In his April 2009 speech in Prague US President Barack Obama spoke of a world free of nuclear weapons. Obama stated that the United States would maintain nuclear deterrence during the disarmament process. This paper discusses the limitations and deficiencies of the traditional mutual nuclear deterrence and assesses why progress in nuclear disarmament since the end of the Cold War has fallen short of expectations.

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MAD

The so-called four horsemen, Henry Kissinger, Bill Perry, Sam Nunn, and George Shultz, have published several articles in the *Wall Street Journal* on how to reduce the significance of nuclear weapons. In their 2011 piece, they conclude that this is only possible if the strategy of Mutual Assured Destruction (MAD) will be replaced by a “new and more stable form of deterrence with decreasing nuclear risks and increasing measure of assured security for all nations.”

Decreasing the significance of MAD will only be successful if reliance on nuclear weapons and their hazardous consequences is addressed. The concept of deterrence as a war fighting strategy is ineffective.

What is MAD? It is the capacity to inflict maximum damage on an adversary. What does nuclear deterrence mean? It is the capability to retaliate if attacked or threatened with attack by a nuclear weapon power. Although MAD implies that the ability to eliminate the enemy once would be sufficient, the deterrence strategy of the Cold War resulted in a nuclear arsenal that could destroy the world 50 times.

Why did this happen? Mutual deterrence was not simply mutual destruction, it was destruction organized in a certain sophisticated way. Nuclear weapons became smaller and were equipped with a single warhead to cause limited damage. The idea was that after a first nuclear strike the enemy would blink and withdraw. Yet it goes without saying that there was no guarantee how the other side would react. Therefore, several strategies were developed to control a possible escalation. NATO adopted “flexible response”: small tactical nukes should be used against a conventional attack by the Warsaw Pact; retaliation could escalate by several steps (intermediate, strategic). The aim was to achieve escalation dominance – not only to be capable of striking first, but also striking last. Missiles with multiple warheads (MIRVs – multiple independently targetable reentry vehicles), deeply buried in silos and transportable on tracks, were expected to make this possible. Again, there was no guarantee that one side could ever reach this aim. Missile defense was seen as dangerous because it would invalidate deterrence by preventing retaliation. Anti-ballistic-missile (ABM) systems were prohibited by a 1972 Treaty (which was abandoned by the Bush Administration in 2002).

But there was also an autistic dimension to these arms race dynamics. Arms planning was based more on anticipation of what an enemy might plan than on what it had already produced. Technology was another driving force. Metaphorically one could argue that if one side disappeared but the other side did not know, then the arms race would continue. In the

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end, the legacy of the Cold War was nuclear arsenals that could annihilate the world half a hundred times.

Targeting

It goes without saying that for all these weapons to be effective, targets had to be identified. Targeting in this type of nuclear planning is a driving force for modernization of weapons. Together with an increasing number of nuclear weapons, the number and categories of targets grew throughout the Cold War as well. Strike options multiplied. Nuclear infrastructure, the political and military leadership and all kinds of forces were targeted. During the 1970s, MAD slowly moved from counter-value (the destruction of cities and population centers) to counter-force (force on force) planning. The result was a further expansion of targeted weapons and strategic assets. In turn, missions against the adversary’s country became broader, and they also included territories of allies in case they would be occupied. With the end of the Cold War, the target lists were not reduced. On the contrary, more targets and target categories have been added, such as weapons of mass destruction (WMD) and terrorist groups, which have been defined very generally.

Arms Control and Non-Proliferation Are Not Disarmament

There have been several attempts to control this process of arms build up. Arms control negotiations during the East-West conflicts were not disarmament, however. The Strategic Arms Limitation Talks (SALT) and Strategic Arms Reduction Talks (START) negotiations and agreements were a controlled or managed arms race, without even arms limitations. The negotiations on a Fissile Material Cut Off Treaty (FMCT) were never intended to reduce stocks of fissile material but at best to decrease its production. The same is true for the conventional weapons negotiations, the Mutual Balanced Force Reduction (MBFR) and Conventional Forces Europe (CFE) talks. Only one agreement, the 1987 Intermediate-range Nuclear Forces (INF) Treaty, eliminated a category of weapons, and this was only possible because they could be compensated for by deploying technologically advanced sea-based missiles. The European NATO members resisted the INF Treaty because they were the primary targets of a nuclear exchange that could be limited to the European theater and would spare the superpowers themselves.

The administration of George W. Bush in the aftermath of 9/11 was strong on non- and counter-proliferation. It started several initiatives in these areas, including the Global Initiative to Combat Nuclear Terrorism and the Proliferation Security Initiative (PSI), which was a series of bilateral agreements that allowed interdiction of suspicious shipments, and it sponsored UN Security Council Resolution 1540 prohibiting transfer of WMD and related materials to non-state actors. However, the Bush administration ignored and even despised arms control and disarmament.
By contrast, President Barack Obama spoke of “a world free of nuclear weapons” and also of disarmament of the nuclear weapon states in an April 2009 speech in Prague. What he suggested was not disarmament but arms control measures: a follow-up treaty to START, ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT), achievement of the Fissile Material Cut-off Treaty and a fuel bank to secure vulnerable loose nuclear material. Obama’s proposals all fall within the concept of mutual deterrence. His 2010 Nuclear Posture Review stresses the “fundamental role” of nuclear weapons for deterrence. The approval of the New START Treaty in the Senate in 2010 was only possible in combination with a U.S. $85 billion modernization of the nuclear weapons complex. Russian Prime Minister Vladimir Putin during the election campaign committed himself to spend about U.S. $800 billion for military modernization for the next 10 years which includes strategic nuclear missiles. President Obama also continues to support a non-proliferation policy. In 2010, the United States hosted the first Nuclear Security Summit in Washington in an effort to foster cooperation and consensus on preventing nuclear terrorism. After Obama’s initial period in office, it became clear that arms control plus non-proliferation – although helpful – does not automatically lead to disarmament.

**Deterrence**

Obama wants to be on the safe side: he wants to retain a deterrent capability as long as nuclear weapons exist even though no one knows whether deterrence actually works. Realists like Kenneth Waltz strongly believe it does work because there was no nuclear war between the United States and the Soviet Union. But in reality we do not know if this is true since you can’t prove the negative – why something did not happen. The avoidance of nuclear war between the two Cold War superpowers probably resulted from a combination of political and military factors, such as arms control negotiations, confidence-building measures and cooperation in the Conference on Security and Co-operation in Europe (CSCE) and in other regimes and institutions.

However, the lessons of mutual nuclear deterrence, in both theory and practice, demonstrate that deterrence has several problems:

- Nuclear deterrence is only credible if the adversaries permanently demonstrate that they are serious about using nuclear weapons. This in turn threatens them with self-destruction.
- Deterrence does not prevent conventional wars. Nuclear powers were involved in conventional wars in Korea, Vietnam, the Falklands, Israel, Afghanistan and Iraq. Two nuclear powers, India and Pakistan, went to war in 1999. Moreover, possession of

nuclear weapons could encourage conventional provocation or backing for terrorist groups. The concept only works with rational actors. It requires adversaries to rely on each other to respect deterrence and adhere to its principles. Furthermore, they have to communicate with each other and understand each other’s signals. Deterrence promotes hostility and mistrust when adversaries permanently threaten each other. Reliance on mutual deterrence causes nuclear proliferation and arms races. This was evident during the Cold War, but it is also true for regional conflicts, such as India-Pakistan. It is North Korea’s rationale for possessing nuclear weapons, and it could lead to an arms race in the Middle East. Indeed, mutual deterrence and disarmament are opposing concepts. Deterrence can create instability and dangerous situations through miscalculations, miscommunication and technical accidents. Dr. Strangelove shows how just such a possibility could occur. The dissolution of the bipolar world and the potential emergence of new nuclear powers might lead to a “multinuclear world” that would multiply such risks and uncertainties. The threat of nuclear retaliation is useless against terrorists. The United States and NATO want to build a missile defense system against missiles from the Middle East, but Russia opposes it. As a result, missile defense has become the major stumbling block to further arms reductions. However, missile defense below the strategic level should not be a threat to Russia. Yet if the United States and NATO keep open the option to upgrade missile defense, they can no longer rely on effective deterrence. Missile defense only works properly outside a system of deterrence. The announced intention to annihilate large parts of humanity is both unlawful and immoral. The International Court of Justice ruled that “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law.” The pope regularly encourages the international community to work toward the elimination of nuclear weapons. Mutual deterrence is expensive because it requires continuous modernization and the development and production of new weapons to close real and assumed loopholes in the system. If deterrence failed, it would be a global disaster.


5 The Court does not conclude definitively whether extreme circumstances of self-defense, in which the very survival of a state was at stake, would be lawful or unlawful. The International Court of Justice, Legality of the Threat or Use of Nuclear Weapons, 8 July 1996.
Deterring states of concern from using nuclear weapons is best achieved by conventional weapons and other non-nuclear options (e.g., damaging telecommunication networks). Tailored conventional strikes involving less firepower are a more credible and useful alternative to Cold War-era strategic nuclear deterrence. Militarily they can be more effective and they drastically reduce unintended casualties.

**Beyond Deterrence**

What can be done to reverse the negative trends caused by nuclear deterrence? The current U.S. Operations Plan (OPLAN) 8010 of February 2009 is based on Bush administration guidance and target lists. Without abandoning the concept of deterrence immediately, first steps could be reductions in the number of targets, missions and categories of targets.

- A true “no first use” doctrine would remove conventional, chemical and biological weapons from the target list.
- An unconditional commitment by nuclear weapon states to “negative security assurances” would remove all non-nuclear weapon states from the target list.
- The creation of Nuclear Weapon Free Zones must be combined with negative security assurances.
- The countries targeted for U.S. nuclear strikes is outdated and can be reduced. Bush’s classified Nuclear Posture Review (NPR) and OPLAN 8010 both target China, Russia, North Korea, Iran, Syria, Cuba (only in the NPR) and an unnamed country that hosts terrorists (supposedly Pakistan).
- General target categories like WMD, non-state actors, war supporting infrastructure and military-political leadership are too sweeping and should be redefined and minimized.
- Counter-force planning associated with preemption, launch on warning and all kinds of military targets should be abandoned.
- The use of small nuclear weapons to control and limit damage is not feasible and produces unrealistic expectations.
- Likewise expectations that damage can be regulated and making distinctions between 100 percent, 80 percent, “light,” “moderate” or “severe” destruction are absurd. There is no difference between rubble, gravel or dust after a bombardment.

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7 It should not be forgotten that a counter-force strike would also kill millions of civilians.

8 For the last five points see also footnote 6.
Conclusion

Nuclear deterrence is the main cause of arms races. As long as deterrence goes unaddressed, global zero will be impossible to achieve. Arms control and non-proliferation can create a more stable situation, but they are not sufficient for disarmament. Deterrence of states of concern is more credible and effective using conventional weapons. The suggestions outlined above would not abolish nuclear deterrence right away, but they are steps toward a minimal deterrence. They would mitigate the worst consequences of the concept of deterrence and create the preconditions for nuclear disarmament.