Nuclear Weapons in the 21st Century

Western States Legal Foundation

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Rhetoric vs. Reality: Nuclear Dangers in a Time of Growing Global Economic and Environmental Crisis[1]

President Obama's April 5, 2009 speech in Prague[2] launched a tidal wave of expectations around the world that the abolition of nuclear weapons was finally on the horizon. But Obama made conflicting statements in Prague, which have created confusion and misunderstandings about the current state of US nuclearism and prospects for disarmament. His administration's foreign policy has been similarly characterized by contradictory positions, rhetorically emphasizing the importance of diplomacy while in reality relying heavily on the use of force.

Some believe that Obama's pledge to "to seek the peace and security of a world without nuclear weapons" is unprecedented. Yet, in the Nuclear Nonproliferation Treaty (NPT) itself, in Article VI, the US and the other original nuclear weapon states pledged to end the arms race "at an early date" and to negotiate "in good faith" the elimination of their nuclear arsenals."[3] Forty two years later, and more than two decades after the end of the Cold War and the dissolution of the Soviet Union, some 20,000 nuclear weapons remain in the global arsenal, 95% of them possessed by the United States and Russia.[4]

And there are disturbing signs that a new Cold War–type nuclear arms race is emerging. This time it will be qualitative, rather than quantitative; involving "fewer but newer" nuclear weapons, still in quantities sufficient to end civilization in short order.

At its peak in 1966, it is estimated that the US nuclear arsenal numbered over 32,000 warheads and bombs.[5] In 2010, the United States released information about the size of its nuclear arsenal, stating that as of the end of 2009 it had an active stockpile of 5113 nuclear weapons. This number includes both "active" and "inactive" warheads, with the "active" category including "strategic and nonstrategic weapons maintained in an operational, ready-for-use configuration, warheads that must be ready for possible deployment within a short timeframe, and logistics spares." In addition, the US has "several thousand" nuclear weapons listed as ""retired".[6] Independent experts estimate that there are approximately 3500 such "retired" warheads.[7] An unknown percentage of these "retired" warheads are being held in "managed retirement" status, which requires that they be maintained "in such a way that they could be reactivated should a catastrophic failure in the stockpile necessitate such action."[8]

Despite the dramatic reductions in numbers from the height of the Cold War, nuclear weapons continue to pose an existential threat to humanity and life on this planet. As recent studies by climate scientists have shown, a nuclear war involving no more than 100 Hiroshima-sized nuclear weapons – about 0.3% of the global nuclear arsenal – could have terrifying, long-lasting effects on the global climate, leading to a drop in average surface temperatures, reduction of the ozone layer, and shortened agricultural growing seasons leading to massive famine and starvation.[9] And, as the terrible earthquake, tsunami and nuclear disaster in Japan have shown us once again, there could be no adequate response to the far larger catastrophe of a nuclear

explosion in a city anywhere today. While earthquakes and tsunamis are acts of nature, a nuclear weapon use is a 100% preventable man-made act of hubris. (As is building nuclear reactors in active earthquake and tsunami zones!)

The US government is officially committed to modernizing its nuclear bombs and warheads; the submarines, missiles and aircraft that carry them; and the laboratories and plants that design, maintain and manufacture nuclear weapons. US policy and budget documents all manifest an intent to keep thousands of nuclear weapons in active service for the foreseeable future, together with the capacity to bring stored weapons into service and to design and manufacture new weapons should they be desired.[10] Russia's nuclear weapons programs and policies closely mirror those of the US, and are also reflected in the other nuclear weapon possessing states.

Paradoxically, cynically, or perversely – however you choose to define it – these programs are being driven by treaty negotiations understood by most of the world to be intended as disarmament measures. The Cold War and post-Cold War approach to disarmament was quantitative, based mainly on bringing down the insanely huge cold war stockpile numbers – presumably en route to zero. Now disarmament has been turned on its head; by pruning away the grotesque Cold War excesses, nuclear disarmament has, for all practical purposes come to mean "fewer but newer" weapons systems, with an emphasis on huge long-term investments in nuclear weapons infrastructures and qualitative improvements in the weapons themselves projected for decades to come.

These nuclear weapons do not exist in isolation. While the personality at the top of the US government changes from time to time, the architecture and special interests that underpin it have not. The United States spends nearly as much as the rest of the world's countries combined on its military, accounting for 41% of the global total in 2011. US military spending in 2011 was nearly five times more than the next biggest spender, China ($143 billion), and almost ten times that of Russia ($71.9 billion).[11] Last year the US, spent $711 billion on its military, twice as much as the next 14 countries combined.[12] In 2008, the United States spent an estimated $52.4 billion on nuclear weapons and associated costs alone.[13]

Newly elected "anti-war" candidate Barack Obama, on the eve of his swearing in as President of the United States, declared: "[G]oing forward, we will continue to make the investments necessary to strengthen our military and increase our ground forces to defeat the threats of the 21st Century."[14] Today, it is estimated that of some 1,478,000 active duty troops, 310,000 US military personnel are deployed in approximately 150 countries around the world.[15] The US military dominates the globe through its operation of 10 Unified Combatant Commands, overseeing a network of more than 1000 foreign bases in at least 130 countries.[16] Global operations are coordinated by United States Strategic Command (StratCom), headquartered in Omaha, Nebraska, which is in charge of US nuclear war planning. Nuclear weapons, still at the core of StratCom's mission, exist within - and not apart from - this system of extended military bases and Unified Combatant Commands, and the history it derives from.[17]

A November 2010 White House Fact Sheet, entitled, 'An Enduring Commitment to the U.S. Nuclear Deterrent,' announced the Administration's plans "*to invest more than $85 billion over the next decade to modernize the U.S. nuclear weapons complex that supports our deterrent.... This level of funding is unprecedented since the end of the Cold War.*"[18] This didn't include an additional $100 Billion by 2020 to modernize the missiles and delivery systems that carry U.S. nuclear warheads.[19]

In testimony before the House Armed Services Subcommittee on Strategic Forces on March 2, 2011, Dr. James Miller, Principal Deputy Under Secretary of Defense for Policy increased the numbers, stating: "The Administration's FY2012 budget reflects our commitment to the modernization of our nuclear arsenal for the long term, including some $125 billion over the next ten years to sustain our strategic delivery systems, and about $88 billion over the same period to sustain our nuclear arsenal and modernize infrastructure."[20]

Calling it an "unprecedented investment in ensuring the nuclear security of our country and our allies," Thomas D'Agostino, Administrator of the National Nuclear Security Agency, on February 16, 2011 declared: "Despite the economic challenges facing our nation and the budget pressures being felt throughout the federal government, the President demonstrated his commitment to our mission by proposing an unprecedented investment in ensuring the nuclear security of our country and our allies."[21]

This huge sum was the price exacted by the US military-industrial complex and its representatives in the Senate for Senate ratification of the new START treaty (Strategic Arms Reduction Treaty) on December 22, 2010. The political conditions attached to Senate ratification in the US and mirrored by Russia, reinforced by narrowly proscribed NGO advocacy supported by the funding community,[22] effectively turned START into an anti-disarmament measure. This was stated in so many words by Senator Bob Corker, a Republican Senator from Tennessee, whose state is home to the Oak Ridge National Laboratory, site of a proposed multi-billion dollar Uranium Processing Facility.

> "I… am proud that as a result of ratification we have been successful in securing commitments from the administration on modernization of our nuclear arsenal and support of our missile defense programs, two things that would not have happened otherwise. In fact, thanks in part to the contributions my staff and I have been able to make, *the new START treaty could easily be called the "Nuclear Modernization and Missile Defense Act of 2010*."[23]

"Deterrence": What's in a Word?

In Prague, President Obama declared: "To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same." But this was immediately followed by: "Make no mistake: As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies."

What exactly is this "deterrent"? And what does deterrence mean? A typical understanding of Cold War deterrence meant maintaining the capacity to inflict a devastating retaliatory second strike, or "mutually assured destruction," if either the United States or the Soviet Union attacked the other with nuclear weapons. But what did it really mean? And what does it mean now? To jump directly to the punch line, "deterrence" encompasses the entire military-industrial complex and the national security state and elites that it serves (not only in the United States). Deterrence is an ideology which has outlived its Cold War origins and is used by nuclear weapon states to justify the perpetual possession and threatened use – including first use – of nuclear weapons.

Deterrence in post-Cold War US national security doctrine goes well beyond the threat of retaliation. As stated in a September 2008 Department of Defense Report on the Air Force's Nuclear Mission:

> "Nuclear deterrence is achieved by credibly threatening a potential adversary with the use of nuclear weapons so as to prevent that adversary from taking actions against the United States, its allies, or its vital interests. This is accomplished primarily by maintaining sufficient and effective nuclear capabilities to pose unacceptable costs and risks upon the adversary should it so act."….
>
> "Though our consistent goal has been to avoid *actual* weapons use, the nuclear deterrent is 'used' every day by assuring friends and allies, dissuading opponents from seeking peer capabilities to the United States, deterring attacks on the United States and its allies from potential adversaries, and providing the potential to defeat adversaries if deterrence fails."[24]

In other words, the US uses the threat of nuclear attack the same way a bank robber might use a gun held to temple of a bank teller. In his 2007 book, "Empire and the Bomb: How the US Uses Nuclear Weapons to Dominate the World," Joseph Gerson wrote:

> "On at least 30 occasions since the atomic bombings of Hiroshima and Nagasaki, every US President has prepared and/or threatened to initiate nuclear war during international crises, confrontations, and wars – primarily in the Third world."[25]

To name just two, in 1996, President Clinton made a covert nuclear threat against an alleged underground chemical weapons facility in Libya,[26] and in 2002 President Bush had contingency plans drawn up for battlefield use of nuclear weapons in Iraq.[27]

Here's another description of nuclear deterrence, from Strategic Command Vice-Admiral Carl Mauney, in January 2009.

> "Some argue that the only legitimate role for our nuclear weapons is to deter nuclear weapon use by others against us or our allies, and this is probably their most important role, but the deterrence roles of U.S. nuclear forces goes well beyond deterrence of nuclear attack…. They cast a long shadow over the decision-making of any adversary attempting attacks on U.S. vital interests or contemplating such attacks. They make it clear that the American President always has an option of last resort for which the adversary has no effective counter. They pose what's been called the threat that leaves something to chance, the possibility in the mind of the adversary that their actions could result in unintended or uncontrolled escalation. And these are the deterrence dynamics that only nuclear weapons can provide."[28]

Indeed, according to the Obama Administration's April 2010 Nuclear Posture Review (NPR): "The United States is… not prepared at the present time to adopt a universal policy that the 'sole purpose' of U.S. nuclear weapons is to deter nuclear attack on the United States and our allies and partners," though it vaguely commits to "work to establish the conditions under which such a policy could be safely adopted." And the NPR does not rule out first use.[29]

The policy of nuclear deterrence is not passive and it is not benign.

According to its proponents, maintaining a "credible" US deterrent will require a massive new investment in the nuclear weapons infrastructure. In March 2008, General Kevin Chilton, Commander of Strategic Command, in charge of U.S. nuclear war planning, told Congress

> "If the nation is going to maintain a nuclear deterrent, the capabilities that support this deterrent should be second to none. We must care for the stockpile whether we possess one weapon or thousands.... A revitalized infrastructure will facilitate a reduction of the large inventory of weapons we maintain today as a hedge against strategic uncertainty and weapon reliability concerns, and *will allow us to sustain our nuclear capability and expertise throughout the 21st Century*."[30]

In November 2009, Chilton predicted the United States will need nuclear weapons 40 years into the future, stating: "The President himself has said… a world [without nuclear weapons] will not be reached quickly and perhaps not in his lifetime and I agree with that…. It's not because we couldn't physically cut up every weapon in the world in 40 years. *We could*… The question is would it be a safer world if we did." Quoting from Obama's Prague speech, General Chilton said his Command must focus on "the President's confirmation that as long as nuclear weapons exist the United States will maintain a safe, secure and effective arsenal to deter any adversary and to guarantee that defense to our allies."[31]

In a profoundly disturbing speech to the US Institute of Peace on October 21 2009, Secretary of State Hillary Clinton said

> "We are sincere in our pursuit of a secure peaceful world without nuclear weapons. But until we reach that point of the horizon where the last nuclear weapon has been eliminated, we need to reinforce the domestic consensus that America will maintain the nuclear infrastructure needed to sustain a safe and effective deterrent without nuclear testing. So in addition to supporting a robust nuclear complex budget in 2011, we will also support a new Stockpile Management Program that would focus on sustaining capabilities."

Citing General Chilton she added: "This is what the military leaders, charged with responsibility for our strategic deterrent, need in order to defend our country."[32]

To this end, consistent with specific provisions in the NPR, in his February 2, 2011 Message to the Senate on the new START treaty, President Obama "certified," among other things his intention to "modernize or replace the triad of strategic nuclear delivery systems: a heavy bomber and air-launched cruise missile, an ICBM, and a nuclear-powered ballistic missile submarine (SSBN) and SLBM [sea-launched ballistic missile]…. and to "accelerate, to the extent possible, the design and engineering phase of the Chemistry and Metallurgy Research Replacement (CMRR) building and the Uranium Processing Facility (UPF); and request full funding, including on a multi-year basis as appropriate, for the CMRR building and the UPF upon completion of the design and engineering phase for such facilities."[33]

The CMRR is a new plutonium pit production facility proposed for the Los Alamos Lab in New Mexico.[34] (Pits are the primary components, or "cores," of thermonuclear weapons.) The UPF is a production facility for thermonuclear secondary components poised to begin construction at the Oak Ridge National Laboratory in Tennessee.[35]

In his message to the Senate, the President also pledged to "continue development and deployment of United States missile defense systems" of all types, including the ground-based mid-course interceptors so provocative to Russia.[36]

The deal for START ratification reprises and expands the trade-off brokered by President Bill Clinton in the mid-1990s for Senate ratification of the Comprehensive Test Ban Treaty. In that case, although the Senate failed to ratify the treaty, the "Stockpile Stewardship" program was created and billions of dollars were poured into construction of massive new facilities for simulating nuclear test explosions and training new generations of nuclear weapons scientists. Research and development on new warheads and delivery systems continued, existing weapon types were modified and enhanced, and the continued power and political influence of the nuclear weapons laboratories – the direct descendants of the Manhattan Project, and the vast array of government agencies, corporations, universities and organizations within organizations that comprise the nuclear weapons establishment, was projected into the future.[37]

In his February 3, 2011 Statement at the Plenary of the Conference on Disarmament in Geneva, Ambassador Luiz Filipe de Macedo Soares of Brazil, provided a brutally realistic view of deterrence in today's world.

> "In the present actual political and strategic configuration of the world, nuclear weapons do not aim at balancing potentially opposing powers. They are rather intended to express sheer power of intimidation in an extremely archaic fashion. As you said, Mister President, we should try to 'think outside the cold war box'. I should add to think 'outside the colonialist box', in which a group of States consider themselves above all the others and immune to humanitarian considerations and international legal principles. As one member State expressed here, nuclear weapons are immoral and illegal. Hence the possession of nuclear weapons is immoral and illegal…. In any case, one can ask the question if for its defense needs a States is politically, legally and morally entitled to possess and deploy arms of mass destruction."[38]

As pointed out by United Nations Secretary-General Ban Ki-moon in connection with the October 2008 unveiling of his five-point proposal to revitalize the international disarmament agenda, deterrence is "contagious."

> "Most States have chosen to forego the nuclear option…. Yet some States view possession of such weapons as a status symbol. And some States view nuclear weapons as offering the ultimate deterrent of nuclear attack, which largely accounts for the estimated 26,000 that still exist. *Unfortunately, the doctrine of nuclear deterrence has proven to be contagious.* This has made non-proliferation more difficult, which in turn raises new risks that nuclear weapons will be used."[39]

As Ambassador Soares pointed out in his Statement to the CD, the ideology of deterrence extends to other nuclear possessing and nuclear reliant states. Referring to the new Strategic Concept adopted by NATO in Lisbon on November 19, 2010, he declared

> "A most powerful alliance proclaimed its renewed strategic doctrine expressly based on nuclear weapons. It is consequently difficult to grant credibility to any nuclear disarmament intention coming from any member of that alliance." [40]

Indeed, mirroring President Obama's Prague language, the Strategic Concept states: "As long as nuclear weapons exist, NATO will remain a nuclear alliance."[41]

Further, while the United States continues to maintain some 150 – 200 "tactical" nuclear weapons at six bases in five NATO countries,[42] according to the Strategic Concept

> "The supreme guarantee of the security of the Allies is provided by the strategic nuclear forces of the Alliance, particularly those of the United States; the independent strategic nuclear forces of the United Kingdom and France, which have a deterrent role of their own, contribute to the overall deterrence and security of the Allies."[43]

At a February 28, 2012 press conference, describing the goals of the May 2012 NATO Summit in President Obama's hometown of Chicago, NATO Secretary General Anders Fogh Rasmussen stated

> "As far as our nuclear policies are concerned,... I expect that we will adopt what we call a defence and deterrence posture review at our summit in Chicago. And that will include nuclear policies. The essence of that document will be to find the appropriate mix between nuclear forces, conventional forces and missile defence."[44]

Note: A long planned Russia – NATO side meeting in Chicago was ultimately cancelled because the two sides were so far apart on European missile defense.[45]

As calculated by Randy Rydell, Senior Political Officer in the United Nations Office for Disarmament Affairs: "Today over half the world's population lives in countries whose national security postures explicitly depend on nuclear weapons and the doctrine of nuclear deterrence."[46]

In a major policy speech on March 21, 2008, presenting France's aptly-named new nuclear submarine, "*Le Terrible*," in Cherbourg, French President Nikolai Sarkozy proclaimed

> "Our nuclear-powered ballistic missile submarines are an essential part of our nuclear deterrent capability.... I have come to tell you that maintaining, at the highest level, the capabilities required for deterrence is an objective that is fundamental to our security."

While claiming that France's nuclear deterrent is "strictly defensive," Sarkozy went on to state

> "Our nuclear deterrence protects us from any aggression against our vital interests emanating from a state – wherever it may come from and whatever form it may take…. All those who would threaten our vital interests would expose themselves to severe retaliation by France resulting in damages unacceptable to them, out of proportion with their objectives. Their centers of political, economic and military power would be targeted on a priority basis."

Then, he rather ominously indicated how a "strictly defensive" use of nuclear deterrence might involve a first strike

> "It cannot be ruled out that an adversary might miscalculate the delimitation of our vital interests or our determination to safeguard them. In the framework of nuclear deterrence,

> it would be possible, in that event, to send a nuclear warning that would underscore our resolve. That would be aimed at reestablishing deterrence."

Sarkozy also hinted at a closer nuclear deterrence partnership with Britain.

> "Together with the United Kingdom, we have taken a major decision: It is our assessment that there can be no situation in which the vital interests of either of our two nations could be threatened without the vital interests of the other also being threatened."[47]

In November 2010, France and the UK signed two treaties on defense cooperation, for the first time agreeing to share nuclear research facilities. With technology to be developed at the UK's Atomic Weapons Establishment at Aldermasten, the UK and France will build a joint nuclear testing facility at Valduc.[48]

According to British Prime Minister David Cameron: "While we will always retain an independent nuclear deterrent, it is right we look for efficiencies in the infrastructure required to develop and sustain our separate deterrents"[49]

Final ratification of new START by the Russian Parliament (Duma) on January 26, 2011 was subject to its own reciprocal amendments, including grounds for Russia's withdrawal from the treaty and the Russian President's obligation to undertake a program to modernize Russia's strategic nuclear forces. Grounds for withdrawal include the unilateral deployment by the US of missile defense systems and the adoption of strategic non-nuclear weapon systems (conventional prompt global strike systems) by the US without Russia's approval.[50]

On February 5, 2010, Russia published its new Military Doctrine, which retains the first-use option, reserving the right to use nuclear weapons not only in response to a nuclear attack or an attack with biological or chemical weapons, but also in response to a conventional attack. The new Doctrine places the expansion of NATO's mission and movement of the military infrastructure of NATO member countries closer to the borders of the Russian Federation at the top of its list of external military dangers to Russia. It also identifies the deployment of strategic missile defense systems, the militarization of outer space, and the deployment of precision nonnuclear strategic weapon systems – US priorities associated with START ratification – as threats that undermine global security.

The main mission assigned to nuclear weapons by the new Doctrine is "deterrence", defined as the "prevention of nuclear military conflict or any other military conflict." This mission assumes "the maintenance of strategic stability and the nuclear deterrence capability at the level of sufficiency." The notion of "sufficiency" is defined as ability to inflict "predetermined" or "tailored" damage to an aggressor.[51]

What might "deterrence" mean to the other nuclear armed states – China, India, Pakistan, Israel and North Korea? A chilling defense of deterrence is provided in an *anti-disarmament* article by Josef Joffe and James W. Davis, in Foreign Affairs.

> "Because nuclear weapons serve many purposes, they are often simply too useful to forego. They are good for blackmail (North Korea), they intimidate the enemy next door (India and Pakistan), they deliver the ultimate life insurance (Israel), they devalue conventional superiority (every case), and they support hegemonic ambitions, whether

> regional or global. Regardless of whether the haves disarm, therefore, such weapons will still be in demand. Unless the United States manages to extend deterrence as credibly to Egypt and Saudi Arabia as it did to Japan and West Germany, those countries may well counter an Iranian bomb with ones of their own. And why not? After all, which nuclear power was ever invaded by a mighty outsider?"[52]

However, as the Canberra Commission concluded in its 1996 report

> "The proposition that nuclear weapons can be retained in perpetuity and never used - accidentally or by decision - defies credibility. The only complete defence is the elimination of nuclear weapons and assurance that they will never be produced again."[53]

In order to achieve this assurance, the ideology of nuclear deterrence must be directly challenged. Nuclear weapons reliant states must no longer be allowed to justify the perpetual modernization and maintenance of terrifying nuclear arsenals and the massive investments in infrastructure to sustain them in terms of "deterrence". Nuclear deterrence must be understood for what it is.

In January 2010, the "four horsemen," George Shultz, William Perry, Henry Kissinger and Sam Nunn, peeled away some of the disarmament rhetoric from their now-famous vision of "A World Free of Nuclear Weapons." In an op-ed entitled, "How to Protect Our Nuclear Deterrent," again appearing in the *Wall Street Journal*, they declared

> "Maintaining high confidence in our nuclear arsenal is critical as the numbers of these weapons goes down…. The United States must continue to attract, develop and retain the outstanding scientists, engineers, designers and technicians we will need to maintain our nuclear arsenal, whatever its size, for as long as the nation's security requires it."

And, they warned: "[T]he deadliest weapons ever invented could fall into dangerous hands," calling for a substantial increase in funding for the US nuclear weapons laboratories and a modernized nuclear weapons infrastructure to prevent this from happening.[54]

The "four horsemen's" analysis and recommendations were endorsed by Vice-President Joseph Biden ten days later, in a Wall Street Journal op-ed announcing the Administration's inflated Fiscal Year 2011 budget request.[55]

Unfortunately, this circular reasoning is very short-sighted. Investing in a modernized nuclear weapons infrastructure will be viewed as hypocritical by other nations. And it will provide the next President and future Presidents the means to design and build new nuclear weapons if they so choose, and thus spark new arms races.

In their op-ed, the four horsemen invoked the specter of nuclear weapons falling into "dangerous hands" three times. Yet in whose hands are nuclear weapons "safe"? (The only hands that have so far used them?) As the Hans Blix-led WMD Commission stated in its 2006 report, *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms:* "The Commission rejects the suggestion that nuclear weapons in the hands of some pose no threat, while in the hands of others they place the world in mortal jeopardy." As they wisely observed: "Governments possessing nuclear weapons can act responsibly or recklessly. Governments may also change over time."[56] In short, nuclear weapons are dangerous in *anyone's* hands.

In a time of twin global economic and environmental crises and growing competition over natural resources, the dangers of conflicts among nuclear-armed states are increasing. There is good reason to believe that the potential escalation of conflict among nuclear-armed states leading to a nuclear war is much more likely than the potential use, by a state, of nuclear weapons which do not yet exist, or by sub-national terrorist groups that do not yet have them. Yet this very real threat is largely dismissed. We can't afford to wait decades more for the elimination of nuclear weapons. Seriously moving toward abolition of nuclear weapons will require taking on other challenges as well, but this is not a reason to delay any longer *delegitimizing deterrence* and eliminating the role of nuclear weapons in national security policies.

An "Inconvenient Truth"

As already described, a number of "inconvenient truths" lie between the recent wave of promising rhetoric and the realities that will have to be addressed to bring its promise to fruition. A major one is the NPT Article IV promise of "peaceful" nuclear technology to states that agree to forgo nuclear weapons.

Article IV of the NPT refers to an "inalienable right" of non-nuclear weapon states to develop nuclear energy for peaceful purposes. But by allowing for states to build up the capacity and infrastructure – through ostensibly civilian energy and research programs – to produce nuclear weapons within a brief time period, this presents a major problem for the *confident* achievement and sustainability of a world free of nuclear weapons.

The pursuit of nuclear energy – as we are seeing with Iran, has become a leading cause of controversy and conflict around the world due to the inherently dual use nature of the nuclear fuel cycle. The US – India nuclear deal, approved by the Nuclear Suppliers Group and the US Congress in late 2008, will provide India, a non-NPT party, with nuclear technology and materials that might enable it to further develop its weapons program.[57] It was reported at the time that Pakistan and Israel, both non-NPT nuclear-armed states, were pursuing similar deals.[58] Another US nuclear trade agreement was made with the United Arab Emirates in 2009.[59] Now, there is growing controversy in the US Senate over a new Obama Administration policy, unveiled in January, that would relax existing standards by taking a "case-by-case" approach in deciding whether to demand the strictest nonproliferation measures in trade deals that give nonnuclear weapon states access to US atomic technology and materials. Commitments by nuclear cooperation partners not to enrich uranium or reprocess plutonium on their soil would not necessarily be sought in every negotiation. Prospective new US nuclear sharing deals with Vietnam and Jordan, as well as with Saudi Arabia are currently on the table. Members of the Saudi royal family have reportedly suggested that Saudi Arabia might seek to build or acquire nuclear weapons to counter Israel and Iran.[60]

The potential for further inflaming already volatile regions of the world by adding nuclear capacity is obvious. Additional negatives, such as the extreme public health and environmental risks of nuclear energy, as exemplified by the Chernobyl and Fukushima disasters, the intractable problem of disposition of long-lived high-level radioactive waste, and the huge capital costs of nuclear energy are well known. However, there is another less frequently examined negative dimension.

Nuclear power, the most expensive form of centralized electricity generation, is an inefficient way to deliver energy to the world's vast underserved populations, particularly those in rural areas. Investing the immense capital needed to construct nuclear plants in decentralized, renewable energy technologies world-wide also would promote further innovation and bring down prices, encouraging their spread. This approach would improve energy access, provide employment, and broaden the economic potential of areas left out of the current system of corporate globalization, reducing both greenhouse gas emissions and oil consumption, and reducing as a consequence competition for shrinking oil and gas supplies that is, among other things, a significant factor driving global conflict.[61]

Atoms for Peace; Then and Now

In connection with the March 2012 Nuclear Security Summit in Seoul, South Korea, President Obama addressed an audience at Hankuk University. Reprising the inspiring rhetoric of his 2009 Prague speech, and with an eye towards the upcoming NPT PrepCom meeting, he stated

> "…American leadership has been essential to progress in… taking concrete steps towards a world without nuclear weapons. As a party to the Nuclear Nonproliferation Treaty, this is our obligation, and it's one that I take very seriously. But I believe the United States has a unique responsibility to act – indeed, we have a moral obligation. I say this as President of the only nation ever to use nuclear weapons. I say it as a Commander-in-Chief who knows that our nuclear codes are never far from my side. Most of all, I say it as a father, who wants my two young daughters to grow up in a world where everything they and love can't be instantly wiped out."[62]

However, just as in the Prague speech, Obama went on to reinforce the US commitment to the doctrine of deterrence and all that it implies.

> "… we have more nuclear weapons than we need. Even after New START, the United States will have more than 1,500 deployed nuclear weapons, and some 5,000 warheads.
>
> I firmly believe that we can ensure the security of the United States and our allies, maintain a strong deterrent against any threat, and still pursue further reductions in our nuclear arsenal."[63]

After sternly warning Iran and North Korea that nuclear weapons aspirations on their parts would not be tolerated, without a trace of irony, Obama declared

> "For the global response to Iran and North Korea's intransigence, a new international norm is emerging: Treaties are binding; rules will be enforced; and violations will have consequences. We refuse to consign ourselves to a future where more and more regimes possess the world's most deadly weapons."[64]

What came next was amazing: "[A] renewed commitment to harnessing the power of the atom not for war, but for peaceful purposes."

> "After the tragedy at Fukushima, it was right and appropriate that nations moved to improve the safety and security of nuclear facilities….

> As we do, let's never forget the astonishing benefits that nuclear technology has brought to our lives. Nuclear technology helps make our food safe. It prevents disease in the developing world. It's the high-tech medicine that treats cancer and finds new cures. And, of course, it's the energy – the clean energy that helps cut the carbon pollution that contributes to climate change….
>
> ….That's why, in the United States, we've restarted our nuclear industry…. We supported the first new nuclear power plant in three decades."[65]

In a stunning expression of "magical thinking," President Obama concluded by describing perfectly the inextricable link between nuclear power and nuclear weapons and wishing it away.

> "We all know the problem: The very process that gives us nuclear energy can also put nations and terrorists within the reach of nuclear weapons. We simply can't go on accumulating huge amounts of the very material, like separated plutonium, that we're trying to keep away from terrorists.
>
> And that's why we're creating new fuel banks, to help countries realize the energy they seek without increasing the nuclear dangers that we fear…. *And today I urge nations to join us in seeking a future where we harness the awesome power of the atom to build and not to destroy*."[66]

The eerie similarities to President Eisenhower's famous "Atoms for Peace" speech to the United Nations General Assembly in December 1953 – nearly 60 years ago – are striking. In that speech, Eisenhower acknowledged the terrible destructive power represented by the growing US nuclear arsenal

> "Today, the United States stockpile of atomic weapons, which, of course, increases daily, exceeds by many times the total [explosive] equivalent of the total of all bombs and all shells that came from every plane and every gun in every theatre of war in all the years of World War II. [Author's note: There were 1,161 US nuclear weapons in 1953; today there are approximately 8,500 in total.][67]

Eisenhower warned of the dangers of a looming nuclear arms race with the Soviet Union, and that "the knowledge now possessed by several nations will eventually be shared by others, possibly all others." Seeking a way out of this conundrum he declared

> "[M]y country's purpose is to help us move out of the dark chamber of horrors into the light, to find a way by which the minds of men, the hopes of men, the souls of men everywhere, can move forward toward peace and happiness and well-being."[68]

Calling for the elimination of nuclear weapons, he made a bold proposal.

> "The United States would seek more than the mere reduction or elimination of atomic materials for military purposes. It is not enough to take this weapon out of the hands of the soldiers. It must be put into the hands of those who will know how to strip its military casing and adapt it to the arts of peace.

> The United States knows that if the fearful trend of atomic military build-up can be reversed, this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind. The United States knows that peaceful power from atomic energy is no dream of the future. That capability, already proved, is here, now, today. Who can doubt, if the entire body of the world's scientists and engineers had adequate amounts of fissionable material with which to test and develop their ideas, that this capability would rapidly be transformed into universal, efficient, and economic usage?"[69]

"Nuclear weapons and nuclear power are preeminent examples of the irrationality of the whole. Nuclear energy risks destroying society in order to power it; nuclear weapons risk destroying the people to save the State."[70] As global tensions rise over speculation about Iran's and North Korea's nuclear intentions, apparently we haven't learned anything. If we are to achieve a world of human and ecological security, we must phase out and move beyond nuclear power, as well as fossil fuels.

Some specifics about nuclear weapons budgets and modernization programs (*illustrative, not comprehensive*)[71]

Due largely to government secrecy, it is nearly impossible to calculate total annual spending on nuclear weapons. But according to a June 2011 Nuclear Weapons Cost Study by Global Zero, as a conservative estimate, world spending on nuclear weapons and related programs will surpass one trillion U.S. dollars in total over the next decade.[72]

The US nuclear weapons design and production complex consists of eight major facilities. The Obama Administration's Fiscal Year (FY) 2013 request for "nuclear weapons activities" – that is, programs directly related to maintenance and modernization of warheads – funded by the Department of Energy National Nuclear Security Administration (NNSA), is approximately $7.6 billion, an increase of $363 million, or 5 percent, above the 2012 enacted level. While funding for the CMRR, the plutonium facility at the Los Alamos Lab, which would have the capacity to produce up to 125 plutonium pits (the cores of modern nuclear weapons) per year, has been deferred for five years, proposed funding for the Uranium Processing Facility (UPF) at Oak Ridge has been increased to $340 million, up 112% from last year. The total project cost for the UPF is estimated between $4.2 and $7.5 billion. A third new facility, to manufacture non-nuclear components for nuclear weapons, under construction in Kansas City, Missouri, is being funded though a controversial private contracting arrangement. The 2013 budget request also includes funding for "Life-Extension" programs (rebuilds) for three warhead types, including the B61 bomb, still deployed at NATO bases in Europe.[73]

The Department of Energy NNSA budget covers only nuclear warheads. In addition, in response to the President's commitment to modernize all three legs of the "strategic triad" of nuclear weapons delivery systems, the Department of Defense FY 2013 budget request includes $565 million in funding for the SSBN(X) replacement Ohio-class "Trident"

submarine, though delayed by two years, projected to be in operation through 2080; as much as $11.6 million in funding for research and development of a new ICBM (intercontinental ballistic missile); approximately $2 million in funding for a new Air Launched Cruise Missile; and approximately $292 million (total $6.3 billion from FY 13 – FY 17) for a new long-range bomber. Plans are for 80 – 100 of these aircraft to be built.[74] On January 6, 2011 Defense Secretary Robert Gates announced that the Air Force would begin development of this new

nuclear-capable strategic bomber, which can be remotely piloted.[75] At present, there are no nuclear capable "drones" in the U.S. arsenal.

Despite President Obama's recent statement in Seoul that in his Nuclear Posture Review, "I made it clear that the United States will not develop new nuclear warheads. And we will not pursue new military missions for nuclear weapons,"[76] the projected development of the B61-12 bomb with enhanced targeting capabilities, to be carried by a new aircraft, the F-35, with stealth capabilities, illustrates qualitative modernization arising from replacement of existing delivery systems and bombs/warheads.[77] Similarly, "life-extension" of the W76 submarine-based warhead added to its capability to hit hard targets.[78]

Russia will spend an estimated $70 billion in "core" costs on new strategic arms through 2020. This includes new strategic submarines, silo and mobile land-based rockets, warhead production and maintenance, and supporting command-control systems. This does not include maintaining Russia's thousands of tactical nuclear weapons and delivery vehicles.[79]

China's nuclear weapons budget is very difficult to discern, but as part of an ambitious military modernization program, in the next decade China is planning to produce five new strategic submarines and a fleet of long-range land-based rockets, while increasing its arsenal from 190 weapons today to upwards of 250-300.[80]

In 2010 France deployed its fourth and final Triomphant-class ballistic missile submarine. These new vessels are being equipped with M51 ballistic nuclear missiles, which have a significantly greater range and yield capacity than their existing M45 missiles. France is also modernizing its air-based nuclear component.[81] France, whose nuclear weapons budget is not public, is working closely with the United Kingdom nuclear stockpile maintenance using laboratory-based experiments and computer simulations. The UK will decide by 2016 whether to replace its four Trident nuclear submarines at a cost of up to $40 billion by the time the first submarines enter service in 2028, not including missiles or operating costs.[82]

India and Pakistan do not officially release their nuclear weapons budgets, but the two countries are engaged in a frightening arms race to increase the size of their nuclear arsenals and to develop new types of delivery systems.[83]

North Korea has conducted two nuclear tests, produced enough plutonium for up to a dozen atom bombs, and is developing infrastructure to enrich uranium for nuclear bombs. The secretive nuclear weapon state does not yet have long range missile delivery systems, but has undertaken a program to develop this capability.[84]

Israel's nuclear weapons program is completely secret, but it reportedly has focused on acquiring a fleet of 5-6 submarines capable of firing nuclear-armed cruise missiles, at an estimated cost of $1 billion each. Israel also possesses aircraft and land-based ballistic missiles capable of delivering its nuclear arsenal, whose size was estimated by the US Pentagon to be about 80 weapons, with modest projected increases through 2020.[85]

Blatant Nuclear Hypocrisy; Double Standards and Dual Use (two vignettes)

While the US government very publically lectures and threatens Iran and North Korea about the evils of nuclear weapons and missiles, little known to most people, it routinely test-fires its own long-range nuclear missiles, as well as rockets, from Vandenberg Air Force Base in California. Each test launch sends a clearly implied nuclear threat to the world.

1) On June 22, 2011, the US Air Force Global Strike Command launched a Minuteman III ICBM from Vandenberg. The missile, carrying a simulated nuclear warhead, traveled 4,200 miles before hitting its pre-determined target in the Marshall Islands. According to missile director Col. David Bliesner

> "Minuteman III test launches demonstrate our nation's ICBM capability in a very visible way, deterring potential adversaries while reassuring allies. These launches provide valuable information on the missile's effectiveness in its intended operational environment."[86]

Eight months earlier Colonel Bliesner had assumed command of Air Force Global Strike Command's 576th Flight Test Squadron (FLTS), the only US intercontinental ballistic missile test launch squadron, Addressing the squadron, he had explained

> "Strategic deterrence depends on potential adversaries' perception of U.S. capability to employ ICBMs if national interests are threatened. A significant portion of the responsibility for demonstrating our nation's capability rests with this squadron."[87]

An Air Force Public Affairs news story elaborated

> "In support of the 'deter and assure' mission, the 576th FLTS determines the effectiveness and accuracy of the ICBM force by planning, preparing and conducting ICBM ground and flight tests. The test launches provide performance data and demonstrate the capability of the ICBM force. The information is shared with the Department of Energy, Department of Defense, U.S. Strategic Command, Headquarters Air Force and Air Force Global Strike Command."[88]

The U.S. maintains 448 Minuteman III missiles on high-alert in missile silos in Wyoming, Nebraska, and North Dakota.[89]

The most recent Minuteman III test-launch was conducted on February 25, 2012. Each missile test costs more than $20 million.[90] According to the U.S. Census Bureau, in 2010 nearly one in six Americans was living in poverty, the highest level since 1993.[91]

On Feb. 9, 2012, during a State Department press conference, spokesperson Victoria Nuland declared that "with regard to U.S. sanctions [against Iran]… we don't want to hurt [the Iranian people] any more than we need to. But *they are living in a state with a government that would rather spend money on a nuclear weapons program than on the welfare of its people*, and that's why we are compelled to increase the pressure and increase the isolation until they see the light."[92]

Note: While the State Department spokesperson blatantly accused Iran of spending money on a "nuclear weapons program," Director of National Intelligence, James R. Clapper's February 16, 2011 Statement for the Senate Select Committee on Intelligence, was less definitive

> "We continue to assess Iran is keeping open the option to develop nuclear weapons in part by developing various nuclear capabilities that better position it to produce such weapons, should it choose to do so. We do not know, however, if Iran will eventually decide to build nuclear weapons."[93]

2) On March 16, 2012 North Korea declared its intention to place an orbiting system into space via a long-range rocket launch, setting off an international media uproar. The rocket launch, in April, was scheduled to commemorate the 100th anniversary of the birth of North Korea's founder, Kim Il Sung. The US State Department claimed that a long-range rocket launch would violate UN Security Council resolutions which prohibit North Korean ballistic missile firings. North Korea's official news agency claimed that the rocket would carry an "earth observation satellite" into space.

According to US State Department spokesperson Victoria Nuland: "North Korea's announcement that it plans to conduct a missile launch in direct violation of its international obligations is highly provocative." The US sentiments were echoed by Russia and Japan, who also believe that the planned rocket launch was part of an effort to develop a long-range ballistic missile.[94] The US strongly signaled that if would call off a bilateral nuclear shutdown for food deal with North Korea if it went through with the long-range rocket test.

According to International Crisis Group expert Daniel Pinkerton, rockets for lifting satellites into space are "inherently dual-use technology: if you can launch a satellite you can deliver a warhead at long range."[95] The North Korean rocket blew up on the launch pad less than two minutes after take off, and the US halted the food aid plan.[96]

Meanwhile, with little fanfare, on March 23, 2012, the US Vandenberg Air Force Base issued a press release announcing that "Team Vandenberg" was scheduled to launch a Delta IV Medium rocket carrying a "national security payload" on March 29.[97] The launch, delayed by bad weather, was successfully completed on April 3. It the first of four top secret satellite missions planned by the US National Reconnaissance Office for 2012. According to Jim Sponnick, Vice President of Mission Operation for United Launch Alliance (ULA), which oversaw the launch, "ULA is proud to have supported this mission and delivered critical capabilities to the men and women defending our freedom throughout the world." [98]

Another small irony: while North Korea is widely regarded as a "secretive" state, its state television uncharacteristically acknowledged that the three-stage rocket had failed to enter orbit. In contrast, because of the top secret nature of the April 3 US rocket mission, ULA officials cut off a live webcast of the launch 3.5 minutes after liftoff.

North Korea has accused the US of being confrontational and applying "double standards" on satellite capabilities. According to a spokesman for the North Korean Foreign Ministry, "We will never give up the launch of a satellite for peaceful purposes." He suggested that the Obama administration "drop the confrontation conception" and "make a bold decision to acknowledge that we also have a right to launch satellites."[99]

The "Game of Disarmament"

These examples illustrate what Alva Myrdal, a Swedish Minister of Disarmament and winner of the 1982 Nobel Peace Prize, called "The Game of Disarmament" in her book of the same name. In the preface, dated New Year 1976, she wrote of her "gradually increasing feeling of near despair after twelve years of participating in multilateral disarmament negotiations" where "the superpowers have indulged in subterfuges and half-truths, with their closest and usually most dependent allies following suit or keeping silent. On balance," she concluded, "there has been no real advance towards limitation of armaments. The competitive race between the two superpowers has steadily escalated, and the militarization of the economy and national life of almost all countries has intensified."[100]

In *The Game of Disarmament*, Alva Myrdal asks: "How can we let the nationalistic security needs as defined and exaggerated by military and other vested interests misguide our societies? How can we allow secretiveness and falsifications of reality to motivate the continued arms race, with all the dangers and burdens thereof? The common man should demand honest accountability of the policy-makers. He has the right to question their ethics."[101]

We need to move from the irrational fear-based ideology of deterrence to the rational fear of an eventual nuclear weapon use, whether by accident or design, by some nuclear weapon possessing state that places the threatened use of nuclear weapons at the core of its national security policy. We also need to stimulate a rational hope that security can be redefined in humanitarian and ecologically sustainable terms that will lead to the elimination of nuclear weapons and dramatic demilitarization, freeing up tremendous resources desperately needed to address universal human needs.

Commentary

To delegitimize nuclear deterrence as a step towards abolishing nuclear weapons, *our* task is to change the discourse – from the bottom up. When it comes right down to it, this, I believe is the only thing we *can* do. But it could not be more important.

Changing the discourse will require the courage not only to "speak truth to power," but also to speak truth to each other.

Last year I asked to sign onto a letter, initiated by nuclear weapons abolitionists, calling on members of the Russian State Duma and the US Congress to increase decision-making time for strategic nuclear weapons (popularly called "de-alerting.") I read the letter carefully and was horrified when I encountered the following argument.

> "A recent article in the prestigious journal Foreign Affairs.... shows convincingly that de-alerted nuclear forces would still be able to inflict crippling and unacceptable retaliatory strikes against an opponent that struck first. So-called 'deterrence' would therefore not be compromised by increasing decision-making time and strategic stability by de-alerting."

I was compelled to write to the authors and initial signers of the letter, including good friends and colleagues.

> Dear friends – I'm sorry, but I cannot sign onto any letter supporting de-alerting which relies on the argument above. While seemingly 'practical' on the surface, this is the argument of militaristic national security states and their elites; it should not be *our* argument. Deterrence is an ideology which has been used to justify perpetual possession and threatened use of nuclear weapons. I believe that deterrence must be thoroughly discredited and denied any form of legitimacy if we are to make any real progress toward the eventual elimination of nuclear weapons. If you believe the facts stated in the previous paragraph of your letter: 'The use, by miscalculation or malfunction, of even a small fraction of the US or Russian strategic arsenals (including 2000 launch-ready, high-alert warheads) would terminate not just civilisation but would threaten the elimination of most humans and many other complex forms of life,' why would any humanitarian, environmentalist or nuclear abolitionist support the idea of nuclear *retaliation*? I believe that our job is to debunk this bizarre and abhorrent concept, and develop and promote an alternative view of universal and sustainable security based on meeting human needs and protecting the environment. This is a view that has the potential to attract the broad international public support needed to create the political will to counter the reliance by states on overwhelming military (including nuclear weapons) threats.

Several signers wrote back expressing their appreciation to me for pointing out the contradictions in the letter and asking for it to be changed. A few others argued that these are the kinds of arguments we need to make to convince the Generals. In the end, the offensive paragraph was removed and replaced with the language of abolition, which could not be interpreted as condoning deterrence in any way.

I believe that we will never convince the Generals by trying to make arguments on their terms. We need to change the paradigm. We need to change the discourse by creating and sticking to our own narrative, no matter who we're talking to.

-- Jacqueline Cabasso, Executive Director
Western States Legal Foundation

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