

The Long Saga of Nuclear 'Vortex Politics' in Korea

By Peter Hayes

Fifty years ago, South Korean military dictator Park Chung Hee set out to obtain nuclear weapons. Washington quickly blocked his plan, fearing it could have been hugely disruptive to the US-South Korea alliance and to regional and global nuclear security.

With current South Korean President Yoon Suk-yeol asking publicly if his country should develop a nuclear weapons program, it is time to re-examine the record. But there is nothing to be gained — and a great deal to be lost — should Yoon's remarks be translated into action, writes Peter Hayes.

GREGORY HENDERSON famously described politics in Korea as being a vortex. By this he meant that all political processes swirl around and lead to the center, where decisions are made, while outcomes spiral out from the center in unpredictable and often chaotic ways.

One of the issues driven by vortex politics is post-Korean War nuclear proliferation. After the *de facto* end of the war in 1953, both Koreas attempted to gain nuclear weapons in stop-start phases looping from relative peace and less nuclear activity to near war and spurts of nuclear-weapon proliferation.

Of course, in recent decades there has been no comparison between the two. North Korea has committed itself to nuclear arms and has largely realized this outcome. South Korea tried and failed to secure this option five decades ago, and it has since basically maintained a watching brief on the option while accumulating the scientific, technical and material capabilities via its nuclear fuel cycle that make it a poster-child non-nuclear weapons state with a latent weapons capability.

Korean vortex politics flow and pulsate through the Blue House — a narrow, constricting annulus that generates oscillating, unstable outcomes or vortices. One of these is South Korean nuclear proliferation, and its main oscillation is the Blue House swinging from acute fear of abandonment by the United States, on the one hand, to anxiety over entanglements due to American actions over which it has no control, on the other.

In light of recent South Korean presidential statements that resurrect the notion of a South

¹ See Richard Lawless, *Hunting Nukes: A Fifty-Year Pursuit of Atom Bomb Builders and Mischief Makers* (Mountain Lake Press, Maryland, 2023). Lawless headed the CIA team that tracked Park Chung Hee's program in the US Embassy in Seoul. Also see the 2011 analysis by Moon Chung-in and Peter Hayes that draws heavily on FOIA-released CIA reports, some written by Lawless, in "Park Chung Hee, the CIA, and the Bomb," *NAPSNet Special Reports*, September 2011, nautilus.org/napsnet/napsnet-special-reports/park-chung-hee-the-cia-and-the-bomb/

² Peter Hayes, Jungmin Kang, Li Bin, Tatsujiro Suzuki and Richard Tanter, "South Korea's Nuclear Surprise," *Bulletin of the Atomic Scientists*, January-February 2005, pp. 40-49, at: journals.sagepub.com/toc/bos/61/1

³ This and subsequent quotes are from National Foreign Assessment Center, *South Korea: Nuclear Developments and Strategic Decisionmaking*, US Central Intelligence Agency, June 1978, declassified for release, October 2005. nautilus.org/wp-content/uploads/2011/09/CIA_ROK_Nuclear_DecisionMaking.pdf

Korean bomb, this essay examines how the first pulse of proliferation under the dictator Park Chung Hee compares with current President Yoon Suk-yeol's proliferation ruminations.

Luckily, we have well documented accounts of Park's covert, all-out effort at a nuclear weapons program between 1974-76.¹

PARK AND PROLIFERATION: 1974-1980

Since the end of the Korean War, South Koreans have thought about acquiring nuclear weapons. Even Syngman Rhee may have entertained this notion as early as 1958. And from 1980 to 2000, South Korea conducted various small-scale technical programs that veered into weapons-related territory not allowed under its Nuclear Non-proliferation Treaty obligations.²

But the only concerted, comprehensive effort by South Korea to acquire nuclear weapons was the warhead design, delivery system and fissile-material programs ordered by Park in June 1974; this came to a screeching halt in late 1976, albeit some parts continued until 1980, after his assassination in 1979. These programs had five key attributes that are outlined below and against which President Yoon's remarks may be compared.

First and foremost, the decision to make a South Korean bomb came from the absolute center of the intense political vortex created by Park's military dictatorship. One man alone ordered the program to begin, and only he could stop it. The inevitable result of his personal oversight was, as the US Central Intelligence Agency noted, that Park's nuclear weapons program "was erratic, even haphazard."³ Although it proceeded apace, the program was not well planned or considered by the cabal around Park in the Blue House. According to the CIA, "A written study assessing the pros and cons of developing, deploying and using nuclear weapons was not, and still has not, been produced." Moreo-

ver, Park refused to delegate oversight, ensuring that agencies were "operating essentially as unguided rockets."

In addition, due to stealth, speed and poor planning, Park launched his program with no operational concept of nuclear warfare, no military planning for a robust nuclear command, control and communications system, let alone an evaluation of the strategic implications of South Korea obtaining nuclear weapons in the midst of the Cold War — such as potentially being targeted by China and Russia in a war. This lack of foresight and strategic planning was the opposite of the *modus operandi* of the economic technocrats in the Blue House and inevitably led some of Park's senior lieutenants to ponder the wisdom of having one dictator serve as the nuclear weapons-control center — much like the North Korean nuclear command structure of today.

Second, Park initiated his program because he genuinely believed that the United States might soon abandon South Korea altogether. Far from fearing entanglement with US unilateral actions leading to war with North Korea, he saw the US response to previous North Korean attacks, such as the seizure of the USS *Pueblo*, the shooting down of a US EC-121 spy plane and scores of incursions into South Korea, as weak-kneed. Park judged the US commitment to the alliance to be dwindling rapidly in the aftermath of US recognition of China, US withdrawal from Vietnam (where South Korean forces fought at US instigation) and the rise of an activist US Congress critical of his appalling human rights record.

Although hundreds of US nuclear weapons were at the time still deployed in South Korea, a debate was under way inside the US military over the use of nuclear weapons. For some, it was already apparent that applying the European-oriented notion of nuclear warfighting to Korea

Warheads, explosives, missiles

A front entity, the Agency for Defense Development, was created as the organizational vehicle for Project 890, Park's nuclear-weapons program. ADD recruited South Korean scientists from abroad and, by mid-1975, had three sub-groups working on warhead design, high-explosives fabrication, computer codes and missiles.

The missile program (called *Baekgom*, or White Bear) was initiated on May 14, 1974, at Park's instruction. At its Taejeon site, it focused on modifying the US-produced Nike-Hercules as a surface-to-surface weapon so

that it could target all the way to the Chinese-North Korean border. ADD also developed (with French assistance) a new propellant for the modified missile along with reengineering almost all aspects of the Nike-Hercules.

Another critical element of the nuclear weapons push was South Korea's massive nuclear power program and obtaining advanced fuel fabrication and reprocessing facilities as part of its fuel cycle. These would provide a fast path to producing plutonium for early warheads by diversion of spent fuel. Initially, South Korea

tried to buy pilot reprocessing plants from Belgium, but the US and Canada, alarmed by India's nuclear explosion on May 18, 1974, pushed the Korea Atomic Energy Research Institute to abandon reprocessing and mixed-oxide plants. The US also enlisted Canada to make provision of its heavy-water power reactor contingent on South Korea not reprocessing plus the application of stringent IAEA safeguards.

Only when top Blue House and cabinet officials heard directly from the then US ambassador that continuing with reprocessing threatened the alliance itself did Park suspend the reprocessing and missile programs in December 1976. By blocking the route to obtaining fissile material needed for warheads, the improvised American counter-push effectively neutered the rest of the program. In short, nuclear-capable missiles without warheads were rendered meaningless.



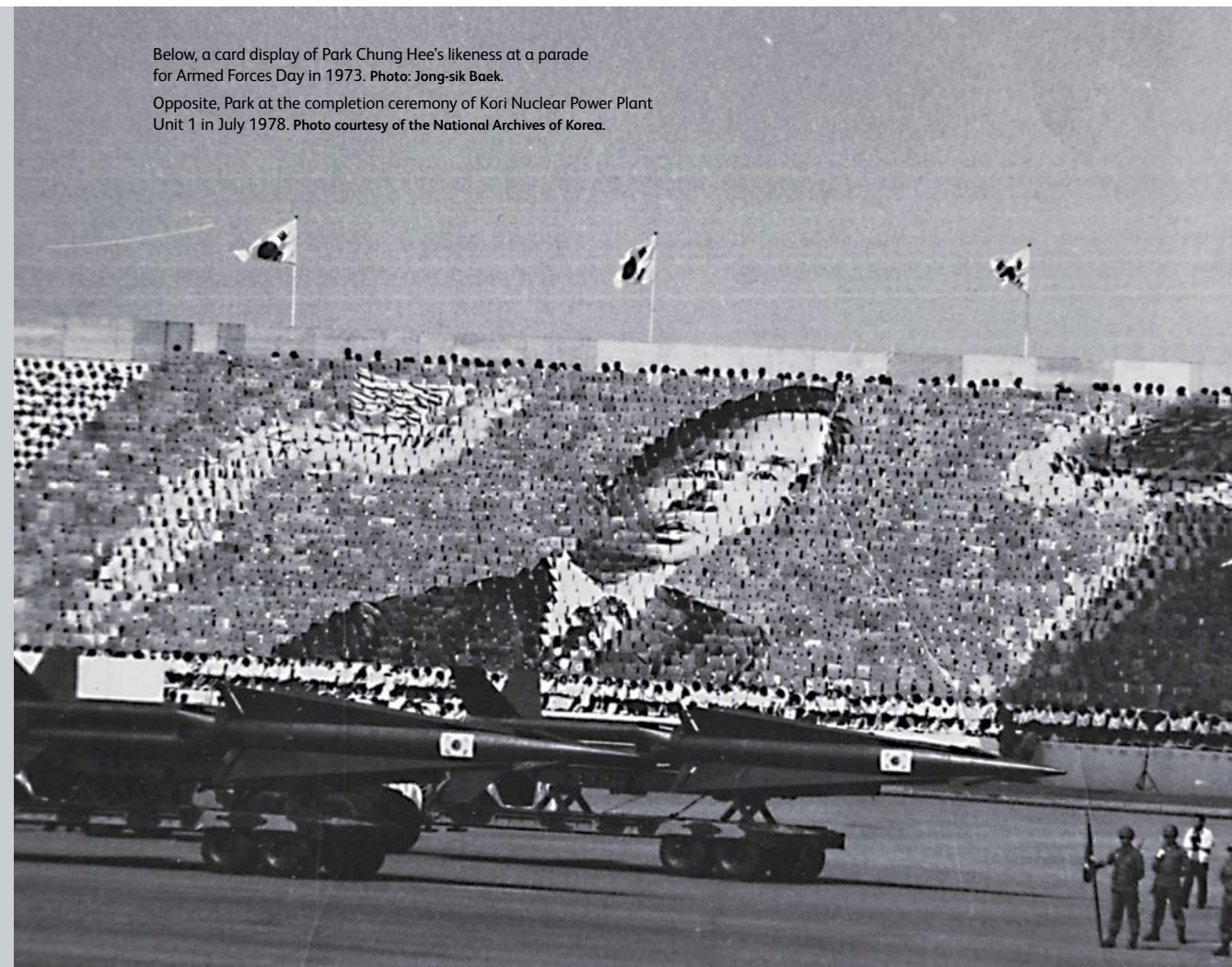
incurred far greater operational risks than were gained by forward deployment of nuclear weapons in Korea. The South Korean military were aware of these debates, not least because they had been integrated into aspects of US nuclear operations and training, including joint military exercises that regularly included nuclear war simulations. Thus, in addition to the perennial question of whether the US would ever use its nuclear weapons on behalf of an ally, there were early signs that not only ground forces, but US nuclear weapons, might be withdrawn soon from

the Korean peninsula — as President Jimmy Carter attempted to do after his election in 1976.

Third, although it had some overt elements — primarily those related to the nuclear reactor program — the core of Park's nuclear weapons program was covert; and those elements in turn were compartmentalized so that few Koreans, let alone Americans or other outsiders, knew at the outset what was going on. That said, within months, a concerted intelligence campaign by the CIA and US army intelligence penetrated the program at all levels — in part due to the fore-

Below, a card display of Park Chung Hee's likeness at a parade for Armed Forces Day in 1973. Photo: Jong-sik Baek.

Opposite, Park at the completion ceremony of Kori Nuclear Power Plant Unit 1 in July 1978. Photo courtesy of the National Archives of Korea.



mentioned disquiet that Park's one-man nuclear dictatorship caused in his own Blue House — providing detailed and accurate information on budgets, facilities, design, staffing and timelines to the US Ambassador in Seoul, the State and Defense Departments and the White House.

Fourth, in spite of mismanagement caused by his personal control, Park's nuclear weapons program was comprehensive. By 1975, it had separate teams working on missile design, and nuclear and chemical warheads (see box above). Nonetheless, it was critically dependent on rapidly obtain-

ing plutonium for warheads, which proved impossible once the US twigged to Park's ambitions.

Fifth, US non-proliferation policy was not yet crystallized, and Japan's construction of pilot reprocessing and enrichment plants — already well under way by 1973 — led South Korean technocrats in the Blue House to believe that the US would accept South Korea's acquisition of similar technology as a *fait accompli*, especially if other nuclear suppliers such as France were willing to sell to the Koreans.

Once alerted, the US had the ability not only to

confound these acquisition plans, especially the reprocessing technology without which nuclear warheads and missiles were useless, but had the absolute power within the alliance to force Park to reverse course. This power rested mostly on the threat to withdraw extended deterrence by potentially terminating the alliance; but also on the possibility that the US could block the massive financial assistance from the US Exim Bank that South Korea needed to acquire commercial nuclear power plants.

YOON'S PROLIFERATION IMPULSE

Today, all five of these conditions and constraints have changed.

First, the Blue House as an institution is far weaker relative to other centers of decision-making than it was during the Park Chung Hee dictatorship. Short of a small war with North Korea that might empower a Yoon-like leader to establish authoritarian rule and roll back South Korea's democratic institutions, it is inconceivable that he could order the South Korean military and civilian sector to make nuclear weapons on his own authority. It is one thing to float a balloon. It's another to start a nuclear-weapons program.

Second, time has proven Park wrong with regard to the durability of the alliance. Nearly four decades since he yearned to go nuclear, the US-South Korea alliance remains, including substantial "trip wire" ground forces and bases. Admittedly, the Donald Trump presidency caused some heartburn for all US allies, including South Korea, and sowed long-term doubts about US staying power. However, China is now the No. 1 American strategic pre-occupation and is driving development of a more agile, multilateral force structure across a string of US bases in the region to contain China's growing military power. South Korea is viewed in Washington as an essential stepping stone in this regional strategy.

Moreover, just as Park feared in 1976, US nuclear weapons *were* unilaterally removed from the Korean peninsula in 1991 — but the sky did not fall. Rather, a period ensued of engagement and negotiation with North Korea and the four great powers plus South Korea, delaying North Korea's nuclear armament by at least a decade and enhancing South Korea's middle-power status. The US still declares that its offshore and home-based nuclear forces provide nuclear deterrence to counter North Korean threats but places primary emphasis on increasing the lethality of combined US-South Korea conventional forces to deter any fantasies that North Korean leaders might entertain about attacking the South. The Ukraine war also signals the potency of modern conventional weapons in a conflict in which a nuclear-armed aggressor's nuclear threats have little effect or even a counter-productive one — a signal warning to North Korea that nuclear weapons are not useful in war fighting, whatever their inflammatory rhetoric.

Thus, unlike Park, who faced the immediate and realistic prospect of an American withdrawal, Yoon's administration does not.

Third, far from being covert, Yoon has openly announced that South Korea must examine the nuclear-weapons option. The inevitable result will be surveillance of everything nuclear in South Korea by the US and its allies. Even the tiniest step down this path is likely to leak from the Blue House or other agencies. Diversion of spent fuel for reprocessing will not only take considerable time but is almost certain to be noticed and reported by the International Atomic Energy Agency. Every move will be contested by outside powers.

Fourth, today South Korea has all the technical, scientific and material resources needed to design and produce a plutonium-based nuclear device in a crash program that might, without

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domestic or external disruption, take as little as two years. Unlike Park, Yoon's Korea has thousands of kilograms of plutonium in the form of spent fuel that could be used for warheads, albeit less efficiently and with lesser reliability than dedicated weapons-grade plutonium. It also has an array of delivery systems that could carry a crude nuclear weapon including fighter bombers and ballistic and cruise missiles.

Nothing is known about where Park planned to test nuclear weapons, but the geologically suitable places would have been either at a military base in the mountainous area in Gangwon province near the demilitarized zone; or on an isolated island. Yoon has the same options today. Park would have used military and intelligence officials to ensure local compliance. How the central government would manage the likely outraged public response to nuclear tests in today's South Korea is an interesting question.

As was the case with Park, South Korea today has no nuclear-capable command, control and communications system, let alone the surveillance and monitoring systems needed to acquire a range of targets, assess post-attack damage and reassign nuclear weapons to targets not yet destroyed in the course of fighting a nuclear war. Some South Korean military command posts and communications have been hardened against the electromagnetic pulses that would occur in a nuclear attack, but the entire set of positive and negative controls has not been realized let alone thought out.

Admittedly, South Korea could improvise a crude and simple nuclear weapons command, control and communications system similar to that of the North. But in a nuclear war environment how it would conduct combined US and South Korean commands for conventional operations and share intelligence with US Forces, let alone UN Command, while using a separate

command system for its nuclear forces, appears nowhere in Yoon's vague pronouncements.

What is especially obscure is whether nuclear weapons would offer any military advantages. Their mere possession and deployment would do nothing to remove the threat of a North Korean nuclear attack and might make such an attack more likely — not only by North Korea but also by China and Russia. Delivery systems for nuclear weapons offer no advantages in terms of time-to-target or precision not already available to South Korean conventional warheads. The fundamental quality associated with nuclear weapons — the size of the explosion and the wide area of damage and radiation — increases the probability of disabling enemy ground forces or destroying logistical sites such as fuel farms or airfields. It also presents massive collateral damage, civilian casualties, property destruction, immediate and long-term radiation hazards and cleanup costs. Finally, their use is critically dependent on near-perfect intelligence on target locations.

A NUCLEAR CRAPSHOOT

It is this latter attribute that is almost identical to what faced Park. South Korea today is no closer to real-time target identification and tracking than it was when Park ran the military, despite advances in technology. The strategic and tactical systems that it relies on to target North Korean command posts and mobile forces are dependent on US ground, aerial and space assets that it cannot hope to replicate in the short term — or even in the long term. Without access to such capabilities, Yoon's putative independent nuclear force would be flying blind, and firing nuclear weapons anywhere outside South Korean territory would be the equivalent of a nuclear crapshoot. In this regard, Yoon would be in the same situation as Kim Jong Un today.

Fifth, as was the case in 1975, the US is highly unlikely to accept a South Korean nuclear weapons *fait accompli*. In 1976, it took a direct threat to end the US-South Korea alliance, combined with the promise of huge Exim Bank financing for nuclear power, the restructuring of the US-South Korea command structure into a Combined Forces Command, and American support for a massive conventional arms modernization of the South Korean military, to induce Park to comply with demands to end his nuclear-weapons program.

Today it is improbable that the US would threaten the military alliance if Yoon were to activate a nuclear-weapons program. Instead, the US could simply threaten to use the potent weapon of financial sanctions developed by the US Treasury in part to isolate North Korea from external trade, financing and investment partners. Even the mention of such sanctions in South Korea would send shocks to South Korean *chaebol* and civil society that would be reminiscent of the 1997-98 financial crisis.

Thus, short of a war with North Korea and the re-institution of military rule or a similar shock, powerful stakeholders would likely form coalitions to quickly overrule and reverse such a reckless decision. Unlike the invisible reversal engineered by the US within the top-level clique around Park two generations ago, such a public political struggle would become symbolic of South Korean democracy itself and Yoon would be unlikely to survive politically. Even if he did, the probability that a nuclear-weapons program would survive three election cycles — the time it would take to create a meaningful nuclear weapons force — is remote. In short, domestic and international constraints are far greater today than in 1974-76 when public opinion could be ignored and Park's opponents were dispatched to jail and tortured into compliance or killed.

CONCLUSION

Despite these constraints, Yoon's response is to beat the abandonment drum and speculate publicly about creating an independent South Korean nuclear force. It is hard to avoid the conclusion that this rhetoric is aimed at polarizing voters and dividing the opposition, for the illogic of his nuclear proliferation musings is patently clear to South Korea's allies, friends and enemies.

Park embodied a real proliferation tiger that the US had to cage. Yoon presents not actual proliferation, but only a clownish impulse designed to exploit domestic fears that the US might abandon South Korea.

Ironically, this immature display sows distrust and dissension in the country's most critical security relationship. Joe Biden endured four years of the Trump presidency. He knows what a clown looks like as a head of state. It would be interesting to see the cable traffic from the State Department's Korea desk to the US ambassador after Yoon's remarks. He is skating on very thin ice. Conservatives should take note.

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