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A North Korean nuclear test: possible or probable?

On 10 January 2003, the Democratic People's Republic of Korea (hereafter North Korea) withdrew from the nuclear Non-Proliferation Treaty (NPT). On 2 October 2003, North Korea declared it had completed reprocessing spent fuel rods, in order to obtain Plutonium-239, a fissile material used in the production of nuclear weapons.[1] On 10 February 2005, North Korea for the first time openly declared that it had manufactured nuclear weapons.[2]

Each of these events represents a line that has been crossed in defiance of requests by the international community. To date, diplomatic efforts have failed to convince North Korea that pursuing a nuclear capability is not in its interests.[3] The next line to be crossed may be the testing of a nuclear weapon. This Research Note looks at this possibility and its implications.

Just another nuclear test scare?

On 17 August 2006, the United States (US) news network ABC reported that North Korea may be preparing an underground nuclear test.[4] Subsequent reports indicated that the preparations were underway in Gilju, North Hamgyeong Province, in the north-east of the country.[5]

Such reports are not new. During the 1990s, there was concern regarding tunnelling activities in Gilju and in Kumchang-ri. In 2003, the Gilju site, amongst others, was used for conventional high explosives tests, which are required in the detonation of a nuclear device. In April 2005, there were unconfirmed reports that a reviewing stand was constructed at Gilju, and that a tunnel was filled. This heightened concern that a nuclear test was imminent.[6]

Once basic preparations for an underground nuclear test have been completed, it is extremely difficult to determine when one is actually going to take place. Basic preparation involves construction of tunnelling facilities, installation of monitoring equipment and monitoring stations. Constant and often difficult monitoring is then required to determine if final preparations are underway. It has been reported that South Korean National Intelligence Service Director, Kim Seung-Kyu, stated that 'the possibility of a nuclear test is always open as soon as Kim Jong-Il makes a decision'.[7]

Further, North Korea is known to be a notoriously difficult target for intelligence gathering. The closed nature of the regime makes the collection of intelligence from human sources difficult and the country is adept at using US satellite intelligence to its own advantage. In 1998, US intelligence indicated that significant activity was being undertaken at an underground site in the Kumchang-ri region. After protracted negotiations, North Korea allowed the US to inspect the site in return for 400,000 tons of food through the UN World Food Program, the installation of bilateral food projects and agreement to discuss North Korean export and development programmes. The site was found to be empty.

The difficulty in detecting final preparations for a nuclear test and the nature of the North Korean regime, allow the threat of a nuclear test to be used as a diplomatic tool to exert pressure and influence dialogue partners.

North Korea has previously threatened to conduct a nuclear test in order to influence negotiating partners. During 23-24 April 2003, North Korea, the US, and China, held Three Party Talks designed to resolve the nuclear issue. Li Gun, the deputy Director-General of the American Affairs Bureau of the North Korean Foreign Ministry reportedly stated to James Kelly, US Assistant-Secretary of State for East Asia and the Pacific, that a nuclear test was possible.[8] During the 27-29 August 2003 Six-Party Talks, involving the US, North Korea, Japan, China, South Korea and Russia, the North Korean delegate stated that it had no choice but to conduct a nuclear test.[9]

To a certain extent, the threat of a nuclear test, serves the diplomatic aims of the US by encouraging dialogue partners such as South Korea and Japan to take a harder line with North Korea. This has proven particularly important as South Korea engages North Korea, seeking reconciliation under the 'Sunshine Policy', straying further from US policy aims (see below).

The current indications that North Korea may be preparing a nuclear test could be just another nuclear test scare—with both the US and North Korea seeking to use it as a diplomatic tool to exert pressure and influence dialogue partners in negotiations. However, the gravity of the implications forces the international community to take any nuclear test scare very seriously.

Rationale and timing

While it is extremely difficult to determine the rationale behind North Korea's diplomacy, there are several considerations that could explain a nuclear test:

– **Prestige.** Confirmation of its status as a nuclear weapons power would strengthen the regime both domestically and internationally.

- **Deterrence.** North Korean massed artillery along the De-Militarized Zone (DMZ) within range of the South Korean capital, Seoul, is already a substantial deterrent. However, confirmation of a nuclear weapons capability inevitably augments the psychological impact of deterrence on potential aggressors.
- **Brinksmanship.** A nuclear test could be perceived in North Korea as just another line to cross that will enhance its ability to negotiate in future talks.

A nuclear test, however, could remove much of North Korea's negotiating strength in future talks. North Korea uses strategic ambiguity and an image of irrationality to enhance its strength in negotiations. Testing a nuclear device would remove this ambiguity and substantially restrain the ability of North Korea to continue its image of irrationality. As noted by Columbia University academic Kenneth Waltz in 1981, using the example of Libya: "A nuclear Libya, for example, would have to show caution, even in rhetoric, lest she suffer retaliation in response to someone else's anonymous attack on a third state … Nuclear weapons induce caution, especially in weak states".[10]

Due to the gravity of the event, it is difficult to calculate the impact that a nuclear test could have on the region. The first order effects, such as condemnation, sanctions, or even a military strike, are compounded by potential second order effects such as the re-armament of Japan, increased anti-ballistic missile programs in the region, and the commencement of additional nuclear weapons programs in the region. The increased levels of insecurity in the region could lead to a regional arms race, which would place North Korea and its ailing economy at a severe disadvantage. A nuclear test could reduce North Korea's security relative to its regional adversaries. This decreases the likelihood that a rational actor would pursue the option.

If a nuclear test were to occur, precedent suggests it may be undertaken either on a day of national significance or on a day that would heighten its impact on potential targets. On 31 August 1998, North Korea tested a *Taepodong*-1 ballistic missile 'to significantly adorn the first session of the 10th Supreme People's Assembly and the 50th anniversary of the founding of the DPRK'.[11] Significant days in the North Korean calendar include:

16 February: Official birth date of Kim Jong-Il
15 April: Official birth date of Kim Il-Sung
1 May: May Day
25 April: Korean People's Army Day
8 July: Memorial Day of the death of Kim Il-Sung
27 July: Korean War Armistice Day
15 August: Korean Liberation Day
9 September: Foundation Day
10 October: Workers Party Anniversary
27 December: Constitution Day

A test may also be undertaken on a day that would heighten its impact on the United States. The 5 July missile tests coincided with 4 July celebrations in the United States, which heightened their impact both in terms of international media coverage and direct influence on the US administration.

Implications

A North Korean nuclear test would have a profound political impact, for it would directly challenge the global nuclear non-proliferation regime. If North Korea were to test a nuclear device, a dangerous precedent would be set. Other signatories to the nuclear Non-Proliferation Treaty (NPT) that might seek a nuclear weapons capability would have an example to follow.

Although less-reported in the media, the more immediate risk of a North Korean nuclear test is to the environment and local populations. North Korea is in the centre of a densely populated region, with South Korea, Japan, China and the less densely populated Russian Far East within close proximity.

Nuclear tests (both atmospheric and underground) to date have occurred in remote regions with low population densities. A North Korean nuclear test, by virtue of its geography, can only be carried out within proximity to regions of high population density. Accident or failure to adhere to adequate safety standards could provoke environmental and health concerns.

Even under the most stringent safety standards, there is the potential for mishap. From September 1961 until September 1992 more than 800 nuclear tests were undertaken in the United States, with all but a select few being underground tests. Of the underground nuclear tests, 38 resulted in the detection of off-site radioactive materials.[12] While this is an incidence of less than 4.75 percent, in the densely populated Northeast Asian region, this is enough to raise substantial concern.

Underground nuclear tests can also leave a near-permanent impact on the environment. Leakages from test sites inevitably occur.[13] The amount and duration of leakage is dependent upon preparation and geological nature of the test site. Environmental damage could potentially reduce agricultural production levels, further damaging North Korea's precarious food situation.

Regional Reactions

Japan. The greatest focus of the international community would be on the Japanese reaction to a North Korean nuclear test. Japan is a technologically advanced state with the scientific capability to rapidly attain a nuclear weapons capability. There is a widely held belief that if North Korea tests a nuclear device, Japan may follow. As noted by Thomas Schieffer, US Ambassador to Japan, "If you had a nuclear North Korea, it seems to me that that increases the pressure on both South Korea and Japan going nuclear themselves".[14]

In the short-term, however, it can convincingly be argued that Japan would not follow the North Korean example. Japan's 'peace constitution' includes the renunciation of war

and forbids the maintenance of offensive military forces. As the only state ever to be attacked with a nuclear device, Japan has a strong aversion to nuclear weapons. Japan also continues to follow the long-cherished, and widely accepted, policy of the 'nuclear three nots'—not possessing nuclear weapons, not producing them, and not permitting their introduction into Japanese territory.

Change or re-interpretation of Japan's peace constitution and, in particular, the 'nuclear three nots' could be expected to be a slow process given the strong domestic opposition.

Since 1998, the North Korean missile program has been a rallying point to those in Japan advocating change or re-interpretation of the peace constitution. North Korea has been used to justify deployment of independent satellite capabilities, minor constitutional revision, and strengthening of the US military alliance, including implementation of the missile defence program.[15] A North Korean nuclear test could provide a rallying point for further change or re-interpretation of the peace constitution and possible an end to the 'nuclear three nots'.

A Japanese nuclear weapons programme could also increase Japanese security with regards to its alliance with the United States. A junior partner in an alliance is always uncertain that the senior partner will come to its aid, if such an action would threaten the senior partner. Doubts as to whether the US would risk New York over London and Paris in the face of the Soviet nuclear threat is often cited as a reason for the British and French decision to initiate a nuclear weapons program.[16] In a more modern scenario, Japanese strategists may ask whether the United States would risk Los Angeles over Tokyo in the face of conflict with a nuclear power, be it North Korea or China.

China. China is an ally of North Korea, under the terms of the 1961 Treaty of Friendship, Cooperation and Mutual Assistance. However far from being a relationship based on the Chinese proverb 'as close as lips and teeth', contemporary North Korea has become the proverbial thorn in China's side.[17]

Chinese national security seeks above all a stable and secure environment for economic development. This means the maintenance of the status quo on the Korean peninsula. Accordingly, it is in China's national interest to ensure that North Korea does not collapse, for this could result in a flood of refugees crossing into north eastern China, and result in substantial disruption to regional trade.

Further, North Korea, since before China's entry into the Korean War (1950-53), has represented a bargaining chip in China's relations with the US over the question of Taiwan.[18] The key question is whether supporting North Korea would extend to accepting a North Korean nuclear test.

A stable and secure environment for economic development requires good diplomatic relations with partner countries, most importantly, the US. The dominant pattern in China's contemporary diplomacy is its efforts to present the image of a responsible great power. This may require China to acquiesce to US pressure for a much stronger stance on the North Korean nuclear issue if a test takes place.

South Korea. The reaction in South Korea may prove to be the most significant and could see an end to the 'Sunshine Policy' of reconciliation with North Korea.

The Sunshine Policy, established by former President Kim Dae-Jung, sought reconciliation with North Korea based on non-aggression and cooperation. This culminated in the visit of Kim Dae-Jung to Pyongyang 13-15 June 2000. The two day visit resulted in the signing of the South–North Joint Declaration, which paved the way for agreement across a number of political, social and military issues.

The Sunshine Policy effectively presented a volte-face to the confrontational approach that had seen the immediately previous President, Kim Young-Sam (1993-1998) refuse to send food aid to the North, and actively discourage other states from doing so.[19]

On 10 December 2000 President Kim Dae-Jung was awarded the Nobel Peace Prize for his 'work for democracy and human rights in South Korea and in East Asia in general, and for peace and reconciliation with North Korea in particular'.[20]

However, the Sunshine Policy, as continued and extended by the current South Korean administration of Roh Moo-Hyun, has proven to be at odds with US North Korea policy.

Roh Moo-Hyun was elected in December 2002 on a wave of anti-American sentiment following a public outcry at the accidental deaths of two schoolgirls in a US military training exercise. Relations with the US have deteriorated substantially during Roh's term. Three key issues have contributed to this. Firstly, South Korea and the US remain divided over policy approaches towards North Korea. Secondly, the higher level of anti-Americanism since 2002 has started to register in US public opinion.[21] Finally, negotiations over adjustments to the US military presence on the Korean peninsula, including base locations and costs, training rights, responsibility for environmental damage and the operational control of troops, has led to dissatisfaction on both sides.

The conservative opposition has argued that the dogged pursuance of reconciliation with North Korea, in spite of its nuclear weapons ambitions, threatens South Korean security and weakens relations with the US. Conservatives point out that the Roh administration's initial reaction to the 5 July 2006 missile tests were not to join Japan and the United States in condemning North Korea, but to first condemn Japan for over-reacting.[22]

In the short-term, depending on the South Korean Government response, a North Korean nuclear test could

result in civil unrest and further polarisation of South Korean politics.

In the medium term, a nuclear test by North Korea could be expected to further strengthen the conservative position in the lead-up to the November 2007 presidential elections. If elected, it is likely that a conservative administration would effectively suspend the Sunshine Policy.

United States. The greatest pressure as a result of a nuclear test may fall on the US. The detonation of a nuclear device by North Korea would call into question the Bush administration's handling of North Korea.

The first administration of George W. Bush was slow to implement a North Korea policy. At best, the administration pursued a policy of 'strategic neglect', focusing on what it perceived as the more imminent threat of Iraq and the Middle East. At worst it appeared a concerted North Korea policy did not even exist, based upon the mixed messages emanating from the administration during Bush's first term.[23]

The most characteristic elements of Bush's North Korea policy has been its 'hardline' approach—refusal to negotiate bilaterally with North Korea outside the Six-Party Talks framework; refusal to reward bad behaviour; and insistence that North Korea return to a freeze on its nuclear program prior to concessions. Prominent academics in the field of Korean studies have long been critical of this approach, epitomised by the remarks of noted Korea specialist, James Palais of the University of Washington: 'The spectre of immense tragedy looms over all the Korean peninsula as long as the US continues to refuse meaningful negotiations with North Korea'.[24]

A nuclear test by North Korea could be considered as evidence that the hardline approach has failed. Engagement, pursued by the Clinton administration, achieved a freeze on known North Korean nuclear programs, albeit while North Korea allegedly pursued a secret highly enriched uranium program. A hardline approach, in comparison, has resulted in North Korea's withdrawal from the NPT, the reprocessing of spent fuel rods, and could conceivably result in a nuclear test.

However, a nuclear test could also be used as justification for a hardline policy towards North Korea. A test may ultimately make current US North Korea policy substantially simpler. If, as mentioned, the Sunshine policy in South Korea comes to an end, US efforts to isolate and potentially coerce North Korea could become more achievable. A North Korean nuclear test could also serve as a rationale to speed up the implementation of anti-ballistic missile systems currently underway.

Comment

It is impossible for analysts to predict with any certainty the likelihood of North Korea conducting a nuclear test. It should also be noted that exploding a nuclear device in an underground tunnel is substantially different from having a device small enough to be delivered using North Korean missile technology. Even after confirming its nuclear weapons capability through a test, North Korea would not be a direct threat requiring a military response. Given the gravity of the implications, convincing North Korea that a nuclear test is not necessarily in its interest should be a priority for the region and for the international community.

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