New Challenges in Nuclear Arms Control

A return to nuclear arms control would be a sensible move at this point in time. However, this would require taking into account the differences between the Cold War era and the current day: The replacement of nuclear bipolarity by multipolarity and the linkage with non-nuclear military developments. Moreover, for the foreseeable future, there is little prospect of political leadership in arms control.

By Oliver Thränert

All nuclear powers are currently modernizing or expanding their nuclear arsenals. New technological developments such as improved accuracy of rockets or modern capabilities for detecting submarines are jeopardizing the survivability of nuclear arsenals. This threatens the stability of the nuclear balance. The Cold War maxim “Who shoots first, dies second” might soon be undermined.

It was to avoid such a scenario that the concept of arms control was developed in the US soon after the dawn of the nuclear age. Arms control is an attempt to resolve the problem of a potential breakdown of nuclear deterrence. The main goal is to prevent comprehensive nuclear wars and to establish strategic stability.

The revolutionary insight that the adversary’s security must always be taken into account in deliberations over one’s own security is at the core of the concept of arms control. It is based on a realistic understanding of self-interest: During crisis situations, uncertainty on the part of the adversary can result in unwanted escalation. At the same time, arms control includes nuclear disarmament, while not being identical with the latter. From the point of view of arms control, nuclear disarmament is not inherently advisable, but remains subject to considerations of stability.

In political practice, arms control has certainly achieved some demonstrable results. In a number of treaties between the US and the Soviet Union, and later Russia, upper limits were agreed for the strategic nuclear arsenals of both sides, which in some cases led to reductions in numbers. In 1987, the two sides even agreed on a complete ban concerning intermediate-range nuclear arms, which prevented a destabilizing dynamic of armaments involving this class of weapons. In the 1972 Anti-Ballistic Missile (ABM) Treaty, both sides agreed to limits in strategic missile defense, avoiding an arms race in the fields of defensive systems. After the dissolution of the Soviet Union, the Strategic Arms Reduction Treaty (START) of 1991 paved the way for Belarus, Ukraine, and Kazakhstan to rid themselves of the nuclear weapons based on their territory, which they handed over to Russia in 1994. Most importantly, how-
ever, the permanent dialog and the jointly verified implementation of agreements helped to create transparency and trust. It became easier for each side to understand the deliberations of the other.

Since the end of the Cold War, arms control has largely been put on the backburner. However, in view of the return to confrontational mode between the West and Russia and trilateral nuclear competition in Asia between China, India, and Pakistan, revisiting arms control would be sensible. That, however, would require awareness of the differences between the Cold War era and the present-day situation. In the following, we will look more closely at three of these differences that are particularly salient: The lack of political leadership in the international system; the replacement of nuclear bipolarity by nuclear multipolarity; and the growing linkage between the nuclear arms issue and non-nuclear military developments.

**Lack of Leadership**

A complex policy concept such as nuclear arms control requires political leadership. Although the US has not abandoned arms control altogether under President Donald Trump, the issue is hardly relevant anymore. Instead, the focus is on efforts to modernize the US nuclear weapons capacities. This is partially due to the fact that Russia, for its part, is also dismissive of arms control and is not meeting its treaty obligations. However, protracted and complex negotiations over arms control treaties are not really what President Trump has in mind. For Beijing, the concept of consensus-based nuclear arms policy remains a largely foreign one. Moreover, China fears that the improved transparency that comes with nuclear arms control could jeopardize the survivability of its relatively small second-strike capability. While India would like to be regarded as a responsible nuclear actor, it is unwilling to accept nuclear restrictions in view of its large neighbor China. Pakistan, for its part, is not interested in engaging in arms control before Delhi makes any moves in that direction.

**Nuclear Multipolarity**

In order to demonstrate the equal political status of the two powers, nuclear arms treaties between the US and the Soviet Union/Russia were based on the notion of parity. Even today, the US and Russia still possess about 90 per cent of all the world’s nuclear weapons. However, the strategic picture has changed for both powers, since other states are building up nuclear weapons and missile arsenals that, both from the US and the Russian point of view, are of great importance for their respective national security. Therefore, both Russian and US decision makers believe that bilateral agreements on upper limits for nuclear weapons or other systems related to nuclear deterrence, such as missile defense, are no longer conducive to the national security of their respective states. The examples of Washington’s withdrawal from the ABM Treaty and Russia’s violation of the INF Treaty illustrate why this is the case. In 1972, the US and the Soviet Union agreed on the ABM Treaty, which limited strategic missile defense systems to two on each side, further reduced to one defensive system each in an additional protocol in 1974. The purpose of this agreement was the mutual acceptance of vulnerability as a way of strengthening nuclear deterrence and minimizing the risk of comprehensive nuclear war. Following the 11 September 2001 attacks and based on the belief that a number of states were about to procure long-distance missiles as well as nuclear, biological, and chemical weapons, the principle of accepting vulnerability was no longer tolerable for the US. Therefore, then president George W. Bush withdrew from the ABM Treaty in December 2001, with effect from 30 June 2002. He expressly noted at the time that this step was not directed against Russia.

The US today fundamentally rejects any relationship of mutual nuclear vulnerability, as maintained with the Soviet Union in the past, with regional nuclear challengers today. This applies, for example, to North Korea, but also to China. Options for damage limitation with regard to such powers are seen as indispensable for maintaining credible commitments to assist US allies. Therefore, missile defense has become a pillar of regional deterrence architectures for the US. Russia, on the other hand, fears the gradual development of a basically unlimited US missile defense architecture, which could undermine the Russian capability to deliver a nuclear second strike and thus Russia’s deterrence capability.

As part of the negotiations on disarmament of intermediate-range nuclear missiles in the mid-1980s, Soviet general secretary Mikhail Gorbachev had initially offered to dismantle all ground-based nuclear intermediate-range missiles in the European zone. However, the USSR had also stationed such systems in the Asian part of its territory to deter China. Since Gorbachev was determined to reach an agreement with the US, he later agreed to accept the global elimination of all land-based intermediate-range missiles as part of the INF Treaty. Today, Russia is no longer prepared to make such concessions. For many years, Moscow has pointed out that a number of states including North Korea, India, Pakistan, and Israel are developing missiles in precisely the range spectrum in which the US and Russia had agreed under the INF
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Treaty to abolish land-based projectiles al-
together. Russia views the entire nuclear
arms dynamic in Asia as a threat. This may be one reason why – according to US
sources – Russia is violating the INF Treaty by stationing a new land-based cruise
missile system.

Both examples illustrate that in a multipo-
lar nuclear world, the US and Russia are
affected by threats that are not directly re-
lated to their mutual relationship, but ema-
nate from third parties. As a result, bilat-
eral treaties are being cancelled or violated.
This makes it even harder to conclude new
bilateral agreements: first of all because withdrawing from treaties, or, even more so,
violating them means erosion of trust; and also because it has become near impos-
sible for a bilateral agreement to take into
account security concerns, which have be-
come highly divergent within a multipolar nuclear environment, in a manner that re-
spects the principle of parity and is satis-
factory to both sides.

Beyond Nuclear
During the Cold War, it was possible to
consider nuclear weapons as a relatively
isolated issue in the framework of arms
control agreements. Today, nuclear weap-
on arms control efforts, should negotia-
tions ever get off the ground. At the same time, however, Washington
largely views its projects to build up a Con-
ventional Prompt Global Strike capability
as being aimed at threats that are not pri-
marily linked to Russia or China.

Another relevant development is the shift-
ing relationship between nuclear and con-
ventional weapons. During the Cold War, the
antagonists on both sides of the Iron
Curtain subscribed to the concept of an es-
calation ladder. In Russian strategic think-
ing in particular, this construct has been
replace by an integrative approach of si-
multaneous action across various domains.
Contemporary Russian deterrence think-
ing is based on a mix of conventional preci-
sion weapons and nuclear arms, with both
of these being regarded as strategic weap-
ons. In doing so, Moscow is combining the
strategic effect of conventional precision
munitions with the deterrent effect of nu-
clear weapons, allowing it to elicit nuclear
uncertainty in an adversary from the first
minute of a conflict. Russia hopes that the
adversary’s resulting insecurity will
strength threaten deterrence and give it more op-
tions for escalation control.

Indeed, Russia is concentrating more on
the development of systems for both con-
ventional and nuclear use, such as cruise
missiles and ballistic rockets. Moreover,
hyper sound cruise missiles and boost-
glide systems armed with conventional or
nuclear warheads are equally designated
for the future suppression of particularly
valuable targets. Even though it will still be
some time before such weapons systems
are developed to maturity in Russia, the
US, and other states, this trend raises the
question of whether arms control focused
on nuclear weapons still makes sense – all
the more so since China also has a growing
number of shorter-range missiles that
mostly carry conventional warheads, but
which can also carry nuclear payloads.

Finally, future cyberattacks may also have
strategic qualities. In terms of their effects,
Russian Defense Minister Sergei Shoigu
has compared such operations to the use of
mass casualty weapons. The US side, too, is
aware of the significance of non-nuclear
strategic attacks. Therefore, under the
Trump administration’s Nuclear Posture Review, the US reserves the right to carry out nuclear first strikes in response to such attacks (cf. CSS Analysis no. 223 “President Trump’s Nuclear Posture Review”). Though the text does not explicitly say so, this also refers to cyberattacks with strategic impacts. Such attacks might, for instance, be directed against early-warning systems, jeopardizing second-strike capabilities. Or they might disrupt the energy supply of one or more countries and inflict lasting damage, especially if they compromise the integrity of cooling systems for nuclear power plants or other critical infrastructures.

The increasing vulnerability of satellites, ground-based radar stations, or aircraft used for early warning, communications, and surveillance is a matter of concern to the US, Russia, and China alike; in particular because such systems are needed both for conventional and for nuclear conflicts. This raises the specter of unwanted nuclear escalation if communications systems should be targeted in a limited conflict to suppress hostile conventional operations, since such a move would simultaneously endanger the capability to maintain a nuclear second-strike capability. The increasing importance of outer space is underscored by the US intention to establish a new service branch of the armed forces dedicated to this sphere. The aim is to sustain US dominance in space. Among the key missions would be the protection of early-warning and communications capabilities for conducting conventional, and potentially also nuclear conflicts. This development also highlights the extent to which the conventional, nuclear, and space domains of military technology are already intertwined today.

Nuclear arms control therefore faces a range of very difficult, and to some extent completely novel challenges. At the same time, the US cannot be expected to provide political leadership in this policy field for the near future. Autocratic states like Russia and China are hardly likely to fill the gap. Halting this ominous development would require a discourse on contemporary challenges to strategic stability. While nuclear second-strike capabilities are still a factor here, the context is far more complex today than it was during the Cold War: The matter is no longer limited to two actors, but involves many more parties; and non-nuclear technologies today have a far larger impact on strategic stability than was the case during the heyday of the East-West confrontation.

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