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Review Essay 81

Siegfried S. Hecker with Elliot A. Serbin, *Hinge Points: An Inside Look at North Korea's Nuclear Program*. Stanford: Stanford University Press, 2023. ISBN: 9781503634459 (hardcover, \$40.00).

Reviewed by **Névine Schepers, ETH Zurich Center for Security Studies**

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Hinge Points is a narrative of missed diplomatic opportunities to constrain North Korea's nuclear weapons program over the last seventeen years. Its author, Siegfried Hecker, is a nuclear scientist, professor at Stanford University, and former director of Los Alamos National Laboratory. Together with his former research assistant at Stanford University, Elliot Serbin, he describes six key moments in US-North Korean relations, which he calls "hinge points," where the United States failed to pursue policies that could have constrained Pyongyang's nuclear weapons program. The hinge points are articulated through the prism of what he describes as North Korea's "dual-track strategy of diplomacy and nuclear development" (20), whereby North Korea pursued both tracks in parallel, alternatively prioritizing one or the other without abandoning either. The United States' North Korea policy until now, he argues, has failed to consider this strategy and has too often been based on wrong assumptions, deeply ingrained suspicions, political priorities, and the repeated belief that engaging in diplomacy with Pyongyang would only perpetuate a cycle of "provocation, extortion, and reward" (16).

The book's focus is on the period between 2004 and 2019, when most significant nuclear and missile developments occurred, and in particular between 2004 and 2010, when Hecker visited North Korea on seven different occasions. His assessment of North Korea's nuclear developments and diplomatic strategy during this time are grounded in the unprecedented access that he had to nuclear facilities and the numerous conversations with North Korean scientists and diplomats he conducted. These are recounted in great detail, providing the reader with striking descriptions of the Yongbyon Nuclear Research Center as well as comprehensive accounts of his exchanges with key North Korean figures over the years. Hecker's visits served as one of the few conduits where the North Koreans displayed both the nuclear and diplomatic tracks side by side. This enabled him to assess technical developments and the North's willingness to negotiate based on the level of access provided and the information shared by scientists, diplomats, and military officials in different settings.

The unique insights gained through these visits are supplemented by Hecker's own extensive technical expertise gained from working in nuclear weapons labs, his experience working with Soviet and Chinese nuclear scientists, and his access to high-level officials in the three different US administrations his book covers (those of George W. Bush, Barack Obama, and Donald Trump). Hecker relies on, and acknowledges, the work and expertise of seasoned North Korea experts such as John W. Lewis, with whom he travelled to

North Korea and to whose memory the book is dedicated, and Robert Carlin.¹ Hecker does not seek to provide an extensive history of North Korea's nuclear program or of nuclear negotiations between Pyongyang and Washington. The former is addressed in works such as David Albright and Kevin O'Neill's *Solving the North Korean Nuclear Puzzle*, and Ankit Panda's *Kim Jong Un and the Bomb*; the latter in books such as Charles Pritchard's *Failed Diplomacy*, Mike Chinoy's *Meltdown*, and Don Oberdorfer and Robert Carlin's *The Two Koreas*.²

Instead, *Hinge Points* complements these earlier works, which he cites extensively, by outlining the interlinkages between the nuclear and diplomatic tracks that North Korea undertook and the failures of three different US administrations to address them, focusing on six notable hinge points. Under President Bush, the US walked away from the 1994 Agreed Framework in 2002, then undermined a joint statement that had been agreed to during a round of Six-Party Talks in 2005. Under President Obama, two separate failed satellite launches led to a US-orchestrated UN Security Council condemnation in 2009 and the withdrawal of the United States from the Leap Day Deal which sought to implement a moratorium on North Korean long-range missile launches, nuclear tests, and uranium enrichment activities at Yongbyon, in 2012 respectively. The Obama administration also dismissed a 2015 North Korean proposal for a nuclear test moratorium. Finally Hecker considers the decision of the Trump administration not to agree on a deal at the Hanoi Summit in 2019 as “the most serious hinge point yet” (383). At all these different moments, Hecker estimates that the technical benefits for constraining part of North Korea's nuclear program were not adequately assessed, while US officials over-emphasized the political risks and ignored what he considered to be genuine North Korean overtures for diplomacy.

Hinge Points follows a mostly chronological structure. The second and third chapters provide important background information for readers who are unfamiliar with either North Korea's post-Korean War history, the origins of its nuclear and missile programs, the physics and engineering behind nuclear weapons, and the nuclear fuel cycle (26-54). All are useful for situating the timeframe in which Hecker's interactions with North Korea and his analysis begin in 2004, while the technical “Nuclear Weapons 101” sections prove to be essential to understanding some of the later details of conversation with North Korean officials and the conclusions Hecker draws from them. Chapters 4-14 detail Hecker's own observations based upon his visits as well as parallel political developments in both Washington and Pyongyang (55-274).

The next six chapters, covering the period between 2010 and 2019, rely more heavily on news media, speeches and statements, open-source analyses of North Korean facilities by the James Martin Center for Non-Proliferation Studies and 38North,³ and, interestingly, memoirs of US officials involved in negotiations with North Korea (275-372).⁴ The latter often reflected a lack of interest in and understanding of North

¹ Robert Carlin and John W. Lewis, “Negotiating with North Korea: 1992–2007,” *Policy in Context*, Center for International Security and Cooperation, Freeman Spogli Institute for International Studies, Stanford University, January 2008, https://fsi9-prod.s3.us-west-1.amazonaws.com/s3fs-public/Negotiating_with_North_Korea_1992-2007.pdf

² David Albright and Kevin O'Neill, eds., *Solving the North Korean Nuclear Puzzle* (Washington, DC: Institute of Science and International Security, 2000); Ankit Panda, *Kim Jong Un and the Bomb: Survival and Deterrence in North Korea* (New York: Oxford University Press, 2020); Charles L. Pritchard, *Failed Diplomacy* (Washington, DC: Brookings Institution Press, 2007); Mike Chinoy, *Meltdown: The Inside Story of the North Korean Nuclear Crisis* (New York: St. Martin's Griffin, 2009); Don Oberdorfer and Robert Carlin, *The Two Koreas: A Contemporary History* (New York: Basic Books, 2014).

³ See satellite imagery resources collected by Hecker with the James Martin Center for Nonproliferation Studies (CNS) for *Hinge Points* here: <https://nonproliferation.org/hinge-points-satellite-imagery/>; a separate CNS database collecting North Korean missile data in the “North Korea Missile Test Database” is available here: <https://www.nti.org/analysis/articles/cns-north-korea-missile-test-database/>; and work done by 38North on North Korean nuclear and missile facilities based on satellite imagery analysis can be accessed here: <https://www.38north.org/topics/satellite-analysis/>

⁴ See for instance: Christopher Hill, *Outpost: A Diplomat at Work* (New York: Simon & Schuster, 2014); Hillary Rodham Clinton, *Hard Choices* (New York: Simon & Schuster, 2014).

Korean nuclear ambitions or even, in the case of John Bolton, explicit intentions to avoid a deal with North Korea at all costs. Bolton's second memoir *The Room Where it Happened*,⁵ is one of the few primary sources that exist detailing the behind-the-scenes of Trump's second summit with Kim Jong-un in Hanoi. Hecker strongly relies on it to piece together the events leading to its failure. If this were a fictional text, then Bolton would clearly be the main antagonist, having squandered several opportunities for progress on the nuclear file under both the Bush and Trump administrations. A final chapter and epilogue summarize the hinge points and briefly lament the worsening situation since President Joe Biden took office, warning that the diplomatic track is becoming more difficult to pursue with each further enhancement to Pyongyang's nuclear and missile programs (373-385).

While Hecker has written about his technical assessments of North Korea's nuclear program based on his visits in other reports and congressional hearings,⁶ this book provides him with the room to expand on these visits and conversations and provides a much fuller picture of the context behind them and how he arrived at certain conclusions. He walks the reader smoothly through technical observations and discussions regarding various nuclear facilities and clearly highlights what he believes are the implications for the North's nuclear weapons program. When speculating on or giving meaning to the tones, silences, or refusals of officials to answer certain questions, he makes it clear that these are his impressions. With each new visit, he is able to rely on his previous interactions, draw on his understanding of the facilities and the people demonstrating the value of continued dialogue, relationship, and trust building over time. He highlights the benefits of a Track 1.5 setting—where both governmental and non-governmental experts interact—in parallel to a Track 1 dialogue (with only government officials in attendance) such as the Six-Party Talks that were ongoing throughout most of the period when Hecker travelled to North Korea. With Hecker's group, North Korean officials could test out particular arguments and positions prior to official discussions and adjust them accordingly.

The chapters detailing Hecker's visits are without a doubt the highlight of the book. While Hecker has met with quite a few North Korean scientists as well as policy and military officials, his accounts of his numerous interactions with Dr. Ri Hong Sop, Ambassador Ri Gun, and Vice Minister Kim Gye Gwan in particular stand out given their prevalence, breadth, and depth. Dr. Ri Hong Sop was the director of the Yongbyon nuclear complex and later became the head of the Nuclear Weapons Institute. Ambassador Ri Gun was then the Deputy-Director of the North American Affairs Bureau at the Foreign Ministry while Kim Gye Gwan was a Vice Minister of Foreign Affairs. The author's extensive conversations with Dr. Ri are surprising given their range and overall frankness, and are clearly the most insightful for Hecker.

Dr. Ri is portrayed as patient, professional, and apt at avoiding topics he was not permitted to talk about such as details regarding nuclear tests for instance. Year after year, Hecker also notes how Ambassador Ri and Vice Minister Kim improved their technical understanding of nuclear matters. At times, their questions to Hecker revealed some of the divides between North Korea's nuclear and military enterprise on the one hand, and its political and diplomatic spheres on the other. After Pyongyang's first nuclear test, Hecker notes that "it seemed to me that [Ambassador] Ri was asking these questions to get a sense of the veracity of the information he was being given about the nuclear test" (157). Candid moments, such as Ambassador Ri's comment that his favorite American movie is *Rambo* or Vice Minister Kim quoting a line from *Gone With the Wind*, bring some unexpected lightness to what are otherwise formal exchanges.

⁵ John Bolton, *The Room Where It Happened: A White House Memoir* (New York: Simon & Schuster, 2020).

⁶ See for instance: Siegfried S. Hecker, "Lessons Learned from the North Korean Nuclear Crises," *Daedalus* 139:1 (2010): 44-56, DOI: <https://doi.org/10.1162/daed.2010.139.1.44>; *An Update on North Korean Nuclear Developments: Hearing before the Comm. on Foreign Relations* 108th Cong. 412 (2004) (statement of Siegfried S. Hecker, Senior Fellow, Los Alamos National Laboratory); Siegfried S. Hecker, Robert L. Carlin, and Elliot A. Serbin, "A Comprehensive History of North Korea's Nuclear Program," Center for International Security and Cooperation, Freeman Spogli Institute for International Studies, Stanford University, May 2018 <https://cisac.fsi.stanford.edu/content/cisac-north-korea>;

Beyond the nuclear issue, Hecker also provides short observations of the rest of his trips to North Korea, where Lewis would always arrange further cultural or educational visits. While these are not the focus of the book, and it is true that many further accounts exist of life in North Korea,⁷ Hecker's trips offer glimpses of life in schools, factories, and markets, and the changes those institutions underwent in seven years and with increased access to Chinese goods. Even such carefully orchestrated visits remind the reader of what Hecker describes as "a warm humanity that, given the opportunity, could peek through what otherwise appeared to be forbidding and impenetrable political barriers" (61).

Where *Hinge Points* falters is in its brief development of one its main underlying arguments, that both Kim Jong-il and Kim Jong-un genuinely sought to engage in diplomacy with the United States because they saw it as essential for improving North Korea's external security environment, developing its economy, and providing a counter-balance to China. Hecker is also extremely critical of the North Korea policy of US leaders without necessarily delving deeply into a number of factors that played a role in defining this policy, notably the US-South Korea alliance or other domestic and foreign policy objectives. While he acknowledges that "over the years many other issues have plagued US decision-making about the North Korea nuclear question," he does not focus on them, which, at times, leads to an incomplete picture of the reasons why the United States decided against engagement (24). Finally, the difference in pacing, tone, and sourcing between the first part of the book, which recounts his visits, and the second, which was written after his final visit, is quite stark, and the second part feels at times rushed.

Overall, *Hinge Points* adds much detail to the recent history of nuclear negotiations between the United States and North Korea and provides a good overview of North Korea's nuclear developments, particularly those occurring between 2004 and 2010, and the reasoning behind them.⁸ Hecker's ambition to show the parallel tracks of nuclear developments and diplomatic engagement undertaken by the North Koreans fills a certain knowledge gap in terms of Pyongyang's negotiating strategy. *Hinge Points* will appeal to readers interested in US non-proliferation policy and North Korean nuclear issues.

Névine Schepers is the co-head of the Swiss and Euro-Atlantic Security team and a senior researcher at the Center for Security Studies (CSS) at ETH Zurich in Switzerland. Her research focuses on nuclear arms control, non-proliferation, deterrence, and disarmament issues.

⁷ See memoirs by defectors such as Kang Chol-hwan, *The Aquariums of Pyongyang: Ten Years in the North Korean Gulag* (New York: Basic Books, 2001) and Jihyun Park, *The Hard Road Out: One Woman's Escape from North Korea* (Manchester: HarperNorth, 2022); as well as works by, among others, Andrei Lankov, *The Real North Korea: Life and Politics in the Failed Stalinist Utopia* (Oxford: Oxford University Press, 2014); Ralph Hassig and Kongdan Oh, *The Hidden People of North Korea* (Maryland: Rowman & Littlefield, 2009).

⁸ For more on this topic, see Jonathan D. Pollack, *No Exit North Korea, Nuclear Weapons, and International Security* (Abingdon, UK: Routledge, 2011); Van Jackson, *On the Brink: Trump, Kim, and the Threat of Nuclear War* (Cambridge: Cambridge University Press 2018); Ramon Pacheco Pardo, *North Korea –US Relations From Kim Jong Il to Kim Jong Un* (Abingdon, UK: Routledge, 2020);