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Did North Korea Cheat?

by *Selig S. Harrison*

Weapons of Mass Distraction

On October 4, 2002, the United States suddenly confronted North Korea with a damning accusation: that it was secretly developing a program to enrich uranium to weapons grade, in violation of the 1994 agreement that Pyongyang had signed with Washington to freeze its pursuit of nuclear weapons. Since North Korea had cheated, the Bush administration declared, the United States was no longer bound by its side of the deal. Accordingly, on November 14, 2002, the United States and its allies suspended the oil shipments they had been providing North Korea under the 1994 agreement.

Pyongyang retaliated by expelling international inspectors and resuming the reprocessing of plutonium, which it had stopped under the 1994 accord (known as the Agreed Framework). The confrontation between North Korea and the United States once more reached a crisis level.

Much has been written about the North Korean nuclear danger, but one crucial issue has been ignored: just how much credible evidence is there to back up Washington's uranium accusation? Although it is now widely recognized that the Bush administration misrepresented and distorted the intelligence data it used to justify the invasion of Iraq, most observers have accepted at face value the assessments the administration has used to reverse the previously established U.S. policy toward North Korea.

But what if those assessments were exaggerated and blurred the important distinction between weapons-grade uranium enrichment (which would clearly violate the 1994 Agreed Framework) and lower levels of enrichment (which were technically forbidden by the 1994 accord but are permitted by the nuclear Nonproliferation Treaty [NPT] and do not produce uranium suitable for nuclear weapons)?

A review of the available evidence suggests that this is just what happened. Relying on sketchy data, the Bush administration presented a worst-case scenario as an incontrovertible truth and distorted its intelligence on North Korea (much as it did on Iraq), seriously exaggerating the danger that Pyongyang is secretly making uranium-based nuclear weapons. This failure to distinguish between civilian and military uranium-enrichment capabilities has greatly complicated what would, in any case, have been difficult negotiations to end all existing North Korean nuclear weapons programs and to prevent any future efforts through rigorous inspection. On June 24, 2004, the United States proposed a new, detailed denuclearization agreement with North Korea at six-party negotiations (including the United States, China, Japan, Russia, South Korea, and North Korea) in Beijing. Before discussions could even start, however, the Bush administration insisted that North Korea first admit to the existence of the alleged uranium-enrichment facilities and specify where they are located. Pyongyang has so far refused to confirm or deny whether it has such facilities; predictably, the U.S. precondition has precluded any new talks.

If it turns out that North Korea did not cheat after all, the prospects for a new denuclearization agreement would improve, because the Bush administration could no longer argue that Pyongyang is an inherently untrustworthy negotiating partner. At any rate, to break the diplomatic deadlock, the United States urgently needs a new strategy. Washington should deal first with the very real and immediate threat posed by the extant stockpile of weapons-usable plutonium that Pyongyang has reprocessed since the breakdown of the Agreed Framework. Measures to locate and eliminate any enrichment facilities that can produce weapons-grade uranium are essential but should come in the final stages of a step-by-step denuclearization process. Above all, Washington must not once more become embroiled in a military conflict on the basis of a worst-case assessment built on limited, inconclusive intelligence. There is a real danger that military and other pressures on North Korea, designed to bolster a failing diplomatic process, could escalate into a full-scale war that none of North Korea's neighbors would support.

Inconvenient Facts

Washington's accusation of Pyongyang was delivered during a visit to the North Korean capital by James Kelly, assistant secretary of state for East Asian and Pacific affairs. Kelly told a key North Korean official that he had evidence of a uranium-enrichment project. According to Kelly, the North Korean official, First Deputy Foreign Minister Kang Sok Ju, acknowledged the existence of such a program at the time. But Kang has subsequently denied this; what he actually told Kelly, according to Foreign Minister Paek Nam Sun, was deliberately ambiguous: that North Korea is "entitled" to have such a program or "an even more powerful one" to deter a pre-emptive U.S. attack. According to Paek, Kang also stated that North Korea is entitled to pursue an "ncnd" (neither confirm nor deny) policy concerning the specifics of its nuclear capabilities, just as the United States does--especially since the two countries remain belligerents in the technically unfinished Korean War.

Kelly's confrontation with Kang seems to have been inspired by the growing alarm felt in Washington in the preceding five months over the ever more conciliatory approach that Seoul and Tokyo had been taking toward Pyongyang; by raising the uranium issue, the Bush administration hoped to scare Japan and South Korea into reversing their policies. The chain of events leading to the confrontation began in April 2002, when the two Koreas decided to move ahead with plans for North-South railroad links and for the development of a new industrial zone at Kaesong in North Korea, where some 1,000 South Korean firms were expected to establish factories. These steps required U.S. approval to de-mine the demilitarized zone. The United States strongly resisted the thaw, refused to approve the de-mining, and threatened to block the Kaesong project by restricting the use of U.S.-licensed and other sensitive technology by companies investing in the zone. (U.S.-South Korean tensions over the technology issue have since intensified.) But in August 2002, South Korea's then president, Kim Dae Jung, personally appealed to President George W. Bush to drop his objections, and on September 12, after an intense diplomatic struggle, the Pentagon reluctantly gave the go-ahead for de-mining.

American anxieties only grew, however, when, on September 17, 2002, Japanese Prime Minister Junichiro Koizumi visited Pyongyang to discuss the normalization of relations--a visit that Japan had been quietly exploring for more than nine months without telling the United States. Washington, in fact, found out about the trip only three weeks before it occurred, when Koizumi presented the upcoming visit as a fait accompli to Deputy Secretary of State Richard Armitage. Koizumi did not ask for U.S. permission to go to North Korea, and he refused to call off the trip even after Armitage revealed Washington's suspicions about a secret North Korean uranium program.

Faced with the prospect that the North Korea policies of South Korea and Japan had slipped out of its control, the Bush administration "saw a real possibility that its options on the [Korean] peninsula would increasingly be driven by the policy agendas of others," wrote Jonathan Pollack, chairman of the Strategic Research Department at the U.S. Naval War College in the summer of 2003. Plans for Kelly's visit to Pyongyang were accelerated, and his showdown with North Korean leaders came less than three weeks after Koizumi's meeting with Kim Jong Il.

Pollack suggests that Kelly's charges were not justified by U.S. intelligence. Pointing to a CIA report submitted to Congress in November 2002, Pollack wrote that "the imprecision in the CIA analysis underscored the difficulties of estimating the extant capabilities and ultimate purposes of the North's enrichment program" and left it unclear "how complete and compelling the intelligence data may have been." According to Pollack, the CIA report indicated that North Korea had no operational enrichment facility to declare. ... The intelligence community believed that North Korea still [would have] confronted daunting obstacles had it decided to build an enriched uranium weapon, or even to acquire the production capabilities that might ultimately permit such an option. Most

officials recognized that the path to a meaningful enrichment capability remained a distant and very uncertain possibility.

Despite its limited knowledge about the uranium program, the U.S. government "opted to exploit the intelligence for political purposes." The uranium issue "furnished powerful ammunition to render the Agreed Framework a dead letter"--something enormously appealing to hawks in the administration, who had opposed Clinton-era diplomacy toward North Korea as much too soft. As Pollack described it to a New York Times columnist, the Bush administration used "whatever [intelligence] was there on North Korea to step away from a set of obligations, to shine a shaming light on North Korea and perhaps to get others to put the heat on North Korea."

An examination of the November 2002 CIA report that set forth the basis for Kelly's confrontation confirms these charges of imprecision. Although the document alludes to "clear evidence" that North Korea had "recently" begun constructing a centrifuge facility (centrifuges are machines used to enrich uranium), the CIA did not explain the nature of this evidence beyond mentioning, in general terms, that Pyongyang had acquired "centrifuge-related materials in large quantities." No specific evidence was presented to support the report's conclusion that North Korea was "constructing a plant that could produce enough weapons-grade uranium for two or more weapons per year when fully operational, which could be as soon as mid-decade."

The CIA says that it cannot reveal all that it knows without exposing "methods and sources." This argument would be more persuasive if the agency had at least made a credible case to congressional committees in executive session or to U.S. Asian allies. But since the report came out, no evidence to support it has been supplied to South Korea or Japan--or to China and Russia, the other countries participating in the ongoing six-party negotiations. (This assessment is based on off-the-record conversations with past and present government officials in these countries, including officials in South Korea and Japan who participated in the intelligence exchanges with the CIA that preceded the Kelly visit.) China alone has gone public on the issue. Deputy Foreign Minister Zhou Wenzhong told a New York Times reporter on June 7, 2004, "So far, the United States has not presented convincing evidence of the uranium program. We don't know whether it exists."

The limited evidence that has, in fact, been provided to South Korea and Japan does confirm that North Korea has made efforts to buy equipment that could be used to make and operate centrifuges. This equipment includes electrical-frequency converters, high-purity cobalt powder for magnetic-top bearing assemblies, and high-strength aluminum tubes.

In most of these cases, however, it is not clear whether the purchases were ever made and, if so, how much North Korea bought. For example, in April 2003, French, German, and Egyptian authorities blocked a 22-ton shipment of high-strength aluminum tubes to North Korea, the first installment of an order for 200 tons. But no evidence has been presented to establish that any of the order was delivered. Similarly, a U.S. Department of Energy intelligence study reported a North Korean "attempt" to buy two electrical-frequency converters from a Japanese firm in 1999. But the report concluded that "with only two converters, [North Korea] was probably only establishing a pilot-scale uranium enrichment capability."

Again in 2003, Japan blocked a renewed North Korean effort to buy frequency converters, this time three. But as a careful study by the International Institute of Strategic Studies (IISS) observed, "hundreds" of such converters would be required for a production-scale enrichment facility equipped with enough centrifuges to make weapons-grade enriched uranium. The IISS study concluded that such "failures in Pyongyang's procurement efforts suggest that North Korea may still lack key components," especially a special grade of steel for rotors and caps and rotor bearings.

Technical Difficulties

It is much easier to make low-enriched uranium (LEU)-the fuel needed to power light-water plutonium reactors-than it is to make weapons-grade highly enriched uranium (HEU), as Washington has accused Pyongyang of doing. A relatively small number of centrifuges is needed to make LEU, but the production of HEU in quantities sufficient for nuclear weapons requires the continuous operation of hundreds-or thousands-of centrifuges over a long period. Richard Garwin, a respected nuclear scientist, has estimated that 1,300 high-performance centrifuges would have to operate full time for three years to make the 60 kilograms of fissile material needed for a basic ("gun-type") nuclear weapon. Accomplishing that would require an enormous sustained input of electricity, without fluctuation or interruption. Moreover, the operation of a multi-centrifuge "cascade" requires a high-powered motor with a speed twice that of a MiG-21 jet engine. North Korea cannot produce engines even for its Russian-supplied MiGs, and it has only limited, highly unreliable electricity capabilities. It is therefore unlikely that the country is able at present to build or operate the equipment needed, over a long period, to produce weapons-grade uranium.

Apart from the electricity problem, when producing HEU, corrosion of the centrifuge rotors leads to their frequent breakdown. To operate an enrichment plant with 1,300 centrifuges, North Korea-according to Robert Alvarez, who served as senior policy adviser to the U.S. secretary of energy from 1993 to 1999 and conducted inspection visits to North Korea under the 1994 freeze accord-would need hundreds of replacement centrifuges. Says Alvarez, "I was very impressed with the primitive character of many aspects of their plutonium program, and I'm skeptical about their ability to deal with the complexities of a big uranium program. To make and operate thousands of centrifuges successfully, they would have to rely on so many outside sources. They would need ready access to the most sophisticated machine tools. They don't have the money that the Iranians do to buy this fancy technology. Remember, we found that the Libyans couldn't pull it off, even with Pakistani help."

Given the nature and scope of its attempts to buy various component parts, it seems clear that North Korea did explore the option of developing weapons-grade enrichment technology. Faced as it has been with technical constraints, however, Pyongyang may well have been forced to scale down its ambitions, limiting its efforts to LEU production, or a pilot HEU program, or no coherent program at all. The North Korean ambassador to the United Kingdom, Ri Yong Ho, hinted that this is the case during two seminars held in London during 2004, saying, in the same words each time, "We do not have an enrichment program, as such."

LEU facilities, furthermore, would not violate international nonproliferation norms. Signatories of the NPT are permitted to possess LEU facilities to make fuel for their civilian nuclear reactors if these facilities are open to International Atomic Energy Agency (IAEA) inspections. North Korea's status as an NPT signatory is currently suspended, but it did accept IAEA inspections under the Agreed Framework. Pyongyang may have viewed its LEU facilities in this context-not necessarily as a first step toward a possible weapons program, but as a means of avoiding permanent reliance on foreign-supplied fuel for the two light-water reactors being built to provide electricity under the 1994 freeze agreement. North Korea and a multinational consortium set up to build the reactors agreed that they would "initially" be powered with fuel supplied by the consortium, known as the Korean Peninsula Energy Development Organization (KEDO). After that, KEDO and North Korea agreed, in ambiguous language, that North Korea would be free to choose its source of supply. KEDO no doubt envisaged foreign suppliers, but Pyongyang may well have hoped to provide the fuel itself, drawing on its extensive deposits of uranium ore for an LEU program.

Moreover, under the freeze accord, the IAEA did not have the right to search for or monitor undeclared nuclear facilities until after a "significant portion" of the first light-water reactor had been completed. North Korea may well have reasoned that it did not have to declare any LEU facilities until KEDO fulfilled its own obligations to complete the construction of the reactors (which has not happened yet, since KEDO suspended the construction after the breakdown of the Agreed Framework).

When asked whether Pyongyang possessed civilian enrichment facilities on April 22, 2004, Vice Foreign Minister Kim Gye Gwan quickly denied that it had any type of enrichment program. On August 12, however, his Foreign Ministry colleague, Li Gun, edged toward acknowledgment of such a program when he was asked a similar question at a New York seminar. "We are entitled to have it for peaceful purposes," Li said.

The Letter of the Law

Did North Korea, then, cheat on the 1994 agreement with the United States, as the Bush administration has insisted? All of the operative provisions of the accord relate to freezing the North's plutonium program and make no reference to uranium enrichment. Pyongyang scrupulously observed these provisions until the Bush administration stopped the oil shipments in December 2002. The agreement does, however, reaffirm a 1991 agreement between North and South Korea that banned "uranium enrichment facilities," making no distinction between HEU and LEU. Pyongyang clearly did violate that accord by pursuing uranium-enrichment efforts (however limited they may turn out to have been) and thus, technically, violated the 1994 Agreed Framework as well.

The Bush administration, however, has made a much more serious charge: that North Korea has been secretly making nuclear weapons that might be deployed by "mid-decade" and thus cannot be trusted to honor a new denuclearization agreement. If it turns out that Pyongyang has developed no operational enrichment facilities at all-or only LEU, not HEU, facilities-Washington's claim will be discredited.

The CIA assessment rests, at bottom, on the assumption that North Korea has received extensive help and equipment from Pakistan. Some intelligence suggesting this possibility did surface during the Clinton presidency. "We raised fairly generalized concerns with Pakistan about nuclear cooperation with North Korea," recalls Robert Einhorn, Clinton's assistant secretary of state for nonproliferation. "But we didn't cite chapter and verse because we didn't have chapter and verse to cite." Pakistan's president, Pervez Musharraf, moreover, has flatly denied that Islamabad gave North Korea nuclear technology in exchange for North Korean missiles, saying that "whatever we bought from them was with money."

Recent revelations that Abdul Qadeer Khan, the ousted director of Islamabad's nuclear program, ran a black-market supply ring for nuclear materials have strengthened suspicions of a Pakistan-North Korea connection. Here again, however, the facts remain murky. Khan has not discussed the specifics of his misdeeds publicly, and conflicting statements about North Korea have been attributed to him. A June 2002 CIA assessment that was leaked after the Kelly visit said that Pakistan had provided North Korea with centrifuge prototypes and blueprints, but that it was uncertain how many, if any, centrifuges North Korea had made from them. The possibility that such prototypes were supplied to Pyongyang is supported by the fact that the aluminum tubes intercepted by France in 2003 matched the type used by Pakistan. But there is no basis for assuming that Pakistani help went beyond the supply of an uncertain number of demonstration centrifuges and associated replacement parts. When the Khan nuclear smuggling network was exposed, it turned out that a factory in Malaysia had supplied Libya with centrifuges. But the detailed Malaysian police report on the factory's exports makes no reference to North Korea, and U.S. officials acknowledge that there is no evidence that it supplied anything to North Korea. Moreover, the detailed review of British intelligence on nuclear and missile proliferation conducted by the Butler Committee linked Khan solely to Libya and made no mention of any help by his network to North Korea.

First Things First

If North Korea's enrichment program never in fact progressed beyond some degree of LEU experimentation or production, there may yet be a face-saving way for Pyongyang to acknowledge the existence of enrichment facilities in the early stages of the denuclearization negotiations. So far, however, the United States has demanded the removal of all enrichment facilities in North Korea, despite the fact that the NPT permits LEU operations for civilian programs if adequate inspection is permitted. Since the United States has made similar demands of Brazil and Iran, an LEU compromise with North Korea would have to be part of a larger policy shift in Washington.

Such a compromise would be further complicated by the fact that the uranium issue has become a political football in the internal North Korean policy struggle between pragmatists, who favor a nuclear settlement, and hard-liners, mainly in the armed forces, who resist one. On a visit to Pyongyang in April 2004, a ranking general told me that Pyongyang wanted to keep the world guessing about North Korea's HEU capabilities since it "strengthens our deterrent posture."

To find out definitively how far the North Korean enrichment program has gone, the United States and the other powers in the six-party talks should insist on stringent inspection terms in a denuclearization process. Eventually, the IAEA "Additional Protocol," which provides for intrusive inspections, should be extended from South Korea to North Korea. Pyongyang is not likely to permit such intrusive access, however, until the final stages of a step-by-step denuclearization process in which concessions by the United States and North Korea's neighbors build trust by reducing Pyongyang's economic and military insecurity.

North Korea can hide uranium-enrichment facilities from aerial surveillance more easily than plutonium facilities. North Korean cooperation in intrusive, on-the-ground inspections would therefore be necessary to determine whether Pyongyang is developing a weapons-grade enrichment capability, and if so, how close it has come to producing significant amounts of weapons-grade fissile material.

Unless conclusive new evidence comes to light, the entire uranium issue should be deferred so that the parties can focus on the more immediate threat: North Korea's known plutonium-reprocessing capabilities. Since the 1994 agreement collapsed, there is clear evidence that Pyongyang has reprocessed some or all of the 8,000 plutonium fuel rods at the Yongbyon reactor that had been safeguarded under the accord. By scuttling the 1994 agreement on the basis of uncertain data that it presented with absolute certitude, and by insisting that North Korea "confess" to the existence of a uranium program before new negotiations on denuclearization can begin, the Bush administration has blocked action on the one present threat that North Korea is known to pose: the threat represented by its reprocessed plutonium, which could be used for nuclear weapons or transferred to third parties.

The administration's underlying mistake-in the case of the North Korean uranium mystery, as in Iraq-has been treating a worst-case scenario as revealed truth. In October 2004, when Condoleezza Rice, then Bush's national security adviser, was challenged to justify her government's mistaken assessment about Iraqi weapons of mass destruction, she explained that "a policymaker cannot afford to be wrong on the short side, underestimating the ability of a tyrant like Saddam Hussein." Similarly, General James Clapper, who was director of the Defense Intelligence Agency (DIA) during the 1994 North Korean nuclear crisis, has said that "personally as opposed to institutionally, I was skeptical that they ever had a bomb. We didn't have smoking gun evidence either way. But you build a case for a range of possibilities. In a case like North Korea, you have to apply the most conservative approach, the worst-case scenario." The 1994 U.S. estimate (by the CIA and the DIA) that North Korea had "one or two" nuclear weapons at that time remains unchanged-although it has yet to be proved or disproved.

Clearly, worst-case scenarios must be taken into account, and policies should not be made on the basis of wishful thinking. For that reason, the uranium mystery must be resolved in any North Korean denuclearization process, and the biggest and best U.S. incentives, such as the full normalization of economic and diplomatic relations, should be withheld from North Korea until it provides adequate access for inspections. Right now, however, the United States confronts the disturbing immediate reality that the breakdown of the 1994 freeze agreement has made the United States less secure. The danger posed by North Korea's extant plutonium program has grown since the United States announced it was no longer bound by the Agreed Framework, and it is much greater than the hypothetical threat posed by a suspected uranium-enrichment program about which little is known. It is high time for the United States to switch course and deal with North Korea's plutonium first. Only after a relaxation of tensions with Pyongyang, through step-by-step mutual concessions, is the full truth about its uranium capabilities likely to be known, and only then can definitive action be taken to put the North Korean nuclear genie back in the bottle.

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