EAGLE VERSUS DRAGON: THE INTENSIFYING US-CHINA NUCLEAR COMPETITION

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China's nuclear weapons programme grew out of the need to deter any potential nuclear coercion and the use of nuclear weapons from the United States (US) and, to some extent, the Soviet Union. By the mid-2000s, China was on the verge of achieving the goal through the deployment of its road-mobile, solid-fuelled intercontinental ballistic missiles (ICBMs). However, advances in the US strategic capabilities focused on limiting damage, namely the Conventional Prompt Global Strike (CPGS) weapons, along with the presence of its Ballistic Missile Defence (BMD) systems, posed new challenges for China by undermining its deterrence.

China has sought to rebalance its deterrence by developing more asymmetric, competitive and 'assured retaliation' capabilities combined with risky elements of a strategy involving nuclear ambiguity. Currently, the Sino-US deterrence dynamics is characterised by numerous imbalances in terms of the size of their nuclear arsenal, counter capabilities and strategies. Such dynamics remains in sharp contrast with the US-Russia nuclear relations, which is symmetrical in all three of those aspects.

This paper traces the origin and the evolution of the Sino-US nuclear dyad and assesses the current and the emerging contours in their nuclear relations. Concurrent with this work is an attempt to bring out the parallel nuclear thinking

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China has sought to rebalance its deterrence by developing more asymmetric, competitive and 'assured retaliation' capabilities combined with risky elements of a strategy involving nuclear ambiguity. in Beijing and Washington DC that guides those dynamics. Lastly, it assesses the possible changes in China's nuclear forces and the prospects of arms control agreements with regards to the US.

ORIGINS OF THE SINO-US NUCLEAR DYAD

China initially developed nuclear weapons as a response to its confrontations with the US during the 1950s and early 1960s, when the latter first signalled a possible nuclear use against China's territories. These confrontations chiefly included the Korean War (1950-53) and the Taiwan Strait

crisis (1954-55). While Beijing was able to pose a substantial challenge to the US in these conflicts, the leadership in China suspected that Washington DC would not take that challenge lightly and fight back. They also suspected that the US would come to regard China as an adversary and seek pretexts to directly hit mainland territory or even engage in a nuclear confrontation.

THE END OF THE KOREAN WAR

The first nuclear threat came during the end of the Korean war when US President Dwight Eisenhower signalled a possible nuclear use against the Chinese territories if "rapid progress toward a negotiated settlement was not made." John Lewis and Xue Litai have noted that Eisenhower believed that a combined strategy of warnings and blandishments was necessary to make the Chinese leadership hasten the Korean war's end. The leadership in China, at this juncture, decided to exercise greater caution against the American nuclear threat. As a result, Beijing engaged in several negotiations with the US, including the exchange of the sick and wounded prisoners of war. In response to the US nuclear threat, the Chinese leadership ramped up constructing fortifications, such as frontline battlefields and anti-atom shelters, to signal the country's readiness.

^{1.} Roger Dingman, "Atomic Diplomacy During the Korean War", *International Security*, vol. 13, no. 3 (1988) doi:10.2307/2538736.

THE TAIWAN CRISIS

Following the Korean War, the US had begun to believe that China's revolutionary expansionism would spread across Asia and threaten vital American interest in the region. The White House Document titled 'US Policy Towards Communist China'² released in November 1953 perceived China as a formidable power with capabilities and outlined a strategy for reducing those capabilities and the impairing the Sino-Soviet relations. The document also recognised Taiwan as an essential asset of the US in the Far East, following which it incorporated Taiwan into its defence network. As a result of these steps, the Chinese leadership injected urgency into its strategic military programme, perceiving Taiwan's developments as an indication of the US determination to wage a nuclear war with China.

In the summer of 1954, the US attempted to initiate an open nuclear confrontation with China by sending two nuclear-capable carrier aircraft into the East China Sea. Lewis and Xue note that the by such a move, the US sought to test the Chinese defences. Further, in a press statement in August that year, the US Secretary of State John Foster Dulles declared that the US would finalise a military treaty with Taiwan and use force to prevent the Chinese conquest of Taiwan. A week later, China's then-Foreign Minister Zhou Enlai, responded by declaring in a widely distributed governmental report by stating China's intention to liberate Taiwan. The leadership in the US, however, believed that the Chinese lacked the military means to take actions against Taiwan, and therefore, saw China's intention as political rather than military.

Notwithstanding, Lewis and Xue reveal that China's leadership perceived talks of a defence pact between Taiwan and the US as a move of aggression and sought to respond aggressively. China began heavy artillery fire over the offshore Taiwanese islands of Quemoy in September 1954, and later in November, it began to use its planes in the bombing of the Dachen Islands. In retaliation, the Taiwanese nationalist forces seized several Chinese-bound ships, including a Soviet oil tanker.

^{2. &}quot;Foreign Relations of the U.S., 1952-1954, China and Japan", Volume XIV, Part 1, Office of the Historian, at https://history.state.gov/historicaldocuments/frus1952-54v14p1. Accessed on February 25, 2021.

Insufficient financial resources and technological capabilities had also put quantitative restrictions on China's nuclear armoury. Following the first Chinese nuclear tests on October 16, 1964, Mao had stated that the atomic bombs should not be taken casually, as their use would amount to a crime.

Eisenhower formalised the Defence Treaty with Taiwan in January 1955 and passed the Formosa Resolution that sought to protect Taiwan from further aggression. Subsequently, the US halted taking further steps to bolster its military forces in Taiwan and began to count on the right to use nuclear weapons as a means to defend Taiwan's offshore islands. The Chinese leadership perceived the Formosa Declaration as the US resolve to fight a nuclear war against China. Consequently, the Chinese leadership prioritised its strategic military programme and began acquiring its nuclear weapons.

SINO-US NUCLEAR DYNAMICS IN THE EARLY YEARS

The Chinese leadership's decision to develop nuclear weapons was aimed to counter the US security challenge and safeguard Beijing's national interest. As noted earlier, Mao was keen on restoring China's international position and destroying its adversaries' 'nuclear monopoly'. In 1954, Mao had argued, "We also need the atom bomb. If our nation does not want to be intimidated, we have to have this thing." Before the tests, there seemed to be two rationales for China's decision to acquire nuclear weapons: first, to defend against nuclear blackmail and nuclear war; second, to safeguard national security and sovereignty.

The Chinese leadership held that a threat of a bit of revenge is enough to deter an adversary. Mao had asserted, "have some achievement, and be fewer but better." Insufficient financial resources and technological capabilities had also put quantitative restrictions on China's nuclear armoury. Following the first Chinese nuclear tests on October 16, 1964, Mao had stated that the

^{3. &}quot;China's Strategic Nuclear Weapons—Chinese Views of Future Warfare, Part Three", Federation of American Scientists – Science for a Safer, More Informed World. Accessed on February 22, 2021.

^{4.} Ibid.

atomic bombs should not be taken casually, as their use would amount to a crime. To protect its interests at the time, Chinese leadership did not wholly disclose its strengths and resources and kept information on its nuclear weapons capabilities vague.

At the time of the Chinese tests, the US intelligence had no idea how China acquired enough weapons-grade Uranium for a bomb. A 'research memorandum' from the State Department's Office of the Director of Intelligence and Research on November 2, 1964, stated: "Our pre-October 16th estimates did not anticipate that [China] had the capability of producing the U-235 isotope." Notwithstanding, the Joint Chiefs of Staff's assessments following the tests suggest that there was a belief in the US that the nuclear weapon acquisition by China would not alter the power relations among the major states or the balance of military power in Asia for an indefinite future.

Following the first tests, the Chinese government declared that it had developed "nuclear weapons for defence and for protecting the Chinese people from US threats to launch a nuclear war" and that it "will never at any time or under any circumstances be the first to use nuclear weapons." This reaffirmed the US' position., For the better part of China's nuclear weapon's history, its leaders' thinking regarding nuclear weapons remained highly ideological. They believed that the mere existence of nuclear weapons would make China's adversary think twice before striking their country with a nuclear weapon. At the time, the prevalent view was that nuclear weapons are to address nuclear threats and not to deter a nuclear attack. The Chinese leaders equated nuclear deterrence to a policy of coercion and perceived it to be a form of aggression.

 [&]quot;China's Advance Toward Nuclear Status in the Early 1960s Held Surprises for U.S. Analysts, Generated Conflicting Opinions About the Potential Dangers", The National Security Archive, at https://nsarchive2.gwu.edu/nukevault/ebb488/. Accessed on February 23, 2021.

 [&]quot;Here's How the U.S. Reacted to China's First Nuclear Test 50 Years Ago", Business Insider, last modified October 29, 2014, at https://www.businessinsider.in/politics/heres-how-the-us-reacted-to-chinas-first-nuclear-test-50-years-ago/articleshow/44966044.cms.

^{7.} People's Daily 1964. Zhonghua Renmin gongheguo zhengfu shengming (Declaration of the government of the People's Republic of China), October 16, at https://digitalarchive.wilsoncenter.org/document/134359.pdf?v=b1e04ac05705

^{8.} Li Bin, "Differences Between Chinese and U.S. Nuclear Thinking and Their Origins", In *Understanding Chinese Nuclear Thinking*, Carnegie Endowment for International Peace, 2016, p. 3.

During this time, China also lacked the warfighting capabilities that the US employed including the SLBM Lockheed UGM-27 Polaris and the ICBM Boeing LGM-30 Minuteman-I. For instance, the Chinese leadership from Mao Zedong to Marshal Nie Rongzhen continued to limit the scale of China's nuclear arsenal to 'minimum retaliation means' and provided no further detail. Even as the Second Artillery was formally established on July 1, 1966, China did not have an explicit nuclear strategy in the next two decades. It was only in the 1970s and early 1980s that the groundwork of China's nuclear operationalisation began, with the establishment of several academic units, namely the Academy of Military Sciences, along with a committee for academic research, to formulate a 'science of operations' and 'operational principles and rules' for missile units.9

Although China began deploying a small number of Dong Feng (D.F.) missile series between 1981 and 1982,10 namely DF-4 and DF-5 intercontinental ballistic missiles (ICBM), its relations with the US improved in that period, which led Deng to conclude that global or imminent war would not occur. Thus, in the 1990s, the Chinese leadership instead focused on building economic might and achieved 10 per cent annual Gross Development Product (GDP) growth owing to the establishment of the liberal international economic order.

EMERGENCE OF SINO-US NUCLEAR COMPETITION

While the US has maintained a military presence in China's neighbourhood since the start of the Cold War in the form of extension of the US nuclear umbrella to Japan and South Korea along with deployment of anti-missile units in South Korea and Guam islands, the operational aspects of the Chinese nuclear strategy received momentum when the US demonstrated superior capabilities in the Gulf War. The declarations of Taiwanese independence provided further impetus to the operationalisation of China's nuclear weapons programme as Beijing began to claim that the US had

^{9.} John W. Lewis and Xue Litai, "Making China's Nuclear War Plan", Bulletin of the Atomic Scientists, vol. 68, no. 5, 2012, p. 48, doi:10.1177/0096340212459155.

^{10.} Jeffrey G. Lewis, Paper Tigers: China's Nuclear Posture (London, UK: Routledge, 2017), p. 105.

been secretly providing support to Taiwan's independence. Consequently, China began to develop sophisticated command-and-control mechanisms and assigning roles for its nuclear and conventional missiles in order to support peacetime diplomacy, manage military crises and pursue combat readiness.

China's threat perceptions were further triggered following the 2002 Nuclear Posture Review (NPR) release, wherein the US identified the Taiwan Strait region as one of the seven possible nuclear weapons targets. During this time, the US also improved its precision strike capability of its conventional long-range missiles to target China's nuclear assets. China termed the US' military presence, its bilateral military alliances in East Asia and its plans to develop and deploy the Theatre Missile Defence (TMD) system as a negative development. The Chinese leadership expressed concern in the 2005 Defence White Paper regarding the complicated security factors in the Asia-Pacific, pointing out that the US was reinforcing its military presence. It stated that developments such as these had led China to enhance its nuclear counterattacks capabilities. In the several Defence White Papers that followed, China reiterated its concerns regarding the US interference in its neighbourhood. Further, as a result of superior conventional capabilities against China, US President Barack Obama stated in his 2009 Prague Speech that he intended to reduce the role of nuclear weapons to that of solely deterring nuclear attacks in his second term—even though on the declaratory level, Washington DC has not taken the 'No First Use' (NFU) pledge. 11 However, such considerations arose out of the US' confidence in its conventional capabilities, further putting China on the defensive.

THE SWORD AND THE SHIELD: US CPGS AND BMD SYSTEMS

Tong Zhao, an expert on China's nuclear policy, suggests there has been an attempt in Beijing to increase the threshold of nuclear self-sufficiency and move towards 'assured deterrence' as China feels increasingly

^{11. &}quot;'No First Use' and Nuclear Weapons", Council on Foreign Relations, last modified July 17, 2018, at https://www.cfr.org/backgrounder/no-first-use-and-nuclear-weapons.

The CPGS capability, which includes long-range ballistic missiles or boost-glide systems and scramjetpowered hypersonic cruise missiles, allows the US to attack high-value targets or fleeting targets at the start of or during a conflict.

challenged by the US strategic capabilities, namely, the growing emphasis in the US to develop the CPGS weapons and the BMD systems.¹² The CPGS capability, which includes long-range ballistic missiles or boost-glide systems and scramjet-powered hypersonic cruise missiles, allows the US to attack high-value targets or fleeting targets at the start of or during a conflict; the BMD, on the other hand, consisting of its National Missile Defense (NMD) and advanced Theatre Missile Defense (TMD) in East Asia, allows the US to intercept an incoming adversary

missile. Caitlin Talmadge, a scholar at the Georgetown University, suggests the motive behind the US enhancement of its ability to limit damage in an all-out nuclear war with China is to make Beijing worry that if it starts a crisis that raises nuclear escalation, Washington DC will have a greater tolerance to bear those risks than China.¹³

Lora Saalman, an expert on China's nuclear weapons programme, notes, "The Chinese analysts view CPGS as part of a larger US effort to achieve 'absolute security', with BMD as the shield and CPGS as the sword such that Washington is able to act preemptively."14 Chinese leaders and strategic experts fear that in a potential conflict, the US may use its CPGS weapons to destroy a fair share of China's nuclear forces and use its BMD systems to intercept the surviving weapons Beijing may want to use. There is also a more significant concern that such a situation may make Beijing vulnerable to nuclear blackmail by Washington DC.

^{12.} Tong Zhao, "China's Nuclear Posture", presentation, China's Nuclear Doctrine, Manohar Parrikar Institute for Defence Studies and Analyses, New Delhi, October 20, 2020.

^{13.} Caitlin Talmadge, "The US-China Nuclear Relationship: Why Competition is Likely to Intensify", Brookings, last modified September 30, 2019, at https://www.brookings.edu/research/chinaand-nuclear-weapons/.

^{14.} Lora Saalman, "China's Evolution on Ballistic Missile Defense", Carnegie Endowment for International Peace, last modified August 21, 2012, at https://carnegieendowment. org/2012/08/23/china-s-evolution-on-ballistic-missile-defense-pub-49171.

THAAD AND THE ISSUE OF NUCLEAR NORTH KOREA

The US efforts to contain North Korea's nuclearisation also have implications on the Sino-US nuclear relations: China has lent political and economic support to North Korea since 1950. China is interested in North Korea as it offers a buffer with South Korea, which hosts twenty-nine thousand US troops and marines and US missile defences. ¹⁵ While the US has stated that its missile defences in South Korea, namely, Terminal High Altitude Area Defense (THAAD)—a globally transportable ballistic missile

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defence system, is aimed at North Korea's missile threat, China is concerned that it can be relocated/refocused against its territories. It also fears that THAAD's X-band radar can look deep into China if configured to 'Look mode'.¹6 While both China and the US prefer a non-nuclear North Korea, the latter is interested in keeping the present North Korean Region. There seems to be a difference in how the US and China seek to resolve the North Korean nuclear issue: Jennifer Lind argues that while Washington DC sees North Korea as "a dangerous rogue state that broke international law to acquire nuclear weapons", whereas Beijing sees North Korea as "motivated by insecurity."¹⁷

In 2006, China supported the UN Security Council Resolution 1718, which imposed sanctions on Pyongyang. China has also advocated for the Six-Party Talks' resumption, a multilateral framework to denuclearise North Korea. However, many in China argue that the US should stop military exercises

^{15. &}quot;Understanding the China-North Korea Relationship", Council on Foreign Relations, last modified July 11, 2006, at https://www.cfr.org/backgrounder/china-north-korea-relationship.

^{16. &}quot;How China Sees THAAD", Council on Foreign Relations, last modified April 2, 2016, at https://www.cfr.org/blog/how-china-sees-thaad.

^{17.} Jennifer Lind, "Will Trump's Hardball Tactics Work on China and North Korea?", CNN, last modified August 7, 2017, at https://edition.cnn.com/2017/08/07/opinions/china-north-korea-opinion-.

with South Korea that frighten North Korea, provide security assurances to Pyongyang, and withdraw military forces from South Korea. In sharp contrast, state officials and experts in the US have argued that China's punitive steps have been somewhat restrained. On several occasions, they have accused China of circumventing sanctions, especially as there has been a tenfold increase in bilateral trade between 2000 and 2015.

CHINA'S NUCLEAR MODERNISATION

China announced in the 2013 Chinese Defence White Paper that it would maintain an acceptable degree of readiness in peacetime in response to the growing US military footprint well into South Korea, where it deployed the THAAD. Further, it added that it would combine peacetime needs with wartime needs, and maintain vigilance at all times to deter the enemy from using nuclear weapons against China.

The US has been concerned about the Chinese nuclear challenge to its interests in the Indo-Pacific region, especially as Beijing is not constrained with the Intermediate-Range Nuclear Forces (INF) agreement signed between the US and the erstwhile Soviet Union in 1987 to eliminate all their nuclear and conventional ground-launched missiles between the range of 500-5,500 km. According to Ramesh Thakur, without being party to the INF treaty and having 95 per cent missiles in the intermediate range, China can effectively target forward-deployed US forces in the Indo-Pacific region. As a result, the US withdrew from the INF treaty in August 2019 and has evinced plans to develop and station ground-launched intermediate-range cruise missiles in Guam, Japan, South Korea, and northern Australia in order to reach deep into China's interior. A potential counterforce use of such missiles against China poses a threat to the survivability of its nuclear weapons. Beijing has reacted to such developments by cautioning the Indo-Pacific countries against permitting INF-range missiles to be deployed on their territory.

¹⁸ Ibid

^{19.} Ramesh Thakur, "China Balks at U.S. Efforts for Nuclear Arms Talks", *The Japan Times*, last modified September 30, 2020, at https://www.japantimes.co.jp/opinion/2020/09/30/commentary/world-commentary/china-us-nuclear-arms-talks/.

For China, deployment of the intermediate-range missile would not only challenge its nuclear deterrent capabilities but also disrupt the regional balance of power. Thakur argues, "US refusal to acknowledge mutual vulnerability and efforts to enhance damage-limitation and long-range precision strike capabilities signal a higher nuclear risk threshold." He suggests that such actions reflect a form of classic security dilemma wherein "one side's defense-cum-deterrence preparedness to bolster national security is perceived by the other side as strengthened offensive capability and hence a threat to its security."

As a corollary, China has responded to these challenges by adopting a hedging strategy that has caused a sharp accretion in its nuclear capabilities. Over the years, China has rapidly modernised its nuclear weapons capabilities. China has significantly expanded the range of its ICBM to surpass the range of the US ICBMs. It includes new penetration capabilities such as Hypersonic Glide Vehicles (HGVs) and Multiple Independently Targetable Reentry Vehicles (MIRVs) to counter the US BMD systems. In 2019, China introduced its ICBM DF-4I that offers an operational range exceeding 14,000 km. It enables China to reach the US within the time frame of thirty minutes. This range allows China to surpass the longest US ICBM LGM-30 Minuteman with a reported range of 13,000 km.²¹ China has also introduced its potentially dualuse DF-17 Hypersonic Glide Vehicle that follows an unpredictable trajectory and travels at speeds exceeding Mach 5 (6,100 km an hour) to penetrate the US defence systems.

EMERGING SINO-US NUCLEAR DYNAMICS AND ITS IMPLICATIONS

The US CPGS and BMDs remain a predominant concern in Beijing's strategic calculations and a cause of China's nuclear modernisation. There is also a growing concern that such a situation could expose Beijing to nuclear blackmail by Washington DC. To overcome those fears, China has adopted a strategy of 'nuclear entanglement' to increase the survivability of its

²⁰ Ibid.

 [&]quot;China Debuts Most Advanced ICBM DF-41 at Parade", Global Times, last modified October 1, 2019, at https://www.globaltimes.cn/content/1165931.shtml.

nuclear assets against a decapacitating strike by the US. US annual report to Congress on *Military and Security Developments Involving the People's Republic of China*: 2019 remarked that the commingling could "complicate deterrence and escalation management during a conflict." It warned that "a potential adversary attack against Chinese conventional missile force-associated Command and Control (C2) centres could inadvertently degrade Chinese nuclear C2 and generate nuclear use-or-lose pressures among China's leadership".²²

It is also worth noting that there also remain fundamental differences in how China and the US perceive nuclear escalation. The former remains sceptical about controlling nuclear escalation once nuclear weapons are used, whereas the latter assumes that nuclear escalation could be controlled in its planning for nuclear operations. In other words, China does not seem to have an 'escalate to de-escalate policy' like the US, wherein it plans to use nuclear weapons first to forestall defeat in a conventional military conflict. It may lead Washington DC to "overestimate the likelihood that Beijing would use nuclear weapons and underestimate the scale of a Chinese retaliatory nuclear strike." Such a difference in thinking can create greater instability during a crisis and contribute to an accidental nuclear deterrence breakdown.

The aggrandisement of China's nuclear force could cause the US to follow a two-pronged approach: first, it is expected to put more pressure on Beijing to enter into a trilateral arms control agreement with Washington DC and Russia—most likely the New START (Strategic Arms Reduction Treaty). Since its withdrawal from the INF treaty, and with the ongoing talks about the New START extension, the US has insisted that China enters into a trilateral arms control agreement with Washington DC and Moscow.²⁴ Second, it might adopt a hedging strategy and invest in strategic bombers, nuclear attack submarines, command and control assets; it may bolster its alliances with Japan, South

^{22.} Office of the Secretary of Defense, Military and Security Developments Involving the People's Republic of China 2019, 2019, p. 66.

^{23.} Fiona S. Cunningham and M. T. Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation", *International Security*, vol. 44, no. 2, 2019, p. 64, doi:10.1162/isec_a_00359.

^{24. &}quot;Trump Still Wants Multilateral Arms Control", Arms Control Association | The Authoritative Source on Arms Control Since 1971, 2021, at https://www.armscontrol.org/act/2020-04/news/trump-still-wants-multilateral-arms-control. Accessed on February 25, 2021.

Korea and Australia and build deeper military ties with the Philippines and India; lastly, it might increase its presence in Guam.

Beijing may increase its warhead count to MIRV its missiles, as each of them could carry up to ten nuclear warheads. Moreover, China also seems to have enough fissile material to facilitate expansion. The US annual report to Congress *Military and Security Developments Involving the People's Republic of China*: 2020 has suggested that China's nuclear warhead stockpile would at least double in size as it expands and modernises its nuclear forces.²⁵ Additionally, it stated that the number of warheads on China's land-based intercontinental ballistic missiles is likely to increase to approximately 200 in the next five years. Such a move could indeed cause a shift away from Beijing's minimalist force posture. These numbers have been further accentuated by the more recent US DoD report of 2021.

Additionally, China is also expected to continue developing asymmetric capabilities to buttress its second strike, which includes ensuring survivability and penetrability in the face of the US challenge. These could include, for instance, greater manoeuvrability of the DF-21D missiles makes it difficult for the US BMDs to intercept them while enhancing the precision of their munitions makes it easier to target moving enemy vessels with them. ²⁶ China's focus, on the other hand, will continue on developing high-quality nuclear capabilities at a minimal level necessary for sustaining national security.

There are growing concerns within the US that China may abandon its NFU.²⁷ However, the ambiguity in China's NFU policy could be attributed to its perceived threat that the US could use conventional weapons to attack their nuclear assets. Notwithstanding, China's limited ambiguity over its NFU may be ridden with risk as it could raise the US suspicions that China might abandon its no-first-use policy altogether in a crisis. It may cause the US to enhance the development of the new triad and plan for conventional pre-

^{25.} Office of the Secretary of Defense, Military and Security Developments Involving the People's Republic of China: 2020, 2021, p. 85.

^{26.} Thakur, "China Balks at U.S. Efforts for Nuclear Arms Talks", n. 19.

James M. Acton, "Debating China's No-First-Use Commitment: James Acton Responds", Carnegie Endowment for International Peace, last modified April 22, 2013, at https://carnegieendowment.org/2013/04/22/debating-china-s-no-first-use-commitment-james-acton-responds-pub-51583.

It is reported that Russia plans to assist China in developing a missileattack early warning network and aiding the development of ground-based radars and potentially extending to spacebased sensors. emptive strikes against China's nuclear arsenal, thus "confirming Beijing's fears that Washington seeks absolute security at its expense." China may therefore find itself in the arms race that it sought to avoid through limited ambiguity over no-first-use."²⁸

Further, the US 2020 annual report to Congress suggested that China is seeking to keep at least a portion of its force on a Launch on Warning (LOW) posture, including investment in silo-based forces while building more survivable mobile platforms.²⁹ It is reported that

Russia plans to assist China in developing a missile-attack early warning network and aiding the development of ground-based radars and potentially extending to space-based sensors. China already possesses several ground-based significant phased array radars. These systems combined could support a early warning system for missiles. However, such a shift in the posture seems unlikely, as the existing status allows China to maintain a high moral ground on nuclear issues and put the US on the defensive.³⁰

It is worth noting that many within China are suspicious of any form of arms control agreement with the US or Russia. They argue that the leadership in Washington DC is scapegoating China to dissolve the existing US-Russia nuclear arms control agreement. In January 2020, the Chinese Foreign Ministry Spokesperson Geng Shuang argued, "The US constantly makes an issue of China on this to dodge and shift its responsibilities for nuclear disarmament. China is firmly opposed to that." Several in China

^{28.} Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability", *International Security*, vol. 40, no. 2 (Fall 2015).

^{29.} n. 25, p. 88.

^{30.} Manpreet Sethi, "China's Contemporary Nuclear Debates: What's Brewing?", The Sunday Guardian Live, at https://www.sundayguardianlive.com/opinion/chinas-contemporary-nuclear-debates-whats-brewing. Accessed on February 25, 2021.

^{31. &}quot;Foreign Ministry Spokesperson Geng Shuang's Regular Press Conference on 22nd January, 2020", Embassy of the People's Republic of China in India, at https://in.chineseembassy.org/eng/fyrth/t1735126.htm. Accessed on February 25, 2021.

also argue that China's stockpile of 320 nuclear warheads is disproportionate to the US stockpile of 5,800 warheads. Many suggest that the US would have to cut down to a matching level in order to initiate any arms control dialogue.³² However, some hawkish voices, such as the editor-in-chief *Global Times*, Hu Xijin, has argued that, "China needs to expand the number of its nuclear warheads to 1,000 in a relatively short time and procure at least 100 DF-41 strategic missiles." Nonetheless, it

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is unlikely that China would dramatically increase its arsenal, nor the US would cut down its arsenal to match China's level. Thus, the talks of arms control remain unrealistic in the current times.

Finally, with regards to Southern Asia, the nuclear competition between China and the US pulls India and Pakistan into an offence-defence spiral as both these nuclear weapons are located in China's vicinity and have overlapping nuclear dyads: India faces a nuclear challenge from China, whereas Pakistan faces an Indian threat. Such a 'security trilemma', in which one state's attempts to defend itself against another state result in the insecurity of a third state. Thus, any changes in the nuclear capabilities, doctrines or postures of the US and China inevitably disturb the strategic nuclear balance between India, China and Pakistan, and stimulate a chain of strategic rebalancing. For instance, China's nuclear modernisation renders Indian nuclear assets vulnerable to pre-emptive strikes. As India explores its options to overcome strategic challenges posed by China, Pakistan will inevitably face a security dilemma and will seek to match up with its modernisation efforts, such as developing MIRV capabilities.

 [&]quot;China 'Happy' to Join Nuclear Talks if U.S. Cuts Arsenal to Matching Level", South China Morning Post, last modified July 8, 2020.