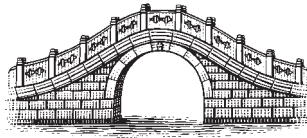


POLICY ANALYSIS

North Korea's Nuclear Weapons Program to 2015: Three Scenarios

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NOTE ≈ The views in this essay are those of the author and should not be attributed to the U.S. Government, the Department of Defense, or the Naval War College.

EXECUTIVE SUMMARY

This essay evaluates three alternative scenarios for North Korea's nuclear weapons development over the coming decade: (1) pursuit of a symbolic nuclear capability, (2) pursuit of an operational nuclear deterrent, and (3) a deficient or failed effort to achieve an operational capability.

MAIN FINDINGS

North Korea's weapons are now a fact, not a bargaining chip. Absent fundamental internal change in North Korea or extraordinary changes in the negotiating strategies of the U.S. and other powers, there is virtually no possibility that North Korea will irrevocably yield the totality of these capabilities. Given that Pyongyang still confronts major technical hurdles if it expects to proceed to an operational deterrent force, however, the most likely outcome would be a symbolic nuclear capability. North Korea may be prepared to restrict some nuclear activities in return for guarantees and commitments from the U.S. and other powers. Even if such a move would not entail a definitive end to the program, this possibility warrants careful consideration by the U.S. and others seeking a negotiated end to Pyongyang's nuclear program. It would not be prudent, however, to anticipate an early end to Pyongyang's program or to the dangers this program poses both for security in East Asia and for the future viability of the non-proliferation regime.

POLICY IMPLICATIONS

There are four immediate policy considerations that the international community would benefit from exploring:

- determining additional measures to discourage or impede North Korea's future weapons development, which in the near term should focus on convincing North Korea to forego additional nuclear tests or further tests of ballistic missiles
- reiterating to Pyongyang that any transfer of nuclear materials, technologies, or completed weapons outside its borders would constitute a grave danger to the international community as a whole
- imposing additional costs on North Korea for any further nuclear tests
- fully weighing the trade-offs in pursuing partial steps to restrict nuclear weapons development versus pursuit of maximal policy goals

On October 9, 2006, the Democratic People's Republic of Korea (DPRK or North Korea) undertook its first ever test of a nuclear device in open defiance of repeated warnings from the United States, China, and other states. This essay examines possible scenarios for North Korea's future nuclear development in light of this initial test, focusing on three research issues: (1) the North Korean leadership's assessment of the purposes of nuclear weapons development; (2) the feasibility of the DPRK, in light of its current and projected technical capabilities, achieving various posited goals; and (3) the potential policy options for constraining North Korea's future nuclear development.

The policy consequences of a sustained North Korean nuclear weapons program are hugely worrisome both to the future of the non-proliferation regime and for regional security. The DPRK is the first state ever to withdraw from the Non Proliferation Treaty (NPT), a move that has created a very troubling precedent for other states that might contemplate such actions. Should North Korea opt to transfer abroad any of its nuclear technologies, materials, and weapons, the dangers to international peace and security would be exceedingly grave. Additionally, the regional consequences are also highly worrisome. Without nuclear weapons, the latent possibilities of a highly destructive military conflict on the Korean Peninsula remain very high; with nuclear weapons, the potential consequences of renewed conflict for the Republic of Korea (ROK), Japan, and for U.S. forces are incalculably greater. Quite apart from the potential for armed conflict, North Korea's possession of nuclear weapons seems very likely to prompt major security reassessments on the part of all the states of Northeast Asia.

The prospective directions in North Korea's nuclear development over the next decade nonetheless remain uncertain. For one, international observers are uncertain of what value the DPRK leadership attaches to the possession of such capabilities; an additional factor is the possibility that the international community might be able to induce North Korea to limit its programs without definitively foregoing its capabilities. At the same time, however, Pyongyang also faces major technical and other hurdles in proceeding to a credible nuclear force. This essay thus posits three alternative outcomes: (1) a largely symbolic or political deterrent, (2) a more operational capability, and (3) a failure to fully realize a credible deterrent.

Of the three scenarios, the first outcome seems the most likely and would be the least disruptive to regional and global security. Though Pyongyang may prefer a genuine operational force, achieving this goal may simply be a bridge too far, though North Korea has no incentive to disclose a failure to reach its

goals. Pyongyang's test of a nuclear device was inherently destabilizing, but pursuit of a deployed nuclear capability (whether it succeeds or fails) would be far worse. The United States and other powers must therefore undertake all feasible steps to reduce the possibilities of either of the latter outcomes.

This essay is organized in four sections:

- ≈ pp. 108–111 describes the near-term implications of the nuclear test and then proposes assumptions for the remainder of the analysis
- ≈ pp. 111–114 assesses the DPRK's presumed objectives in undertaking the test
- ≈ pp. 114–121 analyzes the technical and resource questions that are likely to govern North Korea's nuclear and missile development
- ≈ pp. 121–123 provides overall conclusions and offers policy implications

NORTH KOREA'S NUCLEAR BREAKOUT

North Korea's October 9, 2006 test of a nuclear device marks a fundamental divide in the nearly two-decade effort to prevent the emergence of the DPRK as a nuclear armed state. The ability of a small, isolated, economically vulnerable, and acutely self-referential regime to sustain a nuclear weapons program and to conduct a nuclear test—drawing primarily on indigenous materials, technology, and scientific and engineering skills—validates at least three conclusions. First, as Richard Betts has observed, no state develops nuclear weapons by accident or inadvertence. It reflects purposive, long-term commitment and the dedication of substantial resources toward such a goal.¹ Second, building and testing a nuclear device and moving toward an operational delivery system are very difficult and time-consuming tasks, all the more so for a state as economically challenged as the DPRK. Third, under prevailing circumstances there is no meaningful possibility that Pyongyang will either yield the totality of its capabilities or forego what the leadership deems as North Korea's entitlement as a nuclear-armed state.


The DPRK's nuclear weapons are a fact, not a bargaining chip, even if the quantitative and qualitative characteristics of North Korea's capabilities remain to be determined. The leadership believes that nuclear weapons will enable North Korea to punch above its weight. In addition, the possession of such capabilities solidifies Kim Jung Il's symbiotic relationship with the

¹ Richard K. Betts, "Universal Deterrence or Conceptual Collapse? Liberal Pessimism and Utopian Realism," in *The Coming Crisis: Nuclear Proliferation, U.S. Interests, and World Order*, ed. Victor A. Utgoff (Cambridge: MIT Press, 2000), 57.

North Korean military. A coalition of outside powers is intent on denying the DPRK any opportunity to convert its test into tangible political-strategic gains. External actors are seeking to exact added costs on North Korea for Pyongyang's nuclear test, inhibiting its limited dealings with the outside world, and moving quickly to impose additional restrictions on technology transactions that could enhance North Korea's capabilities for weapons development or export. Though likely to continue, these efforts (all mandated under Security Council Resolution 1718) are very unlikely to compel Pyongyang to alter North Korea's basic commitment to nuclear weapons development. Absent a fundamental leadership transformation in the DPRK or extraordinary changes in the negotiating strategies of the United States and others, it is virtually inconceivable that North Korea will dismantle the entirety of its nuclear inventory and weapons potential. There may have been a time when this goal was feasible, but the opportunity has passed.

Pyongyang may still be prepared to "trade," "rent," or otherwise limit some of its nuclear activities in return for guarantees and commitments from external powers. One such possibility, for example, was broached in meetings in Berlin in mid-January 2007 between North Korea's lead nuclear negotiator, Vice Minister of Foreign Affairs Kim Kye Gwan, and his U.S. counterpart, Assistant Secretary of State for East Asian and Pacific Affairs Christopher Hill. Kim purportedly informed Hill that, in exchange for a U.S. commitment to resume economic and energy assistance to the DPRK and a parallel commitment to unfreeze \$24 million held in North Korean accounts at the Banco Delta Asia in Macao, Pyongyang would agree to suspend various nuclear activities, including operations at its 5 MW (e) reactor at Yongbyon. Kim also reportedly indicated that North Korea would be prepared to permit resumed monitoring at Yongbyon by the International Atomic Energy Agency (IAEA).² These would be at best preliminary (and reversible) measures to end North Korea's nuclear weapons development and in no way would constitute the definitive end of the program. Policymakers therefore need to weigh carefully the options, trade-offs, and potential liabilities both in reducing the scope, scale, and pace of Pyongyang's nuclear development and in mitigating the more worrisome possibilities associated with North Korea's possession of nuclear weapons.

A single nuclear test establishes a baseline but does not confirm a particular trajectory. In light of the longer-term pattern of North Korean

² "N. Korea 'Ready to Suspend Nuclear Activities,'" *Chosun Ilbo*, January 22, 2007  <http://english.chosun.com>.