. South Korea, Japan, and India are eager to pursue these "peaceful" activities in collaboration with the United States. China and Russia are building and operating fast reactors and spent fuel recycling plants and have plans to build more. None of these activities is economical. All are extremely useful for making bombs.

Individually, each of these trends is hardly fatal. Together, however, they threaten a nuclearized world without precedent. Instead of it taking years or decades to ramp up nuclear arsenals to hundreds or thousands of warheads, the five largest nuclear-armed states would be able to do so in 12 to 36 months. Meanwhile, would-be nuclear states, such as Japan and South Korea, could acquire not one or 10, but scores to hundreds within the same time period.

What happens after such large nuclear ramp-ups or breakouts occur is anyone's guess. History offers no guide for such pronounced proliferation. The

last 75 years have seen only nine states acquire nuclear arms, and it took each decades to acquire the arsenals it currently holds. All this would change. Such hyperproliferation, in turn, is likely to occasion a significant revamp-

ing of doctrines for the use of nuclear weapons. China and India are moving toward doctrines that would contemplate early or first use. Russia, NATO, and Pakistan are already there.

Aggravating these catalysts to acquire and use nuclear weapons are the centrifugal diplomatic forces

further nuclear proliferation would release. If any of Washington's close friends or allies – Japan, South Korea, Saudi Arabia, Egypt, the UAE, Turkey, or Australia – chose to develop nuclear weapons, their decisions would stress and loosen existing US bilateral security relations. That, in turn, could make the prospects for further nuclear proliferation and first use more intense than at any time since the fall of the Berlin Wall.

Are these trends facts? Not yet. Can we block or reverse them? Perhaps. Three measures could help.

First, make further withdrawals from the NPT less attractive. Second, clamp down on the uneconomical stockpiling and civilian use of plutonium and highly enriched uranium and the means to make these explosive materials. Third, give meaning to efforts limiting the threats that existing nuclear weapons pose.

Regarding NPT withdrawals, the United States and its allies have dealt with only one case to date – North Korea. What Washington and others did, in this case, is the model of what not to do. The United States did nothing to deter North Korea from withdrawing even though Pyongyang had given a decade of formal warning. The IAEA first found North Korea to be in noncompliance with its safeguards agreement in 1993 and reported this to the UN Security Council. The council, however, only took hortatory action. When Pyongyang finally followed through early in 2003 on its

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announced intent to withdraw, which it had started making 10 years before, the Security Council decided merely to study the matter.

In this vacuum of inaction, North Korea was able to expel IAEA inspectors from the country. Legally, implementation of Pyongyang's original comprehensive nuclear safeguards agreement with the IAEA was tied to its adherence to the NPT. Once Pyongyang withdrew from the treaty, North Korea

was free from international nuclear inspections. As for sanctioning North Korea's nuclear activities, the United Nations did so only in 2006, after Pyongyang conducted its first nuclear weapon test, three years **after** Pyongyang withdrew from the NPT.

If the United States and other like-minded nations want to block more states from withdrawing as North Korea did, they must announce now what they will do, **before** any state withdraws or acquires a bomb. In this regard, Pierre Goldschmidt, a former deputy director general of the IAEA for safeguards, has several useful suggestions (Goldschmidt 2018; Ford 2018). First, the UN should agree now to give temporary expanded inspection authority to the IAEA and demand a subsequent shutdown of any enrichment or reprocessing plants if the IAEA asks the UN Security Council to take that step to deal with a noncompliant state. Passing such a country-neutral UN resolution now might by itself deter future noncompliance (think Iran).

Second, the IAEA and all nuclear supplier states should insist that non-weapon states place all of their civilian nuclear materials and activities under IAEA inspections in perpetuity. This would assure that if any state decided to withdraw from the NPT, all of its civilian nuclear holdings and plants would remain under IAEA supervision.

Finally, Goldschmidt recommends that the UN adopt a country-neutral resolution stating the

Security Council will consider it to be a "threat to international peace and security" for any state to withdraw from the NPT if it is found to be in noncom-

pliance with its IAEA safeguards agreement. This resolution should further stipulate that the IAEA should seal all nuclear equipment and materials subject to IAEA safeguards in the withdrawing state and remove these materials and plants as soon as practical.

If the state refuses to comply, the UN should ban all military cooperation with that state. In support of this resolution, the permanent members of

the Security Council should also make a political announcement in advance stating that all of them consider NPT withdrawals to be such a severe threat to international peace and security that none of them would exercise their right to veto a sanctions resolution if four other Security Council members supported it.

Getting such UN resolutions approved and having US sanctions laws align with them would go a long way to deterring future NPT withdrawals. To push the threat of NPT withdrawals back further, however,

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will require limiting “peaceful” stocks of enriched uranium and separated plutonium and the means to make them. Given the negative economics of using plutonium as a civilian fuel, civilian reprocessing of spent fuel should be placed on hold. The United States, Germany, and the United Kingdom no longer reprocess; Japan, China, France, India, and Russia should stop as well. As a first step, the United States, China, Japan, and South Korea should agree to a moratorium on such civilian activities. Each has plans to proceed, and all have reasons to fear what the others might do. As for uranium enrichment, global capacity currently exceeds civilian demand significantly. It should be frozen until civilian demand approaches supply. Mohamed ElBaradei, the director general of the IAEA, suggested something similar 15 years ago (Aman and McMahon 2006).

More generally, the NPT’s pledge of providing civilian nuclear technology as a *quid pro quo* for nuclear inspections should be reconsidered. This NPT principle is rooted in a mistaken, outdated enthusiasm for nuclear power, which once was thought to be essential to “make the deserts bloom” and would be “too cheap to meter.” That was what engineers and economists thought back in the 1950s and 1960s.

These assumptions, however, have been mugged by reality. Nuclear reactors now are too expensive

to compete with many nonnuclear alternatives and – as the North Korean, Indian, and Iranian cases so clearly demonstrate – are nuclear-bomb starter kits. If the NPT is to have a future, nuclear supplier states should consider offering less dangerous, more economical forms of energy, including advanced natural-gas-fired plants, renewables, and electrical storage systems in the place of nuclear power.

Finally, the United States needs to develop a more convincing narrative about how it plans to limit existing nuclear weapon threats. It is difficult to persuade others to forgo nuclear weapons if you are making more nuclear weapons yourself. Article VI of the NPT calls on the United States, Russia, China, France, and the

United Kingdom to “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament.” Failure to demonstrate progress on this front has arms control critics calling on the world’s nations to “ditch” the NPT (Pretorius and Sauer 2019). President Erdogan’s recent criticisms of the treaty at the UN General Assembly certainly focused on this point. The United States, Russia, and China, meanwhile, are investing heavily in modernizing or (in China’s case) expanding their arsenals. This trend is unlikely to change very soon.

What can be altered, however, is these states’ arms control ambitions. The United States currently seems more focused on explaining why it should abandon existing arms control agreements (the Intermediate-Range Nuclear Forces Treaty, the New Strategic Arms Reduction Treaty, the Open Skies Treaty, etc.) than in proposing or negotiating a new, major arms control agreement it favors. Russia, meanwhile, is all for extending existing agreements but is hardly very ambitious beyond this. Finally, China seems to be in denial that it should be involved in any arms control negotiations at all.

The United States, in collaboration with its allies, can and should change this. It will not be easy, however.

For one thing, US military and diplomatic capital right now is stretched thin. But Washington should make it clear that this will change – in a matter of a few years – and that engaging in fair negotiations on this front now is ultimately in everyone’s interest.

To help make this case, US military modernization efforts should be tailored to this purpose. They should be designed to diminish rather than enhance the value of relying more heavily on nuclear arms for security. In particular, the United States should invest in advanced conventional capabilities in which it has a comparative advantage – including space-based systems, advanced precision weaponry, and submersible technologies. Building up these capabilities should encourage China and Russia to invest in nonnuclear naval, air, and missile systems that are defensive rather than offensive. This, in turn, should make nuclear restraints and other strategic arms limits easier to reach in both East Asia and Europe.

This last point brings us to a larger requirement: the United States must update the way it views nuclear proliferation threats. At a minimum, it needs to recognize that its nuclear woes can no longer be resolved if it continues to view them as it did a half century ago during the Cold War. Then, the United States and its allies had a military and diplomatic narrative for reducing nuclear threats. This is what we need today (Sokolski 2018). Pushing bipolar nuclear and military “balances,” bilateral arms control summits, and “peaceful” global nuclear-powered development agendas are no longer reliable paths to peace.

During the Cold War, the United States could afford to react to strategic developments even after they occurred. Waiting to shape policies until a state’s violation of its international obligations was proven made sense when the United States and its allies merely wanted to stay ahead of the Soviet Union in strategic weaponry. The game was never to keep them from acquiring strategic weaponry. Today, this is no longer sufficient. The aim must be not just to stay ahead, but to discourage states from acquiring strategic arms.

To accomplish this, the US government cannot wait to react to other states’ successful tests or deployments of strategic weapons. Instead, it needs to identify future proliferation scenarios for specific

regions and countries that it wants to avoid and happy endings it wishes to secure. These alternative futures must be the basis for the plans Washington and its allies formulate.

What does this mean operationally? At a minimum, the US Defense Department must offer a clearer description of these futures in its own threat assessments and guidance documents. These narratives, in turn, should drive more of the intelligence community’s development of its National Intelligence Topics and priorities and its routine interactions with mid- and senior-level policy makers.

This effort must be normative in character, aimed at where Washington wants to get to rather than merely providing passive analysis. The fruits of and progress in institutionalizing this collaboration (perhaps in the National Counterproliferation Center, a revitalized Strategic Assessment Group, or similar body within the US intelligence community) should, in turn, be a topic for oversight by the congressional committees with jurisdiction over intelligence, foreign affairs, defense, and nuclear proliferation (Sokolski 2019).

All of this will place a particular burden on the intelligence community. As alliances shift, new coalitions form, and previous allies and longtime rivals seek new or expanded nuclear weapon capabilities, intelligence collection and analysis will need to be broadened. Intelligence will have to be gathered and assessed not just on adversaries, but on friends and emerging trends that could alter current alignments.

Finally, for nonproliferation to have any future, the United States, its allies, and its adversaries must be convinced that living under country-neutral rules serves their interests more than living in a global Wild West. That, in turn, will require national military and diplomatic efforts tailored to this purpose – a project that was once familiar but now is all too novel.

Assuming these steps are taken, the NPT could well survive and thrive for another half century. If not, it will simply be pushed to the margins of history along with the Kellogg-Briand Pact, which famously banned war a decade before the globe was engulfed in the most destructive war in recorded history. ■

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