# The Future Role of Nuclear Weapons in International Relations

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**Presentation at the Public Symposium on the 60th Anniversary of Trinity: The First Manmade Nuclear Explosion**

**National Academy of Sciences • Washington DC • 14 July 2005**

# Outline of these remarks

- Three conceivable nuclear-weapon futures in terms of relevance, inventories/proliferation, dangers…
  - status quo, more or less ("muddling through")
  - sharply increasing ("nuclear nightmares")
  - sharply decreasing ("devaluing the nuclear currency")
- The case for devaluation
  - even the status quo is dangerous out of proportion to its benefits
  - status quo is unstable: muddling through will transition to nightmares unless we <u>choose</u> devaluation
- The elements of devaluation
  - public education & political will
  - doctrinal transition: extended deterrence / war-fighting → core deterrence, absolute no-first-use
  - accompanying "mechanics": de-alerting, deeper cuts, CTBT, production cutoff, monitoring regime, nuclear-energy management
  - the serious pursuit of prohibition

# Three Futures

Three Futures

## MUDDLING THROUGH

- 8-12 nuclear-weapon states maintain arsenals consistent with modest to expansive views of their “security needs”.
  - USA, Russia, China, UK, France, Israel, India, Pakistan
  - N Korea? Iran? creeping proliferation to a few more??
- US view of the role of its nuclear weapons continues to include threat of retaliation against (even pre-emption of) chemical, biological, & conventional attack; Russia persists in a similar view.
- Despite “nuclear disarmament” language in PTBT, NPT, etc, USA, Russia, other NWS continue to regard their nuclear-weapon “needs” to be of indefinite duration.
- Global stockpile remains at ≥10,000 weapons.
- The 180+ non-NWS grumble but nearly all remain non-nuclear.

Three Futures

## NUCLEAR NIGHTMARES

- N Korea tests & S Korea follows; this provokes Japan's conversion of its separated "civil" Pu into a formidable nuclear arsenal; this provokes a large Chinese reaction, followed by Indian, Pakistani, & Russian reactions…
- Iran withdraws from NPT & tests; Israel reveals size of its arsenal; Egypt, Saudi Arabia test; southern-tier former-Soviet states reconsider their nuclear options…
- Argentina & Brazil test; other Latin American states reconsider their options…
- Global stockpile grows, as do weapons on alert.
- The already high risks of "leakage" of nuclear weapons or materials into terrorist hands from Russian, Pakistani stockpiles are multiplied by new programs, arsenals; terrorists acquire & explode nuclear weapons.

Three Futures

## DEVALUING THE NUCLEAR-WEAPON CURRENCY

- USA declares its continuing possession of nuclear weapons is solely for “core” deterrence against nuclear threats by others; correspondingly declares absolute no-first-use, accelerates Moscow Treaty timetable & expands its scope, ratifies CTBT, and announces its intention to work toward global prohibition on NW.
- Russia is persuaded to take similar steps.
- Germany, Japan, Brazil, South Africa are admitted to permanent membership in the UN Security Council on condition that they remain non-nuclear-weapon states.
- These “devaluation” steps, together with economic & diplomatic incentives, persuade N Korea & Iran to roll back their programs and India & Pakistan to cap theirs.
- NPT Review Conferences begin to address conditions & timetable for a global prohibition.

# The Case for Devaluation

The Case for Devaluation

## DANGERS OF THE STATUS QUO

- Size, alert status, dispersion of US & Russian arsenals create dangers of accidental, erroneous, unauthorized, or inappropriately massive nuclear-weapon use far out of proportion to current deterrent needs / benefits.
- This is probably replicated on a smaller scale by India and Pakistan.
- Size & dispersion of current global stockpiles of weapons, components, materials represent a high risk of terrorist acquisition of nuclear weapons.
- US and Russian doctrines of “first use of nuclear weapons if we like” poison international relations, undermine our moral authority (and the will of others to cooperate) on nonproliferation, and provoke potential adversaries to seek ways to deter <u>us.</u>

The Case for Devaluation

## THE STATUS QUO IS UNSTABLE

- Proliferation is being promoted by US policies:
  - preventive and/or regime-change wars at our discretion;
  - refusal to embrace no-first-use of nuclear weapons;
  - exploration of a wider range of applications for nuclear weapons we possess or new types we propose to develop; and
  - refusal to embrace a prohibition of nuclear weapons even as a long-term goal.

  Professed US needs for nuclear-weapon roles beyond core deterrence are particularly problematic coming from the country with the world's strongest conventional forces.
- Russian first-use policy and the manifest intentions of <u>all</u> the nuclear-weapon states to keep their weapons indefinitely are likewise problematic.
- A two-tier system of haves & have-nots is unstable given widespread technical capabilities & these provocations.

# The Elements of Devaluation

The Elements of Devaluation

## PUBLIC EDUCATION AND POLITICAL WILL

If the US public knew what US nuclear-weapon policies are – and the poor ratio of benefits to risks that these policies entail – they would likely withdraw their consent & thus generate the political will for change.

7 key points currently not known by most of the public are:

1. There are still ~30,000 nuclear weapons in the world.
2. The Moscow Treaty doesn't cover most of them.
3. The US side is the one blocking deeper cuts.
4. USA & Russia have ~2000 warheads each on short-reaction-time alert.
5. The USA still reserves the right of "first use" of nuclear weapons.
6. Terrorists could make nuclear weapons if they had the materials.
7. No workable defense against nuclear attack is in sight (not against ballistic missiles, cruise missiles, or aircraft, never mind terrorists).

The Elements of Devaluation

**DOCTRINAL TRANSITION**

- As CISAC concluded in 1997, the only remaining, defensible function of U.S. nuclear weapons in the post-Cold-War era is "core deterrence" – meaning deterrence of other countries that possess nuclear weapons from using them to attack or coerce the United States or its allies.
- If this is so, there is no reason not to declare -- and to intend to observe -- a policy of "no first use" of nuclear weapons under any circumstances.
- There is likewise no need for nuclear forces with the size, diversity, & high alert status of those built up by the United States & the Soviet Union during the Cold War, nor any need to continue to develop and test nuclear weapons of new types for new purposes.

The Elements of Devaluation

**“MECHANICS” OF DEVALUATION**

(As recommended by CISAC in 1997)

- Changes in operational practices to reduce risks from accidental, erroneous, or unauthorized use (de-alerting and more);
- Staged deeper cuts: 1st to ~2000 deployed strategic weapons on each side (Moscow Treaty levels), then to ~1,000 total warheads on each side, then to 100s on each side (with China & others joining);
- Ratification of the CTBT (technical issues – mainly stockpile stewardship, verification, risks from cheating below threshold of detection – addressed in a separate 2002 NAS report)

The Elements of Devaluation

## “MECHANICS” OF DEVALUATION (continued)

- Negotiate a global cutoff of production of nuclear-explosive materials for weapons;
- Develop a more comprehensive, global regime of monitoring, accounting, & protection for nuclear weapons, components, and materials

  as initially recommended in CISAC’s 1994-95 reports of plutonium management, reiterated in the 1997 report on the future of US nuclear weapons policy, and extensively elaborated in the April 2005 report on “Monitoring Nuclear Weapons and Nuclear-Explosive Materials”;
- Revisit the management of nuclear materials in the civil nuclear-energy sector, including
  - strengthening IAEA prerogatives, budgets
  - discouraging or prohibiting reprocessing
  - restricting U enrichment or placing it under international control
  - protecting separated civil Pu to the “nuclear weapon standard”

The Elements of Devaluation

## THE SERIOUS PURSUIT OF PROHIBITION

- Ultimately, prohibition is the only alternative to proliferation
  - If possession does not tend toward zero, in the long run it will tend toward universality and the chances of use toward unity.
  - Need for prohibition was recognized early by many (Manhattan Project scientists, Pugwash), endorsed in many treaties & statements by heads of state (cynically in many cases it seems), lately re-asserted by an extraordinary array of senior figures & groups (Canberra Commission, Butler/Goodpaster, CISAC…)
- Prohibition does <u>not</u> require "un-inventing" nuclear weapons or assuming perfection in verification
  - We've productively prohibited murder, slavery, and chemical & biological weapons without imagining that these were being un-invented.
  - Verification (including "societal verification") can be better than most suppose; dangers from cheating are likely less than dangers to be expected if nuclear weapons are <u>not</u> prohibited.

# The Elements of Devaluation

## **THE SERIOUS PURSUIT OF PROHIBITION** (continued)

- Prohibition need <u>not</u> “make the world safe for conventional war”
  - Many trends in technology & world affairs are diminishing the attractiveness, feasibility of large-scale war.
  - Precisely the fact that nuclear weapons could be re-constituted, out of prohibition, by countries in conflict will continue to provide a degree of “existential nuclear deterrence” of such conflict.
- Prohibition <u>would</u>…
  - resolve the proliferation-provoking inequity of the weapon-state/non-weapon-state distinction
  - resolve legal & moral status of nuclear weapons, raising barriers to acquisition
  - remove all risk of use by states that obey the prohibition

In my view, to advance the devaluation of the nuclear weapon currency

## THE UNITED STATES SHOULD NOW…

- Pursue augmentation of the "Moscow Treaty") to:
  - include nonstrategic & nondeployed warheads;
  - tighten targets & timetables, to reach 1,000 total for USA & RF by 2010, 500 by 2015 with inclusion of other nuclear-weapon states at lower levels;
  - add verification provisions;
  - require destruction of excess weapons.
- Announce a goal of achieving a global prohibition of nuclear weapons by 2025.
- Drastically upgrade US contributions to international cooperative efforts to ameliorate the roots of conflict and terrorism in poverty, environmental impoverishment, and oppression.

# FOR ELABORATION OF THESE VIEWS SEE ALSO…


**Committee on International Security & Arms Control, *The Future of U.S. Nuclear Weapons Policy*. National Academy of Sciences, 1997.**
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**J Holdren, "Getting to Zero", in *The Force of Reason: Eliminating Nuclear Weapons and Ending War. Essays in Honor of Joseph Rotblat*. M Bruce & T Milne, eds. MacMillan, 1999.**
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**J Holdren (Chair) and 10 others, *Report of the Committee on Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty*, National Academy of Sciences, June 2002.**
http://books.nap.edu/html/ctbt/0309085063.pdf

**J Holdren, "Beyond the Moscow Treaty", invited testimony for the Committee on Foreign Relations, US Senate, 12 September 2002.**
http://bcsia.ksg.harvard.edu/publication.cfm?program=STPP&ctype=testimony&item_id=27

**Committee on International Security and Arms Control, *Monitoring Nuclear Weapons & Nuclear-Explosive Materials*, National Academy of Sciences, April 2005**
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