Panel: “Scientific Innovation and Geopolitical Risks in Northeast Asia”

Talking points by John Delury (Yonsei University)
Focusing on North Korean nuclear weapons development and US-China relations

Upon assuming the office of president, Donald Trump announced a new framework for US-China relations, based around two key issues: North Korea and trade. More specifically, Trump wanted to get rid of two things—North Korea’s nukes and China’s trade surplus. He made it clear in his first year in office that urgency of the nuclear threat trumped the trade deficit, and since he needed Xi Jinping’s help to achieve “maximum pressure” on Kim Jong Un, he would hold off in terms of exerting American pressure against China on trade issues. Xi appears to have accepted that bargain, which lasted until the spring of 2018, at which point, for various complicated and debatable reasons, high-level diplomacy began between Seoul and Pyongyang and then Washington and Pyongyang. In the midst of Panmunjom (April) and Singapore (June) summits, the Trump administration fired the first volleys in what has grown into a trade war. The focus on getting Beijing’s help to enforce sanctions against North Korea shifted to implementing tariffs against China itself. On the day that Moon flew to Pyongyang for his second major summit with Kim in September 2018, the Trump administration announced another volley of tariffs against China. You might call these illustrations of entanglement of the North Korean nuclear threat and Chinese trade challenge.

Nothing is more threatening to basic peace and security in Northeast Asia than the North Korean nuclear issue, which remains unresolved. Nothing is more threatening to prosperity and growth in the region than the

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US-China economic relationship, which has is becoming unresolved. If you combine what is at stake in the US-North Korea "peace and denuclearization" negotiations along with the US-China trade talks, you are talking about a staggering degree of geopolitical risk and opportunity. The intriguing question this session introduce is the element of **scientific innovation** into this fragile equilibrium of geopolitical risk. What role do the defining technologies and scientific advances of our moment—artificial intelligence, quantum technology, smart devices and networks, nanotechnology, the Internet of things, the Fourth Industrial Revolution—play in these two issues? Do science and technology in some ways link the region's gravest security risk and the greatest economic one?

The question calls to my mind a fragmentary memory, from a visit to North Korea 8 or 9 years ago. I was traveling along with a leading expert on the contemporary history of Chinese economic reform, and we were in van between visits to North Korean economic sites, our conversation shifted to China. He stressed how the recent Indigenous Innovation Strategy marked a fundamental turning point, the 'end of reform' era. That conversation stuck with me as the technonationalist competition between China and the US intensified, to the current standoff point. Meanwhile, in our dialogues with North Korean economic planners, agronomists, factory managers, etc., he would ask what strategy North Korea had in place to make the most of Chinese economic growth, while defending against its downsides. It seemed at the time they had no answer. The one prominent tech push in North Korea was a propaganda campaign to promote 'computer numerical control' [CNC], cutting-edge technology… circa 1970.

That visit took place just before the death of Kim Jong Il and succession to his son. My next visit to North Korea was about a year into the

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Kim Jong Un era, as part of a delegation led by former UN ambassador Bill Richardson and Google Executive Chairman Eric Schmidt. On that trip, we were shown the best of North Korean IT, including a stop at Pyongyang's Silicon Valley, the KCC. The new leader had been stressing the need for a "new knowledge-based economy," in a way reminiscent (to me) of Deng Xiaoping's early emphasis on science and technology as keys to the success of the new policy of "reform and opening up." Cell phones were still relatively new, and our delegation made the case that increasing the dissemination of communications technology, allowing people to talk by cell and text, would grow the economy. The conventional wisdom used to be that the Kim regime would never allow in mobile phones; once introduced, many experts argued then that only a very narrow slice of the elite of elite would be allowed to use them. Today, estimates are in the range of 6,000,000 mobile phones, or 25% of the population.

Western media has not paid much attention to these transformations; instead, we have been transfixed by a different kind of technological advance—in North Korean missile and nuclear weapons systems. But Kim announced in April 2018 that economic development is the overriding priority of the nation, prioritized over bolstering the nuclear deterrent or military defense. Kim identifies technological innovation and improvement as a key to realizing "self-reliance" (zili gengsheng). One way to frame the diplomatic challenge is to ask: Are we ready to work together with Kim in helping North Korea close the technological and economic gap with the rest of the region, so that his able scientists and technicians can focus on the civilian sector rather than new munitions… or will we hold out the promise of such cooperation and integration as the reward for complete denuclearization?

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The question concerning technology is thus a double-edged sword when it comes to the dilemma of how to approach Kim Jong Un's North Korea. Tech meanwhile plays a central role as a source of tension and conflict in US-China relations. On the economic side, US businesses have long complained that having their technology stolen is the price of doing business in China. Increasingly, the US business community seeks "reciprocity" and redress, especially with regards to IP protection. Meanwhile, on the political and ideological side of the relationship, one of the most disturbing new features of the Xi Jinping era in the eyes of American observers is the deployment of surveillance technology both domestically and internationally. U.S. researchers and media are raising a new level of concern over the creation of a virtual panopticon in the northwestern province of Xinjiang, to monitor the Muslim Uighur minority popution. Xinjiang surveillance, cyberhacking, and IP theft are central pieces of evidence in the growing sense—if not already consensus view—that "engagement" with China was fundamentally misguided. US fears over the Chinese government use of technology is feeding the intensifying sense of "strategic competition"—precisely the kind of dynamic that Graham Allison warns can lead to the worst imaginable outcome.

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