

A North Korean Nuclear Test?

The continuing escalation of events on the Korean peninsula has increased speculation on the possibility of a future North Korean nuclear test.

Political Implications

A nuclear test will confirm both the intent and ability of the Democratic People's Republic of Korea (DPRK) which has, to date, remained uncertain.

The DPRK has reinforced this uncertainty through 'strategic ambiguity'—neither *verifiably* admitting nor denying the existence of a weapons program. Strategic ambiguity maximises DPRK negotiating power by neither inviting a hardline response as could be expected if its nuclear capability were confirmed, nor inviting disregard as could be expected if its nuclear incapability were confirmed.

Uncertainty has also increased with previous US statements declaring the existence of a DPRK nuclear arsenal and weapons program being re-examined in light of the current revelations concerning the use of questionable intelligence estimates on the Iraqi Weapons of Mass Destruction (WMD) program as a justification for military action.

A nuclear test would end 'strategic ambiguity' and confirm the objective of the DPRK as the maintenance of immediate regime security from external intervention. As previously stated by Pyongyang, its objective may also be to: 'reduce conventional weapons under a long-term plan and channel manpower resources and funds into economic

construction and the betterment of people's living'.¹

Technology, Precedent & Theory

Combating nuclear proliferation is an uphill battle in which the incline of the hill increases proportionally with technological advance. While efforts to combat proliferation once included international agreements (Primarily the Non-Proliferation Treaty, which entered into force in 1970) and the technological gap between nuclear and non-nuclear states, the effectiveness of the latter has truly passed. As a 1998 report by the US Department of Defense stated: 'the fundamental physics, chemistry, and engineering involved are widely understood; no basic research is required to construct a nuclear weapon'.² A state seeking a nuclear capability could achieve its first nuclear weapon 3–5 years after the political decision to do so, and achieve reduced weapon size and mass after a further 1–2 years.³

Adding to this proliferation dilemma is the precedent set by recent failures to combat proliferation. The example of India, Pakistan and Iraq set the precedent that on accomplishing a verifiable nuclear weapons capable status, a state achieves greater security. However, by allowing inspections that ascertain the absence of a nuclear weapons capability, a state decreases its security. This precedent has been highlighted in numerous Korean Central News Agency (KCNA) commentaries.⁴

Finally, there is a large body of (strongly contested) theory that

suggests slow proliferation may increase stability. It is argued that the devastating capacity of nuclear weapons has made war between great powers impossible. Similarly, as smaller states acquire nuclear weapons their offensive capacity will be constrained and their defensive capability increased—thus, making war more difficult.⁵

Is there any evidence?

Most recent evidence of DPRK intent to proceed down the nuclear path has relied upon the reprocessing of spent nuclear fuel rods and high-explosives testing—processes necessary for the acquisition of weapons grade material and the triggering of nuclear devices respectively.

The success of the DPRK policy of strategic ambiguity has been reflected by the failure of external attempts to ascertain the status of its 8000 spent fuel rods, best exemplified by the statement of Donald Rumsfeld that North Korea has: 'made assertions with respect to the case at which they're reprocessing. Some people believe what they're saying. Other people don't believe what they're saying'.⁶

Reprocessing involves the separation of uranium, plutonium and further by-products from fuel rod casings using nitric acid, and the separation of uranium and plutonium from by-products utilising an organic solvent. The uranium and plutonium can then be separated, with the small percentage of weaponable fissile material (Pu-239) dependent upon factors

including initial fuel rod composition and duration of usage.⁷

The process gives off high-level nuclear waste as well as gases including Krypton-85, the presence of which provides a distinct atmospheric signature indicating reprocessing. Citing government officials, the US news network NBC claimed on July 11 that such atmospheric signatures had been collected, providing the first physical evidence to confirm DPRK claims.⁸ However, on 14 July the South Korean Foreign Minister, Yoon Young-Kwan, stated that he was unaware of any scientific evidence to prove that North Korea had either started reprocessing the spent fuel rods in earnest or had completed reprocessing.⁹

However, the absence of an atmospheric signature does not rule out the possibility that reprocessing has occurred. Given the lack of intelligence on North Korean nuclear facilities there is the possibility that another unknown reprocessing facility exists, perhaps underground.

Attention has also focused on high-explosive tests required for the triggering of nuclear devices. On 9 July 2003 the South Korean National Intelligence Service Director, Ko Young-Koo, addressed the National Assembly Intelligence Committee confirming reports leaked a week earlier¹⁰ that the North had conducted at least 70 pre-nuclear high-explosive tests since 1994, at a site 40kms north of the main Yongbyong nuclear complex.

While one can question the political motivation in the timing of the revelation, the fact that the 70 tests have occurred since 1994 belies the DPRK intent in entering into the 1994 Agreed Framework.¹¹

After a nuclear test

A nuclear test by the DPRK could alter the security framework of North East Asia in two distinct

areas—proliferation and operational restraint.

A test that confirms the DPRK's nuclear capability would likely encourage the reconsideration of military capability by other regional states, particularly South Korea and Japan. This could even involve pursuit of a nuclear option, well within the material and technological capability of both states. In a classic security dilemma, this would further encourage reconsideration of military preparedness in the wider region including in both Australia and its immediate region.

A nuclear capable DPRK could also maintain the constraint on US options, which has existed in the form of a powerful conventional threat to the South Korean capital, Seoul. Advances in US military capability, as demonstrated in Afghanistan and the recent Iraq conflict, may have pushed Pyongyang to reconsider the efficacy of this ageing conventional deterrent.

A new nuclear state to Australia's north paints a pessimistic picture. However, it would be wrong to consider such an event as permanent. South Africa decided to relinquish its nuclear weapons program (presumed to have been operational since 1979) and verifiably dismantled its weapons capability prior to joining the Non-Proliferation Treaty (NPT) in 1991.

This begs the important question—what changes in South Africa's perception of its security allowed this to occur and could similar changes occur on the Korean peninsula? More importantly, could North Korea be convinced that a nuclear test will not increase its security?

An Australian long-term approach designed to address North Korea's security concerns could include encouraging understanding through second-track diplomacy, increased support for confidence-building

measures and participation in inclusive multilateral security dialogue.

¹ Korean Central News Agency, 'KCNA on DPRK's Nuclear Deterrent Force', 9 June 2003.

² US Department of Defense, 'The Military Critical Technologies List: Part II, Weapons of Mass Destruction Technologies', February 1998, p. II-5-2

³ Ibid. p. II-5-7

⁴ Korean Central News Agency, 'Statement of FM spokesman blasts UNSC's discussion of Korean nuclear issue', 6 April 2003.

⁵ Influential proponents of such theories include Kenneth Waltz [see *The Spread of Nuclear Weapons: More May be Better*, *Adelphi Papers*, No. 171, Autumn 1981] and Martin Van Creveld [see *Nuclear Proliferation and the Future of Conflict*, MacMillan, New York 1993]

⁶ NBC News, 'Transcript for July 13', *Meet the Press*, 13 July 2003.

⁷ The Purex Process, Institute for Energy and Environmental Research, September 2001.

⁸ Jim Miklaszewski, 'North Korea takes nuclear step', NBC News, 11 July 2003.

⁹ Yonhap News Agency, 'FM: No evidence yet to prove N. Korea reprocessing fuel rods', 14 July 2003.

¹⁰ David Sanger, 'CIA said to find nuclear advances by North Koreans', *The New York Times*, 1 July 2003.

¹¹ The reason for the failure of the 1994 Agreed Framework can be apportioned equally to the US and DPRK, both of which entered into the agreement fettered by their long history of mutual suspicion.

**Jeffrey Robertson
Foreign Affairs, Defence and
Trade Group
Information and Research
Services**

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