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## *Toward a nuclear-weapons-free world*

In a speech in Prague on April 5, 2009, President Obama reconfirmed his intention to seek a nuclear-weapons-free world (NFWF): “today, I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons.”<sup>1</sup> In Cairo two months later, he defused the charge of double standards that has been leveled at the nuclear-weapons states (NWS) throughout the 40-year history of the nuclear Non-Proliferation Treaty (NPT): “No nation should pick and choose which nation holds nuclear weapons. That’s why I strongly reaffirmed America’s commitment to seek a world in which no nations hold nuclear weapons.”<sup>2</sup> By seizing the high ground he is set to win important debates. However, there are numerous obstacles in the way.

What might a NFWF look like? The term is used in a variety of ways, some of which appear more stable and satisfactory than others. Certain principles, prerequisites, and transitional issues, as well as political order requirements, must be considered on the way to such a world. On the whole, growing international interdependence is helpful,

but for nuclear disarmament to succeed, interdependence must be turned into cooperative security practices between the big powers, with a view to more effective collective security mechanisms in the hands of the world organization (currently the United Nations).

In their *Wall Street Journal* article of January 4, 2007, George Shultz, William Perry, Henry Kissinger, and Sam Nunn emphasized the interrelationship between the vision of a NFWF and measures to that end: “without the bold vision, the actions will not be perceived as fair or urgent. Without the actions, the vision will not be perceived as realistic or possible.”<sup>3</sup>

To achieve a dynamic, interactive relationship between vision and measures, one has to be serious about both. To be serious about the vision means that a convincing rationale for a NFWF has to be spelled out; that the broadest possible agreement must be sought; and that the advantages of such a world should weigh in the assessment of specific steps to be taken. If not, the advantages and disadvantages of each step will instead be weighed within the framework of the existing international system, with little or no regard for the gains that a NFWF offers, leaving the steps hostage to the

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obstacles that will surely be raised along the way. The “four horsemen” are therefore right in their emphasis on vision: if the vision is not persistently invoked in the discussions of how best to promote disarmament and nonproliferation, efforts in this direction may not lead very far. The dynamism will be missing.

One part of the rationale relates to the terrorist threat: terrorists seek nuclear weapons in order to use them. Another part emanates from the state paradigm. In an increasingly multicentric world with more NWS, nuclear weapons are likely to interact with interstate conflicts in more regions and in new ways. A NFWF would also be safer for nuclear energy. This is not among the major factors in the case for such a world – the overriding objective is to prevent nuclear weapons from being used – but for proponents of nuclear power it is another attraction. Others emphasize that a NFWF would be far more sustainable as part of a double abolition: an end to both nuclear weapons and nuclear energy. However, much like the compromise between the “no” to nuclear weapons and the “yes” to nuclear power built into the NPT, a NFWF would probably entail the same compromise. If and when a NFWF comes into being, the energy situation will certainly be a lot different from what it is today; but this is what full implementation of the NPT implies.

As of mid-2009, the call for a NFWF remains primarily a Western one. In other regions of the world, nuclear- and non-nuclear-weapons states are waiting to see what comes of the call. Will it fizzle out? Will the domestic interests in nuclear weapons hit back and reaffirm the continued relevance of nuclear arms? Abolition has been proposed three times before – the Ba-

ruch plan in 1946, the McCloy-Zorin proposal of 1961, and the Reagan-Gorbachev attempt in 1986 – and those initiatives were short-lived.

Others have more fundamental doubts. They are concerned that the call is part of a double agenda, the real purpose of which is to sustain and enhance Western unilateral advantage. The synergies of disarmament and nonproliferation may stop smaller and weaker states from acquiring “the great equalizer” – nuclear weapons – thus minimizing those states’ ability to counter the vast U.S. conventional superiority. So why should North Korea, Iran, and other states that are at odds with the United States willingly expose themselves to threats and humiliation? In a world without nuclear weapons, U.S. forces may be even more superior than they are today; moreover, at low levels of offensive forces an advanced ballistic missile defense system may give the United States a first-strike capability vis-à-vis other NWS. Seen in one or more of these ways, nuclear disarmament is not a hallmark of progressive politics, but a conservative goal: change meant to preserve the dominance of the United States and the West.

In the NWS, the call for a NFWF raises strong concerns of a different nature. There is the view that nuclear weapons make major war very unlikely, if not impossible; that they provide unique and irreplaceable security benefits; that a world of zero would be highly unstable; and that approaching zero might spur proliferation by making it possible for very small arsenals to have large strategic implications not neutralized by the much bigger arsenals of the major NWS. Then there are the less legitimate, but still very real, unilateral advantages that nuclear weapons are seen to offer: they can be used to threaten and humiliate others, and in some cases they confer a

status on their possessors that is thought to be generally useful in the pursuit of national interests.

It is critically important, therefore, to convince states – nuclear and non-nuclear – that disarmament will be pursued in the universal interest. It is a matter neither of unilateral advantage nor of national sacrifice, but of seeking abolition as a common, public good. The objective is to prevent nuclear weapons from being used ever again. The task is to turn fundamental moral considerations – preventing mass slaughter; preserving human civilization – into *realpolitik*.

To begin in earnest, the United States must lead and Russia must cooperate. If Russia is not ready for major cuts, the disarmament ambition will not go far. Next in the line of importance is China, because of its geopolitical significance. Together, these states most affect the security dynamics in regions of proliferation concern: Northeast Asia, South Asia, and to a smaller extent, the Middle East. As veto-wielding members of the UN Security Council, they also determine whether confidence will be built in the enforcement of disarmament commitments.<sup>4</sup> If they cannot stabilize their own strategic relations and put the nuclear order on a path to disarmament, proliferation may continue and the risk of nuclear weapon use may increase.

Words like *zero*, *elimination*, and *abolition* all have in common the idea of no nuclear weapons. However, *zero* can be conceived of in a variety of ways, and not everyone means the same thing when referring to it. It may be taken to mean no deployed weapons; no stockpiled weapons; no assembled weapons; no nuclear weapons in the hands of the military (but possible under civilian governmental control as an insurance pre-

mium); or no national nuclear weapons (but possibly nuclear weapons controlled by an international body).

Beyond the various meanings of *zero*, the vision of a NWFV also comes in several other forms, one of which imagines a world where all ready-made weapons have been eliminated, but where states maintain a mobilization base for rapid reintroduction of them. It might include fissile materials in stock, able nuclear weapons engineers and manufacturing equipment on hand, and delivery vehicles ready for use. For the NWS this would be a form of deep de-alerting, approaching the status of Japan today. The purpose of such a base would be to deter others from breaking out of the agreement and to be able to confront violators if deterrence breaks down.

This is a bad idea,<sup>5</sup> first and foremost because it sustains the mentality that nuclear war is possible at any time. Many states, suspecting that others may be cheating, may come to think that hedging is prudent, with the result of a hedging race: vertically toward capabilities that can be turned faster and faster from virtual to real; horizontally to involve more states. The trust on which abolition was achieved would then evaporate. Second, virtual arsenals need arsenal keepers, who are never disinterested experts, but socio-political actors legitimizing their activities in terms of threats to be met and demanding more resources to counter them. In effect, the arsenal keepers are likely to push for a hedging race, and would quite possibly prefer real arsenals to virtual ones. Such an end state would therefore contain the seeds of its own destruction. Third, it is a particularly bad idea because in the breakout scenarios, first-strike capabilities are more likely to emerge than in current nuclear constellations.

It would be better to go “below zero” to eliminate the fissile materials that have been dedicated to nuclear explosive uses; to institute strict international control of all remaining materials; to dismantle the nuclear weapons infrastructure; and to redirect the workforce to other sectors. Even more, nuclear materials that can be used to build weapons should be banned from civilian use as well. Highly enriched uranium (HEU) is not the most important issue here – there is little HEU left in the civilian sector and what remains is being phased out – but plutonium continues to pose a problem. Technical fixes may or may not solve the problem; if not, a compromise would have to be struck to accommodate the civilian industry. Dual-capability production facilities for civilian use would remain, possibly based on proliferation-resistant technologies and subject to international control. This would be a more stable NFWF than a world where virtual arsenals are allowed. However, going below zero is a matter of more or less, so this image of a NFWF comes in several variations.

A third version relies on joint capabilities to intercept a nuclear attack before the weapons reach their targets – the idea that Reagan presented to Gorbachev in Reykjavik. An effective shield could be traded against milder restrictions on nuclear infrastructure and modified requirements of international control. Twenty-five years and \$150 billion after the Strategic Defense Initiative (SDI) was born, ballistic missile defense remains an unproven technology with no certainty of success. Countermeasures seem to be simpler and cheaper. Furthermore, to convert the program into a global asset for the benefit of all may be impossible, for it takes a much more cooperative world

to overcome the formidable political problems involved. Still, in a world that has come close to elimination, missile defense is likely to be seen through other lenses. If the road to a NFWF results in, say, 100 or 200 weapons for each NWS, further steps will be considered in an environment much different from where the journey started. The path-dependence of the disarmament process must always be kept in mind, so the option should not be ruled out.

Can a shield be developed as an option for a NFWF while nuclear disarmament is taking place? It is conceivable that research and development of defensive technologies could continue if deployment limitations are agreed upon. But would this be enough? China and others not only are concerned about the specific missile defense applications of the U.S. program, but also are worried that someday there may be a technological breakthrough in another related area that leaves them at a significant disadvantage. The trust-consuming effect of such an R&D program should therefore not be underestimated.

Scaling down missile defense is another way to reduce the overall concerns surrounding it. In the years ahead, the United States is likely to do so, as missile defense was always more of a Republican program than a Democratic one. Additionally, there are strong financial pressures for cuts. Yet another option is a cooperative venture with Russia. This may facilitate negotiations toward deep cuts, but would send a dubious signal to China and others. To enhance U.S.-Russian security at the expense of the security of others is not in the spirit of global public good, and not the way to pursue the long-term ambition of a NFWF.

This builds up to an argument for deployment limitations on a slimmer

U.S. missile defense program. Deployment limitations mean reinstating the Anti-Ballistic Missile (ABM) Treaty or negotiating an updated version of it; a slimmer program is the likely outcome of U.S. politics anyhow. Whether the stability of a NFWW would best be enhanced by erecting a shield will be a matter for consideration in a world much different than ours now.

Two measures from the classical arms control agenda are uppermost on the priority list of many states: the ratification and entry into force of the Comprehensive Test Ban Treaty (CTBT) and negotiation of a Fissile Material Cutoff Treaty (FMCT). The United States and China have not ratified the CTBT, while the other P5 countries (France, Russia, and the United Kingdom) have. The United States has conducted 1,000 tests and Russia 700; the others, far fewer. There is the concern, moreover, that sooner or later, simulation techniques will allow the United States to make new types of weapons without live testing. To stem these inequalities and avoid qualitative improvements in the face of a test ban, the NWS should be asked to join the CTBT *and* undertake not to develop and deploy qualitatively new types of weapons. China is ready to ratify the CTBT at any time, provided the United States goes first.

China is not prepared, though, to declare a cut in the production of weapons-grade materials. Like the other P5, China seems to have stopped production of fissile materials for weapons; but unlike the others, China has made no statement or formal commitment in this respect. In view of the uncertainties surrounding missile defense and the future of U.S. forces, China is not confident that it has enough fissile materials in

stock. India and Pakistan, which are building up their forces, are not ready for a cutoff either. Therefore, an FMCT does not seem to be near at hand.

A CTBT and an FMCT are important because nuclear infrastructures would be closed down, notably nuclear test sites and fissile material production facilities. (France has done so already.) There may be consequences for personnel as well. The treaty measures would signal that there will be less of a future for nuclear weapons work, which may lead experts in other directions, unless they are absorbed by stewardship programs for the weapons that remain.

The ongoing U.S.-Russian negotiation of an agreement to succeed START I (the Strategic Arms Reduction Treaty) is a relatively simple task. The anticipated follow-on negotiation of deep cuts – often said to aim at no more than 1,000 deployed strategic weapons – faces higher hurdles. During that negotiation, the issues of missile defense and tactical nuclear weapons will come into full play. Iran may also complicate the talks. If Iran's nuclear and missile programs continue unchecked, it will be harder for the United States to forgo a missile shield in Eastern Europe, which is a cardinal Russian demand.

Mutual deterrence is far from being an ideal basis for international security. The risks of breakdown are too great, and the policy is counterintuitive, suggesting that we are best protected when we are naked. But missile defense makes an untenable situation even worse, for by stimulating competitive acquisitions of offensive and defensive capabilities it stands in the way of nuclear disarmament. What may be a problem for Russia in the future is already a problem for China. Deep cuts may take deployment limitations on a slimmer program, as argued above.

Primo 2009, the United States had 500 operational tactical weapons, 200 of them in Europe. On the basis of the number of available delivery platforms, it is estimated that Russia has approximately 2,100 weapons in this category. Including these weapons in an overall count is an increasingly legitimate U.S. demand: the lower the level of strategic arms, the higher the stock of unregulated tactical weapons would loom. Agreed reductions of operationally deployed strategic weapons to the level of 1,000 or below, leaving aside the 2,000 Russian sub-strategic weapons, are hard to imagine. To prepare for the inclusion of sub-strategic weapons, Russia might do more of what the United States is planning for, that is, assigning long-range weapons to regional roles. Freedom to mix strategic and tactical weapons under common ceilings can also facilitate inclusion of them.

The United States holds 2,500 weapons in reserve for strategic and tactical use.<sup>6</sup> The corresponding Russian figure is not known, but it may be higher.<sup>7</sup> In the U.S. Congress, the bipartisan McGovern-Lungren resolution brings reserves into the deep-cut framework, proposing to limit U.S. and Russian arsenals to no more than 1,000 weapons deployed and no more than 3,000 weapons in all, reserves included, and with a freedom to mix.

**H**ow deep do U.S. and Russian cuts have to be to engage France, China, and the United Kingdom in disarmament negotiations? The three countries used to say that the superpowers would have to match their level in the low hundreds. Recently, the United Kingdom has shown flexibility in this respect. Maybe the United States and Russia need not come down to the same level as the smaller P5 powers

*before* multilateral negotiations can begin. If the United States and Russia agree to cut their forces to three-digit figures while stating their readiness to head toward common P5 ceilings at about the current level of the United Kingdom, France, and China, this may suffice. With such an approach, reductions to 1,000 weapons may also be enough. But if the United States and Russia were to approach the other P5 countries with proportional reductions in mind, such that the United States and Russia would retain larger arsenals than the others, it might go nowhere. Today, France has a somewhat larger arsenal than the United Kingdom and China: 348 operational weapons compared to 185 for the United Kingdom and 179 for China.<sup>8</sup>

Should the multilateral phase be limited to the P5 at first and widened to include others thereafter, or should all NWS be included right away? Two of the four outliers – Israel and North Korea – can best be addressed separately. The Israel problem is a regional one that can only be solved as part of a peace settlement in the Middle East, and North Korea may be willing to trade its arsenal for economic assistance and normalization with the United States and the rest of the world. For the other two – India and Pakistan – the ambition must be to draw them into global negotiations together with the P5. India's nuclear posture has global ramifications, like those of the P5, and Pakistan's weapons are a function of India's. If a criteria-based approach is adopted in relation to the outliers, asking all three to abide by the commitments that India has undertaken and raising the bar for *de jure* recognition by demanding accession to the CTBT and a moratorium on fissile material production, only India may be able to live up to these requirements. In that

case, the table would be enlarged from P5 to P6.

Article VI of the NPT was always about hardware *and* software, about both the weapons and the roles assigned to them. For half a century, calls have been made to reduce the role of nuclear weapons in international affairs. NNWS are more vulnerable to use and threats of use than NWS. Where mutually assured destruction applies, resort to nuclear weapons is an ordained act of suicide; while in relation to NNWS, the aggressor may get away with it. No wonder, then, that most of the threats that have been made have been addressed to NNWS. In some instances they seem to have worked.

Non-aligned states have therefore called for an international convention committing the NWS not to use or threaten to use nuclear weapons against those NNWS that are party to the NPT, no qualifications added. No-first-use doctrines, limiting the role of nuclear weapons to that of deterring others from using theirs, would meet the same concerns and, in addition, would reduce the role of nuclear weapons in inter-NWS affairs to deterring the others from using theirs. Such doctrines have an intriguing disarmament corollary: nobody would need them if nobody had them. In pursuit of a NWFN, this proposition is more relevant than extension of non-use assurances to NNWS.

The Geneva Protocol of 1925 prohibited the use of chemical and biological weapons, which were considered inhumane. Later, possession of them was outlawed as well: biological weapons by the Biological Weapons Convention (BWC) of 1972; chemical weapons by the Chemical Weapons Convention (CWC) of 1992. The CWC set a timeline for destruction of the arsenals, and

agreement was reached on a comprehensive verification system. In the 1990s, a verification protocol was negotiated for the BWC, too, but the recent Bush administration turned it down. Stressing that any use of nuclear weapons must be compatible with international humanitarian law, the International Court of Justice (ICJ) Advisory Opinion of 1996 came close to a no-use position. The effects of nuclear weapons are such that it is hard to imagine circumstances in which they could be used in compliance with humanitarian law, although a reservation was made for situations in which national survival is at stake (as in the case of Israel).

A protocol banning the use of nuclear weapons, on the model of the Geneva Protocol, would convey the same message: that the effects of nuclear weapons are such that no civilized state or sane leader should or would use them. An international legal instrument declaring their use to be a crime against humanity would send an even stronger message and be a better deterrent against use.

In effect, the Geneva Protocol was a no-first-use agreement. An agreement banning the use of nuclear weapons would similarly allow for nuclear retaliation, that is, it would be a no-first-use agreement. It may include provisions branding the use of nuclear weapons a crime against humanity. Alternatively, the Security Council could be invited to issue such a declaration.

Given its conventional preponderance, the United States could more easily convert to no-first-use than could Russia. However, if the United States seizes the initiative and Russia is willing to generalize the bilateral Russia-China no-first-use commitment, the P5 would end up with such a doctrine, for it is hard to imagine that the United

Kingdom and France would not follow the U.S. lead, especially when reinforced by Russia. (China always had a policy of no-first-use.) The United States would have to stop issuing nuclear weapons threats, and its alliance commitments and nuclear umbrellas would have to be changed accordingly. Its allies would have to be reassured in other ways.

One or more NWS may find that they can move to the low hundreds, but no further unless their security concerns have been much alleviated and the military and political role of nuclear weapons has been much diminished. Russia may be a case in point. Others may be ready to push for proposals beyond a call for low hundreds: China to follow up on its no-first-use posture; India to promote its long-standing proposal for a nuclear weapons convention; NNWS to press their case for a NFWF whether they are brought into the negotiations or not. Most important, the United States should remain committed to the course initiated by President Obama. All of this is uncertain, however.

Ceilings in the low hundreds will presumably be set on the basis of some notion of minimum deterrence. In terms of hardware, minimum deterrence is a function of the vulnerability of the weapons, their ability to penetrate enemy defenses, and the possibility that some of them will malfunction and fail to arrive on target for that reason. In terms of software, it is a function of the efficiency of the C3I system (Communications, Command, Control, and Intelligence) and the perceived political will to follow through on deterrence doctrines. Today, the powers that subscribe to minimum deterrence keep arsenals ranging from 180 weapons (China and the United Kingdom) to 350 (France). India and Pakistan are probably heading for forces

in about the same range, and Israel may already be there.

It may be assumed that multilateral negotiations will seek ceilings in the lower end of this range, compatible with notions of minimum deterrence but not allowing significant increases in any of the forces. Substantial additions would run against the declared aim of the exercise, which will be framed in disarmament terms. How could one go on from there? What approach would minimize the risks on the way to a NFWF and maximize the advantages that it offers? The prize is high, but so may be the risks.

From this point on, the continuation is hard to foresee. Indeed, it would be presumptuous to claim to know much about it. However, political-order issues aside, some force constellations are known to be more dangerous than others. A few parameters, therefore, may be established to steer the process away from some of the greatest risks in the final approach to the goal – in particular, the worlds immediately above and immediately below zero. The dangers of a world immediately below (virtual arsenals) have been spelled out above. Similar dangers would exist in a world immediately above. At the level of, say, 30 nuclear weapons, the retaliatory capabilities may be in doubt. Some weapons may be destroyed by the enemy, others may be intercepted, and yet others may not function as planned. As a result, first-strike propensities may be too great for comfort. It may lead to surprise attacks, hitting the enemy when his guard is down, or to inadvertent escalation when decision-makers begin to believe that war can no longer be avoided. However flexible the notion of minimum deterrence, force levels in the low hundreds may have been chosen for good reason.

It may therefore be wise to skip those transitional phases immediately above and below zero and go from the low hundreds directly to a NFWF significantly below zero. That can be done by eliminating weapons-grade materials, dismantling dedicated nuclear infrastructure, and trimming the nuclear weapons workforce to a minimum *before* eliminating the remaining weapons. In other words, the stability of minimum deterrence postures would be maintained until the stability of a NFWF has been ensured. Then, and only then, would it be time to move from the one to the other.

It is hard to imagine a NFWF where the ground rules are different for different categories of states. Forty years of discontent with the NPT's division of the world into nuclear- and non-nuclear-weapons states, and persistent complaints over the slow implementation of Article VI, which was supposed to have ended that division, have led many NNWS to insist on equal rules for all. Thus new measures must be equitable and capability differences increasingly reduced as the process unfolds. Regardless of the exact roadmap followed, the principle of equity will be important throughout the disarmament process.

The NPT was meant to be the regulatory mechanism for nonproliferation, disarmament, and peaceful uses on the path toward zero. The parties may wish to reinterpret some of its provisions, but may see fit to keep the Treaty until it has been implemented – that is, until all weapons have been eliminated. At that point, however, the equity that it prescribes stops. The NPT goes to zero, but never pretended to guide moves below zero. Therefore, a new convention outlining the ground rules of a NFWF has to be written before reaching that

point. A convention well ahead of zero may also be desirable because the NPT is no more than a skeleton agreement; new rules guiding the final approaches to zero will be needed in any case. To be agreeable, those rules must be informed by the principle of equity and lead to a NFWF where the rules are the same for all.

Measures to enhance the proliferation resistance of nuclear power must also be the same for all. For instance, proposals to internationalize the fuel cycle must apply to *all* existing and future facilities, including those in the NWS. If not, the critical cases are unlikely to be covered. Deep cuts and measures blocking qualitative developments of nuclear arsenals may improve the prospects for internationalization by making the implementation of the NPT more balanced. Even so, studies have shown that the problems are formidable. Will proliferation resistance be more urgent as disarmament progresses, or will it be less important? To what extent will civilian uses of nuclear energy have to be circumscribed by technological and organizational constraints in a NFWF?

The main driver – the concerns about weapons proliferation in a world where nuclear power is spreading – would seem stronger today than in a world that is set on the course of nuclear disarmament. Reductions to 1,000 U.S. and Russian weapons with no promise of going further would hardly impress would-be proliferators; but if disarmament becomes an established trend pointing toward a NFWF, it will be more costly to defy that trend. In that setting, proliferation resistance will still be desirable, but arguably less urgent.

Today, the incentives to acquire nuclear capabilities and nuclear weapons are strong, while the mechanisms to enforce the commitments undertaken by NPT

members are weak. In a NFWF, on the other hand, the further below zero one goes, the stronger the inhibitions against remilitarization will be and the lesser the concerns about the shape of the civilian sector. In a world of virtual arsenals this will be different: civilian facilities may become part of a hedging race, so proliferation resistance and international safeguards will be of the essence. The nuclear industry would therefore be well served by a sustained disarmament process and by a NFWF below zero.

On the way to a NFWF, the differences between the NWS will diminish. Still, their capabilities will remain different in many respects, especially qualitative ones. The principle of equity should inform the process, but how agreeable is it and how will it be practiced? Would China use the opportunity to go for equal status with the United States and Russia in as many respects as possible and as soon as possible? Would India reach out for the same? So far, China has refrained from arms racing, saying enough is enough. But will it continue to do so in the face of a real chance to obtain equal status? Why should the United States and Russia give up their nuclear superiority and accept equal status with the much smaller nuclear powers any sooner than is absolutely necessary? Would they ask for proportional reductions when they come to the multilateral table? Even if the United States maintains its commitment to a NFWF, why should it yield to the others any more or any sooner than is required?

If the commitments to a NFWF are firm and the expectations that it will be achieved are strong, equal or unequal terms some steps earlier will not necessarily matter very much. The end result would be the same for everybody. In a *process* perspective, there would be more

leeway in the negotiation of transitional steps than in a *static* perspective, where each stage stands on its own and the future is open-ended. For instance, if a multilateral deal is struck in a static perspective – this far, but no promise of going further – the NWS are likely to be more sensitive to competitive edges and seek unilateral advantages. The leading powers cannot then be expected to relinquish their lead generously. More than in a process perspective that is pursued in the name of global public good, old-fashioned power politics would be the name of the game.

A static perspective, which regards disarmament not as a process but as a state of affairs, presents a problem similar to a well-known question in integration theory. Integration is also seen variously as a process or a state of affairs. In the European Union, which has inspired integration theory more than any other empirical setting, there is the recurrent question whether integration can stop and remain at some point without unravelling. Is there such a point of stability, or will stagnation be the beginning of reversal? The same question is pertinent to the field of disarmament. If the United States and Russia stay content after having reduced their forces to 1,000 weapons all in all, losing sight of the objective of a NFWF, what will others do? Will emerging powers go for equal numbers? Maybe not. Will more states take an active interest in the nuclear weapon option? Maybe yes. Proliferation is more likely in a static context, where the NWS continue to demonstrate the significance that they attach to nuclear arms, than in a process perspective, where proliferators would confront an overwhelming majority of states set on the course of continued disarmament. It is always more costly to act against an existing

trend. Stagnation may therefore lead to proliferation, which in turn may lead more states to rearm.

The first stage of the disarmament process – U.S.-Russian cuts and missile defense limitations in advance of multilateral talks – does not presuppose any change of world order, but it implies a distinct shift from antagonistic to cooperative behavior. Subsequent stages require more of the same, gradually transforming the current security system based on nuclear deterrence into a system based on cooperation and mutual restraint. Arms control and disarmament can assume the role of *catalyst and amplifier* of such a change. It has had that role before: starting in 1986 with the Stockholm agreement on confidence and security-building measures, it helped to move the world out of the Cold War.<sup>9</sup> If it is widely recognized as a high-priority global public good, it may even become a *driver* of systemic change.

When multilateral reductions to the low hundreds have been agreed, further steps will depend on fundamental world-order changes, for it is from that point on that the question of how to live without nuclear deterrence becomes pressing. Some are likely to stick to the view that it is safer to keep the weapons than to take the risk of disarming, so a better system must be developed to substitute for it. Disarmament and world order become twins – two sides of the same coin. Would all NWS be ready to engage in that endeavor? Would they proceed to discuss what version of a NFWF they should go for and how best to reach it? How conditional or categorical would they be about it?

In thinking about how to sustain nuclear disarmament and enhance international security, parallels have been drawn

to the so-called European concert after the Napoleonic Wars, when the European powers undertook to respect each other's vital interests and exercise restraint in a system characterized by balance of power. Henry Kissinger, an authority on concert diplomacy, describes it as a system in which "the great powers work together to enforce international norms. . . . Common action grows out of shared convictions. Power emerges from a sense of community and is exercised by an allocation of responsibilities related to a country's resources. It is a kind of world order either without a dominating power or in which the potentially dominating power leads through self-restraint." Believing that the Obama administration favors some kind of concert diplomacy, he argues that American leadership will "result from the willingness to listen and to provide inspirational affirmations (of norms)."<sup>10</sup>

A great-power concert may be predicated on equilibrium between the participating states or it may be based on consensus. Generally, the former has been considered less demanding than the latter, although there are few examples of sustained operation of any version of power concerts. Today, however, when power is shifting so rapidly, a lasting equilibrium is dead on arrival. Better then to focus on norms – norms of mutual respect and self-restraint embedded in a growing body of international law, with a view to building a platform for effective enforcement action.

The organizing framework in the nuclear field, the NPT, suffers very much from the lack of well-functioning enforcement mechanisms. Not only is it difficult to forge consensus between the P5, but the UN Security Council has long been out of tune with the distribution of power in the international system. Progress toward a NFWF requires

*cooperative security* between the big powers with a view to more effective *collective security* mechanisms in the hands of the world organization.

Globalization encourages development along these lines. Interdependence is growing by the day and necessitates broad-based international cooperation on regulatory measures. The current economic crisis does the same. It absorbs the energies of all the major powers, so they need respite from international confrontation. This is a period of opportunity for international security cooperation.

**I**n East Asia, rapidly growing economic interdependence is a brake on security dynamics in the region. Use of force will come at tremendous costs to all involved. However, economic cooperation and security policies are conducted along different trajectories. Economic cooperation means interdependence, but it is pursued by sovereign states and does not translate into political integration.

Europe is different in this respect. Starting from the interdependence of the Coal and Steel Union, integration has been going on for more than 50 years. When the Cold War ended, the European Union and Russia became strategic partners. Still, Russia and the Western nuclear powers threaten to be the first to use nuclear weapons against each other, and U.S. tactical nuclear weapons remain deployed in Europe. There is no reasonable connection between the political sphere and existing nuclear doctrines. Many

elements of the nuclear postures have become anachronistic.

The danger of nuclear weapons use is probably highest in South Asia and the Middle East. These are volatile areas that call for combinations of regional measures and global initiatives. The political requirements of nuclear disarmament are therefore different for different parts of the world. The nuclear arsenals evolved under different historical circumstances and have different political meanings and utilities for their owners. Because the starting points are so different and because long-term disarmament is path-dependent, attempts to envisage how the process might unfold are easily overblown.

Thinking beyond multilateral talks about arsenals in the low hundreds, the path-dependence of nuclear deterrence blurs the picture. This paper nevertheless advances one specific proposition about disarmament below that stage. Since stability concerns and bickering over numbers are likely to become more of a problem at very low levels, and since virtual arsenals are likely to be unstable, it may be wise to stay at minimum deterrence levels until nuclear weapons infrastructure and weapons-grade materials have been eliminated, and then go straight to a world below zero.

For political leaders to act on complex realities, the realities have to be simplified. Heuristic assumptions to that effect may be flawed, but they are necessary to keep the debate about the feasibility and desirability of a NFWF alive.

#### ENDNOTES

<sup>1</sup> [http://www.huffingtonpost.com/2009/04/05/obama-prague-speech-on-nu\\_n\\_183219.html](http://www.huffingtonpost.com/2009/04/05/obama-prague-speech-on-nu_n_183219.html).

<sup>2</sup> [http://www.usatoday.com/news/world/2009-06-04-Obama-text\\_N.htm](http://www.usatoday.com/news/world/2009-06-04-Obama-text_N.htm).

<sup>3</sup> See also the second Shultz et al. op-ed in *The Wall Street Journal*, January 15, 2008. A number of high-level statements have been made in support of this initiative, including the statement by German leaders (Bahr, Schmidt, Genscher, von Weizsacker); the statement by British leaders (Rifkind, Hurd, Owen, Robertson); the statement by Norwegian leaders (Bondevik, Brundtland, Nordli, Stoltenberg, Willoch); the statement by Australian leaders (Fraser, Gration, Sanderson); the statement by Polish leaders (Kwasniewski, Walesa, Mazowiecki); the statement by Italian leaders (D'Alema, Fini, La Malfa, Parisi); the joint statement by Presidents Obama and Medvedev; the joint statement by Carter, Gorbachev, Beckett, Rocard, et al. (Global Zero); and the joint statement by Norwegian Foreign Minister Støre and German Foreign Minister Steinmeier. These and other statements by a great many individual leaders show that the interest in reviving the objective of a NFWF has spread to the political mainstream also in countries that had not been very vocal on this matter in the past.

Of the many academic contributions to the debate, this paper draws, in particular, on George Perkovich and James Acton, eds., *Abolishing Nuclear Weapons: A Debate* (Washington, D.C.: Carnegie Endowment for International Peace, February 2009). Perkovich and Acton's own contribution to that volume was first published as an Adelphi Paper in September 2008.

<sup>4</sup> George Perkovich, "Principles for Reforming the Nuclear Order," Proliferation Papers, IFRI Security Studies Center, Fall 2008.

<sup>5</sup> Harald Muller, "The Importance of Framework Conditions," in *Abolishing Nuclear Weapons*, ed. Perkovich and Acton.

<sup>6</sup> Weapons loaded on heavy bombers or stored in weapons storage areas at heavy bomber bases are counted as operational strategic weapons.

<sup>7</sup> It is estimated that about 8,800 weapons are held in reserve or have been slated for dismantlement.

<sup>8</sup> As of 2008; Stockholm International Peace Research Institute (SIPRI), *SIPRI Yearbook 2008* (Oxford: Oxford University Press, 2008).

<sup>9</sup> Harald Muller, "The Future of Nuclear Weapons in an Interdependent World," *The Washington Quarterly* (Spring 2008).

<sup>10</sup> Henry Kissinger, "Obama's Foreign Policy Challenge," *The Washington Post*, April 22, 2009.