China's Approach to Nuclear Weapons and Disarmament

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Nuclear Futures: What Would Disarmament Look Like?

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Outline of presentation

- Past developments: decisions, doctrines, deployments
- Disarmament positions
- Current and future deployments
- Why is China modernizing?
- US-China strategic rivalry?
- Conclusions, questions, implications
  - Doctrine driving technology?
  - What would Chinese disarmament look like?

Decisions and development -- past

- Decision taken in January 1955 to pursue nuclear weapons, attributed to U.S. nuclear threats during the Korean War and during the Taiwan Straits crises in the early 1950s
  - Significant Soviet assistance including designs and training between 1956 and 1959
  - Atomic bomb detonated October 16, 1964; thermonuclear weapon detonated June 17, 1967 (32 month interval compared to 86 months for the US And 75 months for USSR)
  - October 27, 1966 DF-2 medium-range ballistic missile armed with 12 kiloton warhead fired from test site in Gansu province to hit site at Lop Nur, demonstrating delivery capability -- only known instance of country testing nuclear armed missile over populated area

Development and deployments -- past

- Slow development times in generating land-based systems: solid fuel, silo-based
  - DF-2/2A MRBM testing begins in 1962, deployments in mid-1960s; retirement begins in 1979 and complete by early 1990s
  - DF-3A IRBM testing begins mid-1960s, deployed in 1971; still in service
  - DF-4 IRBM first two-stage rocket, begins testing in late-1960s but not deployed until early 1980s; still in service
  - DF-5/5A ICBM begins development in 1965 but not deployed until 1981
  - Solid fuel missile R&D begins as early as 1956, but not until 1984-85 is DF-21 fully tested and approved for deployments beginning in the early 1990s
- Sea-based component has always been problematic
- Aircraft-delivered systems also problematic and underdeveloped, based on H-6 (based on Soviet Tu-16) bombers first built in 1965

Doctrinal choices -- past

- Technological constrains doctrine
  - NFU
  - Weapons probably demated
  - No launch on warning or launch on attack capacity
  - Slow preparation and launch times, assuming survival of first strike
  - Small numbers of deployed systems
  - High-yield, poor accuracy: countervalue targeting

- ***Quantitatively and qualitatively limited nuclear force over the history of the program***

Disarmament principles -- three important points

- 1. Unconditional no first-use
  - China has persisently pursued a universal NFU agreement
  - Sought in the context of CTBT negotiations and in bilateral contexts with the US and with Russia; concluded bilateral NFU pledge with Russia in 1994
- 2. Nuclear weapon free zones
  - Adheres to several NWFZ treaties: Pelindaba (Africa); Raratonga (South Pacific); Tlatelolco (Latin America); expresses support for but has not signed Bangkok (Southeast Asia)

Disarmament principles -- three important points

- 3. Negative and positive security assurances
  - Official statements undertake not to use or threaten to use nuclear weapons against non-nuclear weapon states parties to the NPT or nuclear weapon free zones
  - Question: does this apply to countries under a nuclear umbrella or to Taiwan? India?
  - PSAs: Agrees within the UN Security Council to take ”appropriate measures to provide … necessary assistance to any non-nuclear weapons State that comes under attack with nuclear weapons” and acknowledges this commitment in UNSC resolution 984 (1995)-- does not elaborate what kind of assistance

Official disarmament positions

- "An international legal instrument on the **complete prohibition and thorough destruction of nuclear weapons** should be concluded at an early date."
- "Nuclear disarmament should be a just and reasonable [and the] **two countries possessing the largest nuclear arsenals** bear special and primary responsibilities for nuclear disarmament."
- "Nuclear weapon states should commit themselves to **no first use of nuclear weapons**"
- "Nuclear-weapon states should **abandon the policies of nuclear deterrence** based on the first use of nuclear weapons and **reduce the role of nuclear weapons** in their national security."
- Expresses support for FMCT, but in context of other negotiations at the CD, including on nuclear disarmament, security assurances, and **preventing an arms race in outer space (PAROS)**

Disarmament treaties/agreements (partial listing)

- Joined IAEA 1984
- Joined NPT 1992
- Signed CTBT 1996 (but not ratified)
- NWFZs
- Detargeting agreement with US
- Bilateral NFU with Russia 1994

Deployments -- current and future

- Land based missiles (approx. 120 deployed), shifting to mobile, solid fuel over long development times
  - DF-3A IRBM (1971) to be replaced by road-mobile solid fuel DF-21 and DF-31
  - DF-4 IRBM (1980) to be replaced by road-mobile solid fuel DF-21 and DF-31
  - DF-5 ICBM (1981) liquid, fixed for the near-term remain principal ICBM
  - DF-21 MRBM (1991) road-mobile solid fue
  - DF-31/DF-31A ICBM (2007/2010??) road-mobile solid fuel
- Sea-based missiles (approx. 12 potential), shifting to greater capability with development of new 094 Jin-class SSBNs
  - JL-1 MRBM SLBM (late-1980s) on Type 092 Xia class subarine, based on DF-21; limited testing/operation/deployment
  - JL-2 intercontinental SLBM (2010/2015??) based on DF-31

Deployments -- current and future

- Total of approximately 175 operational nuclear weapons
- Total stockpile of approximately 240 warheads
- Little evidence of operational tactical warheads
- Sufficient stockpile to double or triple its nuclear warheads

Why is China modernizing?

- Because it can: technologically more capable
- In response to perceived threats: improved strategic conventional strike capability of the United States and possible missile defense capabilities
- In 2008 report, US DOD states “China is qualitatively and quantitatively improving its strategic missile force” which could “provide a credible, survivable nuclear deterrent and counterstrike capability.”

US-China strategic rivalry?

- Many analysts suggest United States and China are in an implicit ”arms race” with one another
  - The only dyad among major nuclear powers where nuclear exchange is actively contemplated by strategic planners on both sides
  - Taiwan issue most often cited as potential catalyst; militarization/nuclearization of space potentially new area of rivalry; longer-term strategic rivalry possible
  - Offense-defense racing
  - China committed to maintaining a credible nuclear deterrent, avoiding nuclear blackmail, and retaining ability to inflict unacceptable damage
  - No serious strategic nuclear dialogue at official level
  - According to recently released report by the Secretary of State International Security Advisory Board (ISAB) Task Force on China’s Strategic Modernization: ”***Washington should also make clear that it will not accept a mutual vulnerability relationship with China.***”

Conclusions, questions, implications

- Doctrine now driving technology?
- China is alone among the major NWS to actively and openly modernize its nuclear weapons arsenal
- Doctrinal modernization as well?
  - NFU debates in China
  - Moving to *credible minimal deterrent* vis-a-vis the United States and Russia, a posture of *limited deterrence* regarding its theater nuclear forces, and an *offensively-configured, preemptive, counterforce and warfighting* doctrine for its large conventionally armed missile forces (note Second Artillery Corps have operational responsibility for both nuclear and conventional missile forces)
  - Command and control becoming more complex -- what is relationship between political and military leadership regarding nuclear weapons?

Conclusions, questions, implications

- What will Chinese disarmament look like?
  - China will not build down its forces until United States and Russia make significant, transparent, and verifiable reductions (well below 1000 nuclear weapons)
  - Nuclear developments in other states, particularly India, will be a crucial factor determining Chinese nuclear posture and potential disarmament
  - US-China strategic relationship in its broadest sense will be crucial to any significant movement on disarmament by either the US or China
  - Probably will continue to abide by *de facto* CTBT. Chinese ability to test and modernize its warheads already significantly constrained by limited testing program in the past.
  - Likely to maintain its basic strategic posture of ***minimal credible deterrence*** and eschews getting into a classic arms race with the United States