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The Persistence of Nukes: Why Nuclear Weapons Remain Central to International Power

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Power shifts are an inexorable phenomenon in history. The global power structure is not static but continually evolves. The international institutional structure, however, has remained largely static since the mid-twentieth century rather than evolving with changing power realities and challenges. Reforming and restructuring the international system poses the single biggest challenge to preserving global peace, stability, and continued economic growth. A twenty-first century world cannot remain indefinitely saddled with twentieth-century institutions and rules.

Although the world has changed fundamentally since the end of World War II, one factor remains the same – nuclear weapons still represent power and force in international relations. Despite major military innovations and the deployment of an array of new weapon systems, nuclear weapons' relevance or role has not changed.

Nuclear weapons have strategic and political utility. Think of Britain and France without nuclear weapons. They would become irrelevant, if not in international relations, then at least at the United Nations. Britain and France value nuclear weapons for their political utility. Meanwhile, Russia should take comfort in the strategic utility of these weapons; without them, the United States would have assembled a “coalition of the willing” to take on Russia in response to the developments in Crimea and Ukraine.

Such is the strategic utility of nuclear weapons that US President Barack Obama was quick to rule out the military option against Russia after the referendum in Crimea. He even distanced the US from the Budapest Memorandum, signed in 1994, which provides Ukraine with security assurances of its territorial integrity in exchange for relinquishing its nuclear arsenal. After all, Russia remains a nuclear superpower.

Countries possessing nuclear weapons are more ready to use military power and violate international law. In some cases, the possession of nuclear capabilities has played a critical role in decisions to launch ground operations – sometimes sending troops to regions far from the homeland. For example, there have been 70 US interventions since WWII, including CIA operations, as well as air, missile and drone strikes. There are also at least 11 cases of clearly articulated nuclear threats that may be considered passive usage of nuclear capabilities during military or diplomatic conflicts. The USSR also was involved in dozens of conflicts around the world, most without UN Security Council approval. The same goes for the United Kingdom and France.

But there is also the example of Pakistan and India, which have always been reluctant to exercise power on the international arena due to the absence of direct challenges to their national security. China also has not been involved in any conflict since the Sino-Vietnam War of 1979.

This demonstrates that there is no direct link between possession of nuclear capabilities and a country's aggressiveness, which is mostly a product of historical and political circumstances. Still, nuclear status makes a country less susceptible to pressure and more likely to violate international norms. In fact, nuclear capabilities remain necessary for any country wishing to play a major geopolitical role, and there is a direct connection between a country's possession of nuclear weapons and its geopolitical influence.

Status of World Nuclear Forces

Source: Federation of American Scientists

Country	Operational strategic	Operational nonstrategic	Reserve/ non-deployed	Military stockpile	Total inventory*
Russia	1600	0	2700	4300	8000
USA	1920	184	2661	4765	7315
France	290	n.a.	n.a.	290	290
China	0	n.a.	250	250	250
UK	160	n.a.	65	225	225
Israel	0	n.a.	80	80	80
Pakistan	0	n.a.	100-120	100-120	110
India	0	n.a.	90-110	90-110	100
North Korea	0	n.a.	<10	<10	<10

* For the US and Russia total inventory includes retired warheads awaiting dismantlement

Nuclear proliferation and the utility of nuclear weapons are linked. It is the very utility of nuclear weapons that serves as the main proliferation incentive. This means that the proliferation incentive will remain strong as long as nuclear weapons exist.

Today's world stockpile of nuclear weapons remains large, although in some ways it even seems excessive, especially for Russia and the USA, even taking into account the fact that their arsenals are on the decline. The total stockpile of nuclear warheads exceeds 16,000, including both strategic and non-strategic capabilities, which is still enough to wipe out humanity several times over.

The table clearly illustrates that the global balance of nuclear capabilities still favors Russia and the USA, which continuously developed their strategic capabilities during the Cold War. They are the largest holders of nuclear warheads and the main contributors to nuclear disarmament. As others nuclear powers lag far behind, they hardly can be persuaded to reduce their arsenals. That means that in the near term the number of states possessing nuclear weapons can only increase.

Among the nine countries possessing nuclear weapons, only four deploy strategic forces ready to launch an immediate strike. Others keep their nuclear capabilities in reserve. That reflects the fact that in the modern world weapons of mass destruction play a political rather than military role. A source of international status and power, the nuclear bomb guarantees sovereignty and security in an aggressive international environment. That consideration may drive states to obtain nuclear weapons even in the absence of a direct threat. There was no threat to South African national security that

could have been countered by nuclear capabilities, even in theory; and yet Pretoria had an active nuclear program until it was dismantled in 1989. The country joined the NPT two years later.

To be sure, the international nuclear non-proliferation regime has progressively become very stringent since the 1970s. International Atomic Energy Agency (IAEA) safeguards in non-nuclear-weapon states, for example, have gone from being site-specific to becoming comprehensive in nature. The IAEA's Additional Protocol empowers its inspectors to check even non-nuclear facilities in a non-nuclear-weapon state. There isn't much room to further tighten the non-proliferation regime.

Still, the stringent non-proliferation regime has made proliferation very difficult or driven it underground. There are limits to what underground proliferation can accomplish. But there are also limits to what coercive enforcement of non-proliferation norms can achieve.

The Nuclear Non-Proliferation Treaty (NPT), which came into force in 1970, was originally intended to prevent countries like Japan, West Germany and Italy from acquiring nuclear weapons. Japan, for example, did not ratify the treaty until 1976 – eight years after the NPT was concluded, and six years after the pact took effect. West Germany and Italy ratified the treaty only in 1975. After France conducted its first nuclear test in 1960 in the Sahara, West Germany was considered the most likely candidate to follow suit. Bonn first tried to block the conclusion of the NPT before seeking to influence the outcome of the negotiations.

The NPT also became the foundation for a number of regional nuclear weapon free zone (NWFZ) agreements, which include the Treaty of Tlatelolco (1969), establishing a NWFZ in Latin America, the Treaty of Rarotonga (1986) in South Pacific, the Treaty of Bangkok (1997) signed by ASEAN members, the Treaty of Pelindaba (2009), and the Central Asian NWFZ (2009), which counts all post-Soviet republics in Central Asia as members. Regional NWFZ agreements were designed to strengthen the non-proliferation regime, which was shriveling as the international environment grew more chaotic after the end of the Cold War. It is remarkable that three of these agreements were signed after the Cold War, while two were signed just five years ago, when the international crisis over Iran's nuclear program was at its height.

The number of states involved and geographical scope of regional NWFZs, as well as their recent progress, are impressive. The current status of NWFZs is explained below.

Today NWFZs cover almost half of the world and include 115 states plus Mongolia, whose status as a one-state nuclear weapon free zone is recognized by UN General Assembly Resolution 3261. The modern configuration of the non-proliferation regime consists of the NPT and regional NWFZ agreements that play a significant role in strengthening regional security. During the Cold War period, such agreements had a dual pragmatic purpose – to prevent the deployment of nuclear weapons by one of the two superpowers (such as the Mongolian one-state NWFZ or Treaty of Tlatelolco, signed soon after Cuban missile crisis), and/or to bring countries under the nuclear umbrella of a superpower (the Treaty of Rarotonga). New NWFZs officially aim to counter threats produced by violations of the non-proliferation regime, including non-state threats. In most cases, NWFZs cover less-developed and chaotic regions where the possibility of nuclear weapons falling into the hands of terrorists or irresponsible, radical governments is considered to be relatively high. From

this perspective, the formation of a NWFZ in Africa could go a long way toward strengthening the non-proliferation regime and international security. However, the effectiveness of NWFZs remains dependent on the NPT as the core treaty and foundation of the non-proliferation regime.

The challenges to the NPT, however, have come from outside the list of its original targets. The NPT's first test came early on. In May 1974, India carried out a "peaceful nuclear explosion" (PNE). As India was not a signatory and indeed had vowed to stay out of the NPT when the treaty was concluded, the test involved no breach of legal obligations. However, after the Indian test, PNEs quickly fell out of international favor, though the US and the Soviet Union both had large PNE programs.

After India obtained nuclear weapons under the guise of its PNE program, any peaceful nuclear program came to be regarded as a possible attempt to produce a nuclear bomb. However, despite the fact that the NPT restricts the military application of nuclear power, there are no clear instruments for verifying if a certain program has military aims. Many countries are developing their nuclear industry for peace purposes, while others are expressing interest in doing the same. Determining whether a certain nuclear program is a threat or not remains subjective and depends on the circumstances. Today, 31 countries possess nuclear reactors, making them members of the "peaceful nuclear club." According to former IAEA head Mohammed El Baradei, around 35-40 countries have the capability to produce nuclear weapons, which exceeds the number of countries with nuclear reactors. For example, Saudi Arabia is one such country that has no nuclear infrastructure but could rapidly create it. In 2011 Riyadh expressed interest in obtaining nuclear weapons if Iran succeeds in producing its own bomb, which again clearly illustrates the importance of nuclear capabilities for a state's security and international status.

Looking back, the NPT has been remarkably successful, limiting nuclear weapons to a small number of countries. Yet the NPT's long-term challenge comes from the dichotomy it creates – that it is morally and legally reprehensible for most countries to pursue nuclear ambitions but morally and legally acceptable for a few states to rely on (and modernize) their nuclear weapons for security.

Today, the spotlight is on the nuclear programs in two states – Iran and North Korea – as well as on the potential nexus between terrorism and WMDs.

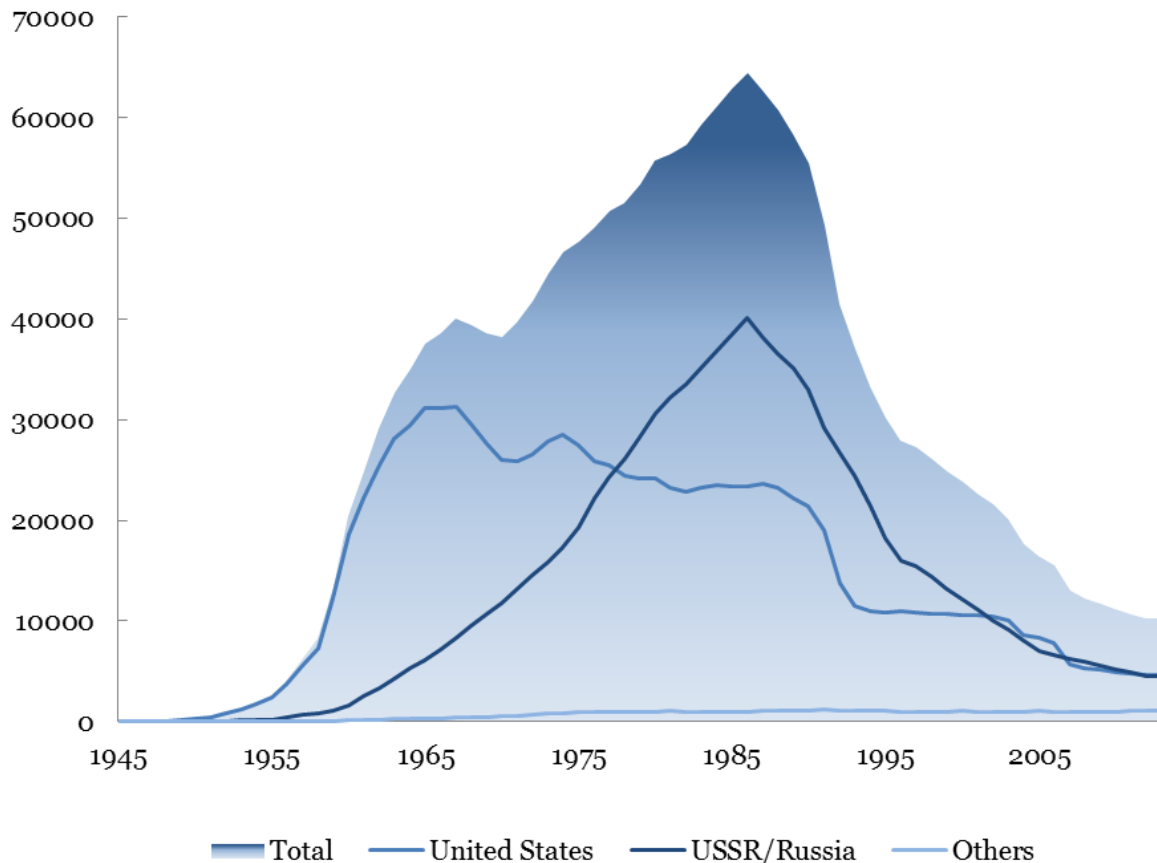
North Korean strongman Kim Jong-un won't give up the nuclear option because he understands the utility of nukes. After all, the United States used air power to overthrow Libyan leader Muammar el-Qaddafi in 2011, eight years after he abandoned his nuclear program in 2003. The big question today is whether Iran, as part of a deal with the United States, would agree to at least freeze its nuclear program, if not give it up entirely.

Nuclear disarmament has fallen by the wayside. It has become little more than a pious slogan. The United Nations' Conference on Disarmament (CD), for example, has been without real work for 18 years now.

It is significant that nuclear disarmament slipped from the global agenda after the NPT was indefinitely extended in 1995. The NPT was originally conceived as a 25-year bargain between nuclear-weapon states and non-nuclear-weapon states. But as a result of the 1995 extension, the

Estimated global nuclear stockpiles 1945-2013

Source: Federation of American Scientists



treaty has become permanent, eliminating international pressure on nuclear-weapon states to reduce their arsenals.

Not only has nuclear disarmament fallen by the wayside since, there is also little international attention to nuclear modernization programs currently underway. This means the five NPT nuclear powers and the three non-NPT nuclear-weapon states of India, Israel and Pakistan can pursue nuclear modernization with no real constraints.

Take Obama, who, after championing “a nuclear-free world,” has quietly pursued plans for an extensive expansion of the US nuclear arsenal, already the world’s most expensive and sophisticated nuclear deterrent. As the New York Times reported on September 22, 2014, the United States plans to spend about \$355 billion on nuclear weapons over the next 10 years, and up to \$1 trillion over 30 years. This level of spending on nuclear weapons is simply unjustifiable, given the changing nature of security threats. In fact, in mid-2014, an independent, bipartisan US federal commission co-chaired by former Secretary of Defense William Perry and retired Gen. John Abizaid called the Obama administration’s plans to expand the nuclear arsenal “unaffordable” and a threat to “needed improvements in conventional forces.” By pursuing a slightly less ambitious nuclear modernization program, the United States could easily save billions of dollars and still keep the “triad” of delivery systems armed with the same number of nuclear warheads planned under the 2010 New START Treaty.

Russia also has initiated a nuclear modernization program. According to Russian President Vladimir Putin, every fifth ruble from the country's huge 22 trillion ruble rearmament program through 2020 goes to developing the country's strategic capabilities. Total expenditures on nuclear modernization in this case is about \$115 billion, which makes it comparable with both the US program and ambitious Soviet nuclear initiatives. While the previous goal was to modernize no more than 70% of strategic capabilities, now nearly the entire Russian strategic nuclear force is going to be modernized by 2021.

On the other hand, the US and Russia remain the main contributors to the nuclear disarmament process. The history of US-USSR and US-Russia relations includes significant success in strategic arms control and reductions. The increase in nuclear capabilities spurred on by the US-Soviet rivalry was reversed following the end of the Cold War. The graphic below shows the change in worldwide nuclear stockpiles since 1945 and the US and Russian roles in the disarmament process.

There is a clear trend of gradual nuclear disarmament, almost entirely due to reductions of US and Russian arsenals. However, while playing a significant role in disarmament, US-Russia strategic arms reduction is driven not by pacifism, but by the logic of deterrence and the desire to make bilateral strategic balancing less chaotic and more predictable. The same goes for the NPT, which has been a part of this process.

The real "success" of the NPT has been in reinforcing the system of extended deterrence by enabling countries such as those in NATO and others like Australia, Japan and South Korea to continue to rely on the US for nuclear-umbrella protection. Absent the NPT, these countries would have been the most likely candidates to go nuclear because they also happen to be the most technologically advanced states. So, the effect of the NPT has been to strengthen extended deterrence.

Today, a key question is whether any of the countries ensconced under the US nuclear umbrella would be willing to forgo the benefits of extended deterrence in order to help lower the utility of nuclear weapons and give a boost to the cause of nuclear disarmament. After all, the security imperatives that prompted these countries to seek nuclear-umbrella protection more than half a century ago are no longer valid in a post-Cold War world.

To be sure, some of these states, especially Japan, have seen their regional security environment deteriorate and thus can ill-afford to renounce reliance on US nuclear-umbrella protection. However, the majority of states huddling under the US nuclear umbrella – from Canada and Norway to Portugal and Australia – find themselves today in a relatively benign security environment. These states could take the lead in gradually weaning themselves off extended nuclear deterrence.

Nuclear might provides some powers cover to engage in acts that contravene global norms and international law.

For example, Israel's nuclear monopoly in the Middle East, reinforced by its conventional military superiority, emboldens it to act preemptively at times, or to employ disproportionate force, as was seen recently in Israel's Gaza war, which was triggered by Hamas firing crude, unguided rockets.

Consider another example: Pakistan's military generals export terror by playing nuclear poker. They use their nuclear shield to prevent them from retaliation for their roguish actions.

One can argue that nuclear might also drives America's interventionist impulse. America's Nobel Peace Prize laureate president, Barack Obama, has been more at ease waging war than waging peace, as underlined by the launch of the seventh military campaign in a Muslim country during his presidency. His new war in Syria – initiated without UN authorization – is just the latest action of the United States to make a mockery of international law. Other such actions in the past 15 years include the bombing of Serbia, the separation of Kosovo from Serbia, the invasions of Afghanistan and Iraq without UN Security Council authorization, Gaddafi's overthrow, the aiding of an insurrection in Syria, CIA renditions of terror suspects, and the National Security Agency's Orwellian surveillance program. Yet, paradoxically, Obama has escalated a sanctions campaign against Russia in the name of upholding international law.

In our rapidly changing world, most technologies tend to become obsolete in a decade or two. But more than seven decades after they were invented, nuclear weapons still remain the preeminent technology of mass destruction.

Nuclear arsenals may have no deterrent effect on the pressing conflicts we face today. But for the foreseeable future, nuclear weapons, with their unparalleled destructive capacity, will remain at the center of international power and force. Nuclear weapons, as the 2002 US Nuclear Posture Review stated, will continue to play a "critical role" due to their "unique properties."

However, a century after chemical arms were introduced in World War I and nearly seven decades after Hiroshima and Nagasaki, the world is on the threshold of new lethal and precision weapons, including information weapons, anti-satellite weapons, and the extension of the arms race to outer space and cyberspace.

The aforementioned arguments indicate that nuclear weapons will remain at the center of international power for the foreseeable future. Still, there is a widely held misperception in the world about the number of countries that rely on nuclear weapons for security. In addition to the five NPT nuclear powers and the three non-NPT nuclear-weapon states of India, Israel and Pakistan, plus North Korea, a sizable number of additional countries rely on nuclear-umbrella protection – a fact that is often obscured.

In reality, 30 states are currently ensconced under the US nuclear umbrella, and their number has been growing as part of the eastward expansion of the North Atlantic Treaty Organization (NATO) following the disintegration of the Soviet Union. In fact, the taproot of the ongoing US-Russian tensions has been NATO's aggressive expansion, including to the Baltics and the Balkans. Russia, however, drew a line in the sand when NATO announced in 2008 that Ukraine and Georgia "will become members of NATO."

The nuclear-umbrella protection provided by the US extends to all members of NATO, a military alliance that has expanded from its original 12 members in 1949 to 28 states now. In 1997, three former Warsaw Pact members, Hungary, the Czech Republic, and Poland, were invited to join NATO. Then, in 2004, seven more countries joined, including the Baltic states of Estonia, Latvia and Lithuania. And in 2009, Albania and Croatia became the latest entrants to NATO.

NATO's nuclear umbrella primarily relies on American nuclear weapons. However, in a contingency, British and French nuclear arsenals are also expected to play a role.

In addition to NATO members, the US provides nuclear-umbrella protection to Japan (as part of the bilateral Treaty of Mutual Cooperation and Security of 1960), South Korea (a commitment from 1958 that was reaffirmed by America after North Korea tested a nuclear device in 2006), and Australia under the terms of ANZUS (Australia, New Zealand, United States Security Treaty of 1951).

However, the US umbrella no longer covers New Zealand, whose accession to the South Pacific Nuclear Weapon Free Zone (Treaty of Rarotonga, 1985) and subsequent enactment of domestic measures to meet its treaty obligations triggered a bitter diplomatic row with the United States. By contrast, another ANZUS member, Australia, remains under the American nuclear umbrella despite being a party to the Rarotonga Treaty.

The security alliances of the Soviet Union (which broke up into 15 separate countries) and those of today's Russia also are believed to have incorporated nuclear-umbrella protection, although Moscow has never acknowledged this publicly. However, after the disbanding of the Warsaw Pact and the breakup of the Soviet Union, half of the ex-Soviet allies and breakaway states have been absorbed by NATO as members. Russia currently has a military alliance – known as the Collective Security Treaty Organization (CSTO) – with Armenia, Belarus, Kazakhstan, Kyrgyzstan and Tajikistan. In fact, the creation of the Central Asian Nuclear Weapon Free Zone in 2009 strengthens the dependence of Kazakhstan, Kyrgyzstan, Tajikistan (CSTO members) as well as Uzbekistan and Turkmenistan on the Russian nuclear umbrella.

Against this backdrop, the number of states that rely directly or indirectly on nuclear weapons for their security is substantial. From the standpoint of international law, however, extending nuclear deterrence to non-nuclear-weapon states violates the spirit, if not the text, of the Nuclear Non-Proliferation Treaty. Some, of course, have argued that it actually violates the text of the NPT. After all, NATO's nuclear doctrine hinges on nuclear sharing, and the United States deployed nuclear weapons for decades on the territory of non-nuclear NATO members, often without their knowledge, during the Cold War years. Now the US is believed to have approximately 500 tactical nuclear warheads in five NATO members: Belgium, Italy, Germany, Netherlands and Turkey. There are also about 700-800 warheads in storage, which allows the US to increase its nuclear presence in Europe or deploy nuclear capabilities in other regions. Until 1991, US tactic nuclear weapons were deployed in South Korea. The North Korean nuclear threat makes re-deployment of US nuclear capabilities in the peninsula theoretically possible.

Nuclear proliferation in the future will hinge on the credibility of US security guarantees in the eyes of America's key, technologically advanced allies. The future of the NPT regime, despite its tremendous success thus far, looks far from certain. The treaty's main challenges now come from within, not from non-parties – India, Israel and Pakistan, which never signed the NPT and have developed nuclear weapons.

Significantly, technological forces are now playing a greater role in shaping international geopolitics and power equations than at any other time in history. The growing tide of new innovations has not

only shrunk the shelf-life of most technologies, but also accelerated the weaponization of science. As a result, instead of disarmament, rearmament today looms large on the horizon, with the arms race being extended to outer space and cyberspace.

Grand speeches about a world without nuclear weapons are crowd-pleasers at the United Nations. But in truth, pursuing disarmament is like chasing butterflies – an enjoyable pastime for retired old men but a never-ending one. As long as nuclear weapons remain the premier technology of mass destruction, disarmament will remain a mirage. The Chemical Weapons Convention became possible only when chemical weapons ceased to be militarily relevant for the major powers and instead threatened to become the WMD of choice for poor states. If the rapid pace of technological change creates a new class of surgical-strike WMD that makes nuclear weapons less relevant, nuclear disarmament would likely take center-stage.

Nevertheless, it has become difficult to palm off non-proliferation as disarmament. What many members of the international community want to see are genuine efforts to substantially reduce nuclear arsenals and to erode the utility of WMDs in national military strategies. Today, the world has a treaty (although not in force) that bans all nuclear testing – the Comprehensive Test Ban Treaty (CTBT) – but no treaty to outlaw the use of nuclear weapons. In other words, those that are party to the Comprehensive Test Ban Treaty (CTBT) are prohibited from testing a nuclear weapon at home but are legally unencumbered to test a weapon by dropping it on another country. This anomaly must be rectified.

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