The Prospect of Nuclear Proliferation as a Deterrent Factor

Introduction

Since China conducted its first nuclear weapons test in 1964, the number of states with nuclear weapons, and those "latent nuclear powers" (without weapons but retaining the capability to make them), has risen steadily. Historically, China has viewed either the Soviet Union, and subsequently Russia, or the United States as the predominant nuclear threats but the possibility of one or more of China's neighbors obtaining nuclear weapons has remained worrisome to the CCP leadership.

If China attempted to invade Taiwan and used nuclear employment threats as part of its "theory of victory,"¹ the resulting damage to U.S. credibility and extended deterrence efforts could trigger a cascade of proliferation in the region, including nuclear proliferation. If China were unsuccessful in its initial invasion attempt, Taipei might face enormous pressure to restart a nuclear weapons program. If China were successful, or unsuccessful in its invasion attempt, Tokyo and/or Seoul could be motivated to develop their own nuclear weapons programs—developments certain to dramatically raise Beijing's threat perceptions. Could the United States take advantage of the possibility of nuclear proliferation to help deter a CCP decision to invade Taiwan? This chapter examines the possibilities of both horizontal proliferation (states without nuclear weapons initiating nuclear weapons among current nuclear powers) in response to a prospective or actual Chinese invasion of Taiwan.

As part of the broader "victory denial" deterrence strategy, the United States, allies and partners could brandish the potentially deterring effects of a worsened nuclear threat environment for China. Although not a deterrent tool controlled or created by the United States, U.S. and allied officials could communicate to China the likely nuclear proliferation danger it would naturally and almost certainly provoke if it were to invade Taiwan.

The possibility of horizontal and/or vertical nuclear proliferation after an attack against Taiwan, in conjunction with the other tools discussed previously in this report, could add significant deterrent effects. The goal for this deterrence tool would be to introduce or reinforce the belief within China's leadership that a successful or unsuccessful invasion of Taiwan would ultimately be a Pyrrhic victory, due in part to a potentially long-lasting and significantly more menacing nuclear threat environment—an intolerable outcome that would contribute to the CCP's calculation that the political status quo is the less intolerable option.

¹ See Bradley Roberts, *On Theories of Victory, Red and Blue*, Livermore Papers of Global Security, No. 7 (June 2020), pp. 42-57; Bradley Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford, CA: Stanford University Press, 2016), pp. 35, 99, 103-104, 192-194, 260-262, 268-271; Christopher Ford, "Strengthening Deterrence and Reducing Nuclear Risks: The Supplemental Low-Yield U.S. Submarine-Launched Warhead," *Arms Control and International Security Papers*, U.S. Department of State, Office of the Under Secretary of State for Arms Control and International Security, Vol. 1, No. 4 (April 24, 2020), p. 2. And, Bradley Thayer, "Get Ready for a New Arms Race," *The National Interest*, May 21, 2020, at https://nationalinterest.org/feature/get-ready-new-arms-race-why-nuclear-strategic-stability-won%E2%80%99t-workchina-156676.

Do Increased Nuclear Threats Worry China?

The possibility of nuclear proliferation can only act as a deterrent if such a threat is a credible cause for concern in Beijing. Based on the available evidence, China's leadership does appear to track and protest perceived increases in the nuclear threat to China. The recent defense white paper, *China's National Defense in the New Era*, cites both the United States and Russia strengthening their nuclear capabilities as worrying developments.² China's officials have also indicated that they view latent nuclear powers, such as Japan, as potential threats and have tacitly endorsed apparent nuclear threats against Japan while denouncing any change to Japan's non-nuclear status.³ In addition, China has stated that it would consider using force against Taiwan if it attempts to acquire nuclear weapons.⁴

Given this evidence, it appears likely that China's leadership is aware that current and potential nuclear-armed states could react negatively to an invasion of Taiwan. Communicating to China that an invasion of Taiwan would likely entail unpredictable and long-lasting nuclear proliferation risks that threaten China could be an important additional element in a victory denial deterrence strategy.

Horizontal Proliferation Before and After an Invasion of Taiwan

Should China attempt invading Taiwan, current non-nuclear states may seek their own independent arsenals as a response to a seismic shift in threat perceptions.⁵ As detailed below, each potential nuclear power is unique, with varying degrees of capabilities and intentions, but each state's leadership could reasonably conclude that the overriding lesson of a Chinese invasion of Taiwan is: those without nuclear weapons risk Chinese military coercion and attack.

https://www.airuniversity.af.edu/Portals/10/CASI/documents/Translations/2019-

² The State Council Information Office of the People's Republic of China, *China's National Defense in the New Era* (Fort McNair, VA: China Aerospace Studies Institute, July 2019), p. 3, available at

^{07%20}PRC%20White%20Paper%20on%20National%20Defense%20in%20the%20New%20Era.pdf?ver=akpbGkO5ogbDPPbflQkb5A%3d%3d.

³ See, for example, Eric Heginbotham, Michael S. Chase, Jacob L. Heim, Bonny Lin, Mark Cozad, Lyle J. Morris, Christopher P. Twomey, Forrest E. Morgan, Michael Nixon, Cristina L. Garafola, and Samuel K. Berkowitz, *China's Evolving Nuclear Deterrent: Major Drivers and Issues for the United States* (Santa Monica, CA: The RAND Corporation, 2017), pp. 93-95, available at https://www.rand.org/pubs/research_reports/RR1628.html; John Feng, "China Officials Share Viral Video Calling for Atomic Bombing of Japan," *Newsweek*, July 14, 2021, available at https://www.newsweek.com/china-officials-share-viral-video-callingatomic-bombing-japan-exception-theory-1609586; and, Justin McCurry, "China Rattled by Calls for Japan to Host US Nuclear Weapons," *The Guardian*, March 1, 2022, available at

https://www.theguardian.com/world/2022/mar/01/china-rattled-by-calls-for-japan-to-host-us-nuclear-we apons.

⁴ U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China* (Washington, D.C.: Department of Defense, 2021), pp. 115-116, available at https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF.

⁵ For more on the deterrence effects of such a possibility, see, Jared McKinney and Peter Harris, "Broken Nest: Deterring China from Invading Taiwan," *Parameters*, Vol. 51, No. 4, p. 32. For additional views on the possibilities of nuclear proliferation, specifically Japan and South Korea, see, Julian Kerr, "South Korea and Japan 'Inevitably Pushed' to Nuclear Weapons," *Australian Defence Magazine*, March 24, 2022, available at

https://www.australiandefence.com.au/news/south-korea-and-japan-inevitably-pushed-to-nuclear-weapons; and, Doug Bandow, "Give South Korea Nuclear Weapons," *The American Conservative*, March 24, 2022, available at https://www.theamericanconservative.com/articles/give-south-korea-nuclear-weapons/.

Japan

The U.S. government and outside analysts have long recognized that Japan is a latent nuclear power with the technical means and materials needed to achieve nuclear weapons design and production.⁶ China also has long recognized Japan's latent nuclear capabilities and has often criticized Japan for retaining stockpiles of fissile material.⁷ Given a latent Japanese nuclear capability, China's leadership should recognize that any attempt to invade Taiwan, regardless of success, would incentivize Japan in this direction.

While some analysts might argue that Japan's anti-nuclear legacy will prevail and stymie any nuclear weapons ambitions, China should be reminded that this predisposition has been undermined in recent years, including by China. Japanese strategists are well aware that the threat to Japan from China has increased dramatically in the past two decades. For example, strategists in China have openly written about how a successful invasion of Taiwan would allow the PLA Navy far greater access to the first island chain with the resulting potential to break the Japan-U.S. alliance because of the difficulty the United States would have in supporting Japan from overseas.⁸ Indeed, Japanese politicians have begun openly to discuss not only rearming Japan, but have raised the topic of nuclear deterrence.⁹

Japan views nuclear deterrence as an essential element of its security strategy, although currently that deterrence is supplied solely by the U.S. nuclear umbrella. As the 2021 annual Japanese Ministry of Defense report states, "In dealing with the threat of nuclear weapons, U.S. extended deterrence, with nuclear deterrence at its core, is essential: Japan will closely cooperate with the United States."¹⁰ While Japanese officials typically do not spotlight Japan's latent nuclear capabilities in public remarks, former Defense Minister Shigeru Ishiba said, "Japan should have the technology to build a nuclear weapon if it wants to do so."¹¹ If China were to use the threat of nuclear escalation as an element of its invasion of Taiwan, Japanese leaders would undoubtedly seek to increase their defense options, including possibly acquiring nuclear weapons.

As further evidence of the possibility of proliferation, Japanese leaders have become increasingly vocal about the importance of Taiwan for Japan's security.¹² For example,

⁶ For representative examples, see, Director of Central Intelligence, *Special National Intelligence Estimate: Prospects for Further Proliferation of Nuclear Weapons* (Washington, D.C.: Central Intelligence Agency, December 18, 1975), pp. 6-7, available at https://www.cia.gov/readingroom/docs/DOC_0001247369.pdf; and, Mark Fitzpatrick, *Asia's Latent Nuclear Powers: Japan, South Korea and Taiwan* (London: Routledge, 2016), pp. 65-125.

⁷ As detailed in, Hui Zhang, "China Worries about Japanese Plutonium Stocks," *The Bulletin of the Atomic Scientists*, June 17, 2014, available at https://thebulletin.org/2014/06/china-worries-about-japanese-plutonium-stocks/. See, also, China's relevant concern that Japan could host U.S. nuclear weapons: McCurry, "China Rattled by Calls for Japan to Host US Nuclear Weapons," op. cit.

⁸ As detailed in, Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China's Rise and the Challenge to U.S. Maritime Strategy* (Annapolis, MD: Naval Institute Press, 2018), 2nd edition, pp. 86-87.

⁹ See, for example, Rupert Wingfield-Hayes, "Will Ukraine Invasion Push Japan to go Nuclear?," *BBC*, March 26, 2022, available at https://www.bbc.com/news/world-asia-60857346.

¹⁰ Japanese Ministry of Defense, *Defense of Japan* (Tokyo: Ministry of Defense, 2021), p. 212, available at https://www.mod.go.jp/en/publ/w_paper/wp2021/D0J2021_EN_Full.pdf.

¹¹ "Japan should be able to build nuclear weapons: ex-LDP Secretary-General Ishiba," *The Japan Times*, November 6, 2017, available at https://www.japantimes.co.jp/news/2017/11/06/national/japan-able-build-nuclear-weapons-ex-ldp-secretary-general-ishiba/.

¹² For an extended discussion of this topic, see, Ryan Ashley, "Japan's Revolution on Taiwan Affairs," *War on the Rocks*, November 23, 2021, available at https://warontherocks.com/2021/11/japans-revolution-on-taiwan-affairs/.

shortly after Shinzo Abe resigned as Prime Minister of Japan, he stated that even an attack on an American vessel transiting the Taiwan Strait could be considered the necessary trigger for Japanese self-defense actions in the region.¹³ He then stated, as noted previously, "A Taiwan emergency is a Japan emergency. That is, it's an emergency for the US-Japan alliance as well."¹⁴ Or, as Japan's deputy Defense Minister Yasuhide Nakayama recently stated, "… we have to protect Taiwan as a democratic country."¹⁵ In addition, the 2021 Defense of Japan report notes that, "Stabilizing the situation surrounding Taiwan is important for Japan's security…"¹⁶

Potentially adding to Japan's proliferation calculus, officials in China have claimed parts of Japanese territory, such as the Senkaku Islands and even the island of Okinawa—the host of a large U.S. military base—establishing a justification for territorial aggression against Japan.¹⁷ Adding even greater incentive, China could conceivably assert its perceived historical claim on Okinawa in an attempt to eliminate the island as a potential base for military operations against Beijing. Faced with such a prospect, and perhaps a diminished level of faith in U.S. conventional power and/or extended deterrence, Japan's leadership could decide that building a nuclear arsenal is the best chance for ensuring Japan's national survival. In fact, as Amb. Robert Joseph, former Under Secretary of State for Arms Control and International Security, recently stated, "Based on my discussions with Japanese officials, it would not be surprising if a combination of an aggressive North Korea and a successful Chinese invasion of Taiwan caused a fundamental shift in Japanese views on the utility and desirability of nuclear weapons."¹⁸

Taiwan

Perhaps the ultimate Chinese nightmare future scenario involves a failed invasion attempt against Taiwan, which, in response, restarts efforts to build its own nuclear weapons. Taiwan has reportedly independently explored the possibility seriously at least twice before—first beginning in the early-to-mid 1970s, and again in the mid-to-late 1980s.¹⁹ U.S. pressure apparently led Taiwan to cease the program but, in the wake of an unsuccessful Chinese

https://history.state.gov/historicaldocuments/frus1977-80v13/d12.

¹³ "Abe Hints at Japan's Possible Military Role in Taiwan Contingency," *The Japan Times*, December 14, 2021, available at https://www.japantimes.co.jp/news/2021/12/14/national/politics-diplomacy/abe-hints-japans-possible-military-role-taiwan-contingency/.

¹⁴ Kathrin Hille, Robin Harding, Eri Sugiura, and Demetri Sevastopulo, "Japan's former PM warns China invading Taiwan would be an 'emergency' for Tokyo," *Financial Times*, December 1, 2021, available at https://www.ft.com/content/f4140801-a688-4703-825d-236fab4818e1.

¹⁵ David Brunnstrom, "Japan Minister Says Necessary to 'Wake Up' to Protect Taiwan," *Reuters*, July 1, 2021, available at

https://www.reuters.com/world/asia-pacific/japan-minister-says-necessary-wake-up-protect-taiwan-2021-06-28/.

¹⁶ Japanese Ministry of Defense, *Defense of Japan* (Tokyo: Ministry of Defense, 2021), p. 19, available at https://www.mod.go.jp/en/publ/w_paper/wp2021/D0J2021_EN_Full.pdf.

¹⁷ Justin McCurry, "China Lays Claim to Okinawa as Territory Dispute with Japan Escalates," *The Guardian*, May 15, 2013, available at https://www.theguardian.com/world/2013/may/15/china-okinawa-dispute-japan-ryukyu.

¹⁸ Author interview, December 9, 2021.

¹⁹ Rebecca K. C. Hersman and Robert Peters, "Nuclear U-Turns: Learning from South Korean and Taiwanese Rollback," *The Nonproliferation Review*, Vol. 13, No. 3 (2006), pp. 543-545. See also, Michael Oksenberg, "Memorandum From Michel Oksenberg of the National Security Council Staff to the President's Assistant for National Security Affairs (Brzezinski)," in David P. Nickles, ed., *Foreign Relations of the United States*, *1977-1980, Volume XIII, China* (Washington, D.C.: Department of State, memo originally written February 16, 1977), available at

invasion attempt, U.S. officials would be hard-pressed to tell Taiwan once again to refrain. In fact, international pressure to call on Taiwan to cease such a program might be lacking after an unsuccessful Chinese invasion. Admittedly it is unknown how the Taiwanese leadership would act after a failed Chinese invasion attempt, and Taipei might decide that the difficulties and dangers of pursuing its own nuclear program would be too costly to overcome—such as the lack of fissile material and potentially endangering international support by pursuing a nuclear weapons program. Additionally, much of the military and civilian infrastructure that could contribute to a nuclear weapons program would likely be destroyed during a failed Chinese invasion attempt. Yet China cannot dismiss out of hand the possibility that following a failed attempt to invade, Taiwan might try either to restart its nuclear weapons program, or to obtain such weapons with the help of neighbors who greatly fear China's expansionism.

South Korea

South Korean officials would likely have multiple concerns about a Chinese invasion of Taiwan. First, there would be concern about the collapse of U.S. extended deterrence credibility. Given its geographic location and its dependence on open sea lanes, South Korea would likely fear a reduced or contested U.S. naval presence in the Sea of Japan and East China Sea. Additionally, Seoul might fear that China's action against Taiwan would embolden North Korea to use its nuclear threat to coerce or even invade South Korea. In such a case, the South Korean leadership might decide that having its own nuclear deterrent would be essential.

The notion of enhanced nuclear security is already much on the minds of the public in South Korea. According to polls, the majority of the South Korean populace consistently approves of either re-deploying U.S. nuclear weapons in South Korea, or South Korea developing its own nuclear weapons—mostly with respect to deterring a North Korean attack.²⁰ Yet there is a growing sentiment in South Korea that China is the greater threat to peace on the Korean peninsula.²¹ In fact, a recent major study indicates that a majority of the population would support a domestic nuclear weapons program that is focused on the threat from China.²² Thus, from the standpoint of political will, South Korea's leadership may face little domestic resistance should it decide to embark on a nuclear weapons program in the wake of a Chinese invasion of Taiwan.

In addition, should Japan initiate a nuclear weapons program, it would place additional pressure on South Korea's leadership to pursue the same course, given the historical animosity between the two states. As was the case with Taiwan, U.S. officials reportedly have encouraged South Korean leaders in the past to refrain from pursuing their own nuclear

²⁰ Toby Dalton and Ain Han, "Elections, Nukes, and the Future of the South Korea–U.S. Alliance," *Carnegie Endowment for International Peace*, October 26, 2020, available at https://carnegieendowment.org/2020/10/26/elections-nukes-and-future-of-south-korea-u.s.-alliance-pub-83044.

²¹ Ibid.

²² Toby Dalton, Karl Friedhoff, and Lami Kim, *Thinking Nuclear: South Korean Attitudes on Nuclear Weapons* (Chicago, IL: The Chicago Council on Global Affairs, February 2022), p. 2, available at

https://www.thechicagocouncil.org/sites/default/files/2022-02/Korea%20Nuclear%20Report%20PDF.pdf.

program but may be hard-pressed to do so again following a successful Chinese invasion of Taiwan and the potential Japanese response.²³

Australia

Australia is a key U.S. ally with vital interests in the Indo-Pacific region—factors that might prompt Canberra to reassess its current non-nuclear weapon power status following an invasion of Taiwan. Fearful of a waning U.S. presence in the region and the degraded credibility of U.S. extended deterrence—and having been the target of Chinese coercive economic sanctions—Australian strategists have begun debating what once were considered non-viable options: a nuclear weapon-sharing program with the United Kingdom or United States, or development of its own domestic nuclear weapons program.²⁴ Home to a number of uranium mines, including the world's largest uranium deposit, Australia has the material necessary to become a nuclear weapon power should it choose to pursue the necessary technology and delivery systems.²⁵ Although the recent official announcement of Australia's plans to purchase submarines stressed that they will only be nuclear powered, China should account for the possibility that a Chinese invasion of Taiwan could prompt Australia to reassess the submarines' conventional-only role.²⁶

...and Beyond

An invasion of Taiwan could spark additional states to consider building their own nuclear weapon programs beyond those examined above. The pursuit of nuclear capabilities by Australia, Taiwan, Japan, or South Korea could lead to a general breakdown in the Nuclear Nonproliferation Treaty (NPT), leading other states to seek a nuclear weapons capability.²⁷ Obviously, there are numerous uncertainties involved in this possibility, but an invasion of Taiwan could certainly spur a foundational reassessment of the threat environments that could catalyze a vast new expansion of nuclear weapon states in the world—many of which would be opposed to China and/or in alliances with the United States. This prospect should be a deterring factor in the CCP's calculations of costs versus benefits.

²³ Rebecca K. C. Hersman and Robert Peters, "Nuclear U-Turns: Learning from South Korean and Taiwanese Rollback," *The Nonproliferation Review*, Vol. 13, No. 3 (2006), pp. 540-543.

²⁴ For representative examples, see, Peter Layton, "Why Australia Should Consider Sharing Nuclear Weapons," *The Interpreter*, January 17, 2018, available at https://www.lowyinstitute.org/the-interpreter/why-australia-should-consider-sharing-nuclear-weapons; and, Rod Lyon, "Should Australia Build its own Nuclear Arsenal?" *The Strategist*, October 24, 2019, available at https://www.aspistrategist.org.au/should-australia-build-its-own-nuclear-arsenal/.

²⁵ Australian Government, "Uranium," *Geoscience Australia – Australian Government*, no date, available at https://www.ga.gov.au/data-pubs/data-and-publications-search/publications/australian-minerals-resource-assessment/uranium.

²⁶ The White House, "Joint Leaders Statement on AUKUS," *The White House*, September 15, 2021, available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/15/joint-leaders-statement-on-aukus/.

²⁷ See, for example, Central Intelligence Agency, *The Dynamics of Nuclear Proliferation: Balance of Incentives and Constraints* (Washington, D.C.: CIA, September 1985), formerly Secret, sanitized and released May 26, 2010, available at https://www.cia.gov/readingroom/docs/CIA-RDP88T00565R000600950003-9.pdf.

Vertical Proliferation Before and After an Invasion of Taiwan

Nuclear-armed states could respond in a number of ways to an imminent Chinese invasion of Taiwan or in the aftermath of a successful invasion. Each of the relevant states is examined below.

The United States

As the United States begins its current nuclear modernization efforts across all three legs of its nuclear triad—bombers, submarines, and land-based intercontinental missiles—it will retain the potential option of adding to the number of planned systems. Although the planned U.S. nuclear modernization program will not increase the size of the arsenal—as most programs are one-for-one replacements—the "warm" production lines could relatively easily accommodate additional orders of the same systems. Given China's already large and rapid projected growth in its nuclear arsenal, combined with the increased threat an invasion of Taiwan would present, there is a possibility that the United States would respond in part by increasing the number of nuclear weapon systems it plans to build. In fact, when faced with a time of war, the U.S. Congress has regularly and substantially increased the overall U.S. defense budget, raising it 290 percent over the Korean War, 61 percent during the Nietnam War, 54 percent during the height of the Cold War from 1979-1985, and 107 percent from 1997-2010 during the Afghanistan and Iraq Wars.²⁸

Importantly, the United States would likely perceive the need to increase its nuclear arsenal for both deterring further Chinese aggression and assuring U.S. allies in the wake of a Chinese invasion of Taiwan. As discussed above, U.S. non-nuclear allies in the region would likely face increased pressure to become nuclear weapon states because of heightened threat perceptions following a Chinese invasion of Taiwan. If U.S. and allied conventional forces fail to prevent Taiwan from falling into Chinese hands, then U.S. allies may be much less assured by U.S. promises of further conventional reinforcement. Faced with the prospect of potential nuclear proliferation among its allies, and a skeptical allied view of conventional forces, the United States might consider increasing the number of its nuclear forces as a signal of its assurance commitments to its allies.

Beyond the prospect of the United States expanding its nuclear arsenal quantitatively is the prospect of its pursuit of new and different nuclear weapon designs and delivery systems. If China were to use or threaten to use low-yield nuclear weapons against a U.S. aircraft carrier off Taiwan, for example, it would likely dramatically affect U.S. nuclear strategy, and the perceived requirement for new capabilities for the future. In summary, an invasion of Taiwan within the next decade or more would likely trigger a fundamental U.S. reassessment of China's threat, and thus potentially lead the United States to manifestly increase the size and/or capabilities of its planned nuclear arsenal.

²⁸ Brendan W. McGarry, *FY2021 Defense Budget Request: An Overview* (Washington, D.C.: Congressional Research Service, February 20, 2020), p. 5, available at https://crsreports.congress.gov/product/pdf/IN/IN11224/2.

Russian Federation

It is difficult to predict how Moscow might respond to an invasion of Taiwan. Given their current friendly relations, it is entirely possible that Russia would fully support such an invasion and see little substantive change in its threat environment. Yet, while Sino-Russian military cooperation and joint exercises have grown in the past five years—a trend that may indeed continue—an invasion of Taiwan could begin to move the threat perception in Moscow against Beijing. NATO has long been Russia's, and previously the Soviet Union's, primary military focus. After the Sino-Soviet split in the Cold War, however, the Soviet Union, and then Russia, warily watched China's rise as a primarily land-based military power on its border. It is not unreasonable that Russian leaders might perceive a newly empowered China—after a successful invasion of Taiwan—as a major threat, perhaps one that will seek to resolve other border disputes using force, like the Sino-Soviet border conflict of 1969. In an effort to deter such a possibility, Moscow could decide to produce more non-strategic nuclear weapons (perhaps under the guise of countering U.S. and European-based threats) adding to its already "significant" projected growth over the next decade in its nuclear arsenal.²⁹ Additionally, Moscow may react to emerging horizontal proliferation concerns by hedging its nuclear force capabilities to account for potentially new, or more dangerous, threats.

India

Another possibility of vertical nuclear proliferation in the wake of a Chinese invasion of Taiwan is India, a state with its own history of responding to border incursions by China. Much like the case of Russia, India could fear China would seek militarily to resolve border conflicts while its forces were mobilized and battle-tested. Given that India is already producing more long-range nuclear forces, presumably intended to deter China, an invasion of Taiwan could cause India's leadership to increase the planned nuclear force expansion to account for the worsened threat environment.³⁰

...and Beyond

An attack by China on Taiwan is likely to set in motion a series of unpredictable counterresponses among other nuclear-armed powers, some of which might be immediate and others, long-term. The United Kingdom and France could respond by expanding their nuclear capabilities. If Japan reacts to a successful invasion of Taiwan by exploring its own nuclear weapon capability, North Korea might embark on a supplemental expansion of its nuclear arsenal.

²⁹ Robert P. Ashley Jr., "Russian and Chinese Nuclear Modernization Trends," *DIA.mil*, May 29, 2019, available at https://www.dia.mil/Articles/Speeches-and-Testimonies/Article/1859890/russian-and-chinese-nuclear-modernization-trends/.

³⁰ On the types of nuclear forces India is developing, see, Hans M. Kristensen and Matt Korda, "Indian Nuclear Forces, 2020," *Bulletin of the Atomic Scientists*, Vol. 76, No. 4 (2020), pp. 217-225.

Ultimately, China would face the prospect of a significantly deteriorated nuclear threat environment following an invasion of Taiwan—a prospect that may have a deterrent effect if properly communicated and understood in Beijing.

Nuclear Weapons "Use" in a Conflict over Taiwan

A critical final element in examining the potential deterrent effect of vertical and horizontal nuclear proliferation in the wake of an invasion of Taiwan is how China could "use" nuclear weapons in such an invasion. If China successfully utilizes a nuclear threat against the United States that causes Washington to either refrain from defending Taiwan in the first place, or to concede and seek a peace deal, other states will likely perceive great security value in obtaining their own nuclear arsenals to avoid the same fate as Taiwan. The key insight in this regard is that China does not have to employ (i.e., detonate) a nuclear weapon in order to potentially cause adverse nuclear proliferation. While officials in China may view the successful use of a nuclear deterrent threat in a Taiwan scenario as a short-term gain, the longer-term consequences detailed above could cause a net decrease in China's overall security.

If China were to employ nuclear weapons in a Taiwan scenario, it would likely strengthen the motivation of nuclear and non-nuclear powers to respond in the long term with increases in their own nuclear weapon arsenals or initiating their own nuclear weapon programs, respectively. Additionally, beyond the immediate and devastating physical effects of nuclear employment by Beijing, such use would fundamentally shift the threat perception of China around the world as a state that is willing to use nuclear forces to achieve its revisionist political ends. Such a reputation could cause a fundamental re-evaluation of the sufficiency of current defense postures and strategies worldwide in ways that could negatively impact China for decades.

Conclusion

There is no apparent open-source evidence that definitively indicates whether, and how much, elements of the CCP leadership have considered the nuclear proliferation consequences of a potential invasion of Taiwan. Perhaps the leadership in Beijing recognizes the potential proliferation risks of such an invasion but may feel compelled for other reasons to invade nonetheless. Or, perhaps China anticipates such a nuclear chain reaction among U.S. allies as a distinct possibility and is increasing its nuclear arsenal currently as a preemptive attempt to get ahead of the problem. In any case, the CCP leadership appears to follow closely the capabilities of nuclear weapon states, and the capacity of non-nuclear weapon states to become nuclear weapon states—an attribute that U.S. and allied officials could exploit for deterrence purposes.

Under the victory denial deterrence strategy, the possibility of horizontal and vertical nuclear proliferation, especially among bordering non-nuclear states around China, is a reality that U.S. and allied officials could communicate to the CCP leadership. The possibility of a worsened nuclear threat environment alone may not deter the CCP from forcefully changing the status quo on Taiwan. However, U.S. and allied officials can brandish this additional and potentially significant price China would likely pay if it were to invade Taiwan.

The potential cost of the various deterrence tools discussed in this study, taken together, could encourage CCP calculations that an invasion of Taiwan, successful or unsuccessful, would lead to consequences so intolerable that enduring the despised status quo would remain the preferred option.

Recommendations

- Tailor U.S. deterrence signals to China concerning horizontal and nuclear proliferation; that possibility should be stressed in meetings and during dialogues—preferably with non-contradictory and/or supporting signals from allies.
- Stress to CCP officials that an invasion of Taiwan would cause a fundamental reassessment of U.S. and allies' threat perceptions, and the defense capabilities needed for deterrence, including the unpredictable, severe, and potentially long-lasting consequences of horizontal and vertical nuclear proliferation.
- Dispel any potential CCP perception that the United States controls its allies' defense policies; the United States should clearly communicate to CCP officials that it cannot, and will not, dictate how its allies defend themselves in the wake of an invasion of Taiwan.

