CHANGES IN CHINA'S NUCLEAR THINKING

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The Chinese leaders have accorded a limited role to their nuclear weapons. They term them as tools of politics as opposed to weapons of war-fighting, and consider them as a symbol of their industrial and technological prowess. The basis of the Chinese thinking lies on its leaders' historical fear of coming under attack due to their shortcomings in areas such as economics, science and technology, and military affairs. Thus, the ideology underpinning their nuclear weapons programme has been to master the same technologies as of other major powers.¹

During the Mao era, nuclear weapons signified the triumph of socialism over imperialism, and politics over superiority in arms.² The leaders held the view that small numbers of nuclear weapons would suffice to neutralise more massive arsenals. Over time, as China established its economic and military clout, changes in its nuclear strategy have been conspicuous even as the basic tenets of China's nuclear thinking continue to hold. To wit, China has dynamically modernised its nuclear force and declared its nuclear weapons as a cornerstone of its national security, yet it continues to maintain a minimum nuclear deterrence.

This paper traces how the Chinese leaders have perceived nuclear weapons over the years, and their attempts to bring out subtle changes

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- 1. Jeffrey G. Lewis, Paper Tigers: China's Nuclear Posture (London: Routledge, 2017).
- 2. Ibid.

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in China's thinking on the nuclear strategy on deterrence and non-proliferation.

THE NUCLEAR WEAPON: A PAPER TIGER

Historically, Chinese leaders have held the view that success in warfare depends on the strength of the people instead of weapons.³ Mao gave form to this thinking in his conception of "People's War". This view took form in the period between 1839–1949, popularly illustrated as the "century of humiliation", wherein the

experience of using inferior equipment to fight better-equipped enemies led the Chinese leaders to value the human element in warfare.

On the emergence of nuclear weapons on the global scene in the 1940s, Mao remarked that they do not change the basic rules of warfare. He asserted that warfare is about winning hearts and minds, suggesting that it is the people who decide the outcome of a war, not the possession of nuclear weapons. He posited that the atomic bomb was only a paper tiger, used to scare people, suggesting that nuclear weapons would not lead to the destruction of humanity but remain an extension of politics. He believed that nuclear weapons would not stop the trend of national liberation or independence and people's revolution.

With time, however, the Chinese leadership realised the salience of advanced strategic weapons for national security, and developed the thinking that "to lag behind means to be exposed to invasion".⁵ Notwithstanding, the dominant thinking has remained broadly consistent with the Maoist emphasis on ideological considerations over material factors in the outcome of any struggle. The leadership, thus, strives to master the same technologies

Xu Weidi, "China's Security Environment and the Role of Nuclear Weapons", in Bing and Tong Zhao, eds., Understanding Chinese Nuclear Thinking (Carnegie Endowment for International Peace, 2016), pp. 19-51.

^{4.} Lewis, n. 1.

^{5.} Weidi, n. 3.

as other major powers by continuously modernising its nuclear weapons, but keeps them in a low alert system in the anticipation that they will never be used.

DIALECTICAL MATERIALISM AND THE BOMB

The Chinese nuclear thinking is also partly grounded in the Marxist theory of dialectical materialism⁶ that posits that political and historical events are a result of the conflict of social forces which are caused by material needs. At the start of the Cold War

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confrontations in the mid-1940s, Mao grew concerned about the intensifying US imperialism. He referred to the United States as the "forces of world reaction" and believed it to be preparing for another war. He feared that the United States, under the cover of its anti-Soviet slogans, was attempting to turn all its targets of external expansion into its dependencies, and suspected that the part of China under the Kuomintang rule could very well be a target.

Mao declared that the Communist Party must unite with other international revolutionary forces, led by the Soviet Union. He argued that only after beating the reactionary forces, namely the United States and its allies, could China do its business and establish diplomatic ties with other countries on an equal footing. The start of the Cold War also coincided with the dawn of the nuclear age. However, at this stage, Mao was not much concerned about the US' nuclear weapons. He reasoned that the United States and the Soviet Union would compete for the lands that lay between them, and the US nuclear supremacy had little relevance in this confrontation. However, he believed that the Chinese revolutionaries could not hold on, on their own, if they did not align with the Soviet Union.⁷

^{6.} Ibid.

John W. Lewis and Litai Xue, China Builds the Bomb (Redwood City: Stanford University Press, 1991), p. 7.

The Sino-Soviet alliance was established on February 14, 1950, and provided a joint contract to fight US imperialism. The Soviet Union's assistance led China to significantly enhance its air force and navy capabilities when it entered the Korean War. Nevertheless, China suffered massive losses during the war, which included 57,700 casualties, 73,000 non-battle casualties and 16,500 surrendered prisoners of war. The losses in the war brought home the realisation that China needed technological modernisation and professionalism, even while the leaders, including Mao, publicly clung to the "men over weapons" doctrine.⁸

CHINA'S THREAT PERCEPTIONS DURING THE COLD WAR AND ITS NUCLEARISATION

The Chinese leadership considers any dangerous situation that can potentially cause harm to China as a threat to its national security. In other words, the perceived challenges are often based on situations that do not pose a direct threat to the country's security but could be potentially detrimental to its security interest. This frame of thinking is distinct from the thinking of the United States, its prime nuclear adversary, that holds that national security threats are determined by an assessment of an external adversary's capabilities and intent. As a result, the Chinese leaders often tend to conflate China's security threats and challenges. Additionally, China's insecurities often have domestic roots that stem from its deficiencies in military capabilities: the fear of coming under attack due to its weak military strength. The fundamental difference in the threat perceptions of China and the United States explains the security dilemma that besets the nuclear dynamics between the two countries.

Three events that involved confrontation between China and the United States, namely, the ending of the Korean War in a Standstill Agreement in

^{8.} Ibid.

^{9.} Ibid.

^{10.} Li Bin, "Differences Between Chinese and U.S. Nuclear Thinking and Their Origins," in Bing and Zhao, eds., n. 3, 2016, pp. 3-18.

^{11.} Ibid.

1953, the crisis in the Taiwan Strait between 1954 and 1955, and the hostilities in Indo-China during 1964 that led to the defeat of the US backed French forces, set the basis for the Sino-US rivalry and the consequential development of China's nuclear weapons. The United States had begun to believe that the revolutionary expansionism under Mao's leadership would spread across Asia and threaten vital American interests in the region. The US, thereupon, unleashed efforts to contain the Communist expansion in Asia.

John Wilson Lewis and Xue Litai, in their trenchant historical account of China's nuclear weapons programme in *China Builds the Bomb*, have argued that the Chinese leadership saw these events as partial victories. They have written that the Chinese leaders were convinced that the United States would not take the challenge posed by China lightly and would indeed fight back. They suspected that the United States would begin to view China as its adversary and, therefore, would seek pretexts to hit mainland China directly. Mao feared that the United States might engage in a nuclear confrontation with China. Although China was receiving nuclear protection from the Soviet Union, Mao doubted if the Soviet Union would risk its survival to help China.

The Chinese leaders began to fear an imminent nuclear threat from the United States, but they could not predict where that threat might lead. The first nuclear threat by the United States came at the close of the Korean War when the president of the United States at that time, Dwight Eisenhower, signalled China of a possible nuclear use against its territories if the armistice negotiations remained a stalemate. Eisenhower believed that a combined strategy of warnings and blandishments was necessary to make the Chinese leadership hasten the end of the Korean War.

At this juncture, the prevailing thinking in China was that it should exercise greater caution against the American nuclear threat even as the world opinion at large undermined the possibility of the United States making good on those threats. During this period, China engaged in several negotiations with the United States that included the exchange of the sick and wounded prisoners of war; however, the Chinese leadership was resolute about not

making any concessions against the American nuclear threat that could be perceived as a sign of weakness. In response to the US nuclear threat, the Chinese leadership ramped up the process to construct fortifications, such as frontline battlefields and nuclear shelters, to give out signals of the Chinese preparations.

Shortly after that, the United States unleashed its 'New Policy' that laid out a long-term strategy against the Soviet Union and its allies. The policy relied heavily on nuclear weapons and called for a significant deployment of the weapons in military custody. Although the policy was primarily targeted towards the Soviet Union, it also revealed the US hostility towards China. The White House Document titled "US Policy Towards Communist China" released in November 1953 confirmed this view. It perceived China as a formidable power possessing capabilities and laid out a strategy for the attrition of those capabilities and the impairment of Sino-Soviet relations. The document also recognised Taiwan as an important asset of the United States in the Far East.

By 1953, the United States started its military build-up in Asia and sought to incorporate Taiwan into its defence network. American Vice President Richard Nixon and Taiwanese leader Chiang Kai-Shek agreed to pose a military threat towards China. However, before a defence treaty with Taiwan could materialise, the United States became preoccupied with the concerns related to the collapse of the French garrison in Indo-China that provided China with the opportunity of overt intervention in the region. By this time, the US leadership began to put greater emphasis on the military side of its policy towards China. The central view within the American military establishment was that "the real solution for Far Eastern difficulties lay in the neutralisation of Communist China". Lewis and Litai reveal that the top leadership in the US also had discussions about the possible use of nuclear weapons against China in case the latter intervened in Indo-China.

The Chinese leadership, on the other hand, interpreted the talks of a defence pact between Taiwan and the United States as a move of aggression and sought to respond aggressively. China began to open heavy artillery

firing over the offshore Taiwanese island of Quemoy in September 1954. Later, in November, China began to use its planes in the bombing of the Dachen Island. In retaliation, the Taiwanese nationalist forces seized several Chinese bound ships, including a Soviet oil tanker. The Chinese newspaper *Renmin Ribao* alleged that the United States backed such hijacking of ships bound for China.

By the summer of 1954, the United States initiated an open nuclear confrontation with China by sending two nuclear-capable carrier aircraft into the East China Sea. The United States sought to test the Chinese defences by this move. As the Indo-China armistice concluded by July 21, 1954, the tensions in East Asia mounted further. Taiwanese nationalists increased their overflights on the Chinese territories that resulted in the downing of a British airliner by the Chinese forces. The United States responded by using its aircraft carrier to shoot down two Chinese patrol fighters and gunboats. In August, US Secretary of State John Foster Dulles, in a press statement, declared that the United States would finalise a military treaty with Taiwan and use force to prevent the Chinese conquest of Taiwan. Zhou Enlai, China's foreign minister at that time, responded a week later by declaring China's intent to liberate Taiwan in a widely distributed governmental report.

At this juncture, China lacked the military means to take action against Taiwan, therefore, as Lewis and Litai note, China's intent was political rather than military whereby it sought to challenge the US policy of alliances and its designs on Taiwan. The American officials were aware of Mao's intent as the declassified US intelligence reports through the mid-1956 reveal that the American leadership was convinced that China would not make further aggressive moves into Taiwan to risk a war with the United States.

Notwithstanding, Eisenhower formalised the defence treaty with Taiwan on January 5, and additionally passed the Formosa Resolution that sought to protect Taiwan from further aggression. The purpose of the resolution and the treaty was to stabilise the situation. It also sought to balance the psychological effect of the defeat of the US in the island of Dachen. Subsequently, the United States halted taking further steps to bolster its military forces in Taiwan and

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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 issued urgency to its strategic military programme and began the process to acquire its nuclear weapons.

BUILDING THE NUCLEAR BOMB

The decision to acquire nuclear weapons was a Chinese response to the immediate security threat emanating from the United States as well as its need to safeguard its national interest. Mao was keen on restoring China's international position through a greater reliance on

its military such that it would distinguish the new state of China from its humiliating past and destroy the 'nuclear monopoly' of its adversaries.

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During that time, Mao had stated that the atomic bombs should not be taken casually, as their use would amount to a crime.¹² He disagreed with Russia's Premier, Nikita Khrushchev's strategy of immediate retaliation in

^{12.} Ministry of Foreign Affairs of the People's Republic of China and CCCPC Party Literature Research Office, eds., *Mao Zedong on Diplomacy*, p. 453.

response to a nuclear attack by an adversary. He even asked Khrushchev not to engage in an all-out attack if the United States were to attack China. The Chinese leadership held the view that a threat of a little revenge was enough to deter an adversary. Insufficient financial resources and technological capabilities also had put quantitative restrictions on China's nuclear armoury. The Chinese leadership, at this point, did not wholly disclose its strengths and resources, and kept information pertaining to its nuclear weapons capabilities vague in order to safeguard its interests.

French scientist Jean Frédéric Joliot-Curie, who was indignant about the nonproliferation efforts by the nuclear weapons In April 1952, the Soviet Union committed to providing China with a nuclear cyclotron along with fissionable material to advance its research. At the beginning of 1953, a delegation of 26 Chinese scientists, led by Qian arrived in the Soviet Union to facilitate scientific collaboration between the two countries.

states, felt motivated to help China break America's monopoly over nuclear weapons. Joliot-Curie helped arrange for China's physicist Qian Sanqiang—who was initially charged to develop China's nuclear programme—to purchase nuclear instruments in England and France. They also gave Chinese radio-chemist Yang Chengzong ten grams of radium salt standardised for radioactive emissions.

Mao also sought to take Soviet assistance, but only to a limited extent. Mao reasoned that having a stronger Communist power towards its east would be in favour of the Soviet Union, and, therefore, it should assist China in developing nuclear weapons willingly. He sought dual paths for its nuclear weapons programme: the first, albeit short-term programme, involved assistance from the Soviet Union in the initial phase; the second, focussed on an independent long-term approach for the creation of indigenous capabilities. Further, China's status as a neophyte in the arena of nuclear weapons compelled Mao to take the path of self-dependency.

^{13.} Bing and Zhao, eds., n. 3, pp. 3-18.

The Chinese leadership shifted its military doctrine parallel to that of the Soviet Union to facilitate cooperation between the two Communist powers. The cost suffered by the Soviet Union at the hands of the imperialist forces by its covert involvement in the Korean War also motivated it to strengthen its military relations with China. In April 1952, the Soviet Union committed to providing China with a nuclear cyclotron along with fissionable material to advance its research. At the beginning of 1953, a delegation of 26 Chinese scientists, led by Qian arrived in the Soviet Union to facilitate scientific collaboration between the two countries and learn from the Soviet experience.

The mobilisation of Chinese scientists began as early as January 15, 1955. The cadre of the Chinese bomb builders comprised the Chinese youth, a handful of older officials, scientists, and technicians. Lewis and Litai note that the Chinese bomb builders were charged with a sense of nationalism. They were fuelled by the threats of use of nuclear weapons issued by the United States against Asia, and shared a sense of pride in the Korean Armistice where China fought the United States to a standstill.

Mao instructed China's nuclear bomb builders to begin research on hydrogen bombs before taking on the course of developing the atomic bomb. He emphasized on the possibility of war by the imperialists and urged a sense of urgency in developing nuclear weapons. In reality, though, he worried about the effects of the impending Cultural Revolution on the progress of China's nuclear programme and the possibility of future constraints imposed by the US nuclear non-proliferation efforts.

The organisational structure of China's nuclear programme that began to emerge from 1950 onwards consisted of a three-member group at the helm of affairs. It comprised a leading Chinese economist, Chen Yum, a senior battlefield commander, Nie Rong Zhen, and a political commissar in the wartime army, Bo Libo. Further ahead, the 'Third Office' was created to oversee the concrete affairs of China's nuclear industry. This office laid out policies for heavy industry and construction, and served as the administrative head to the two other organisations created for the launch of China's nuclear weapons programme, namely the 'Third Bureau' and the 'Bureau of Architectural

Technology'. Additionally, the Bureau of Architectural Technology, headed by Qian Sanqiang, was created to supervise the construction of the experimental nuclear reactor and cyclotron that was being supplied by the Soviet Union. The Chinese leadership had chosen this name for the bureau to obscure its real mission.

In 1955, the 'Third Ministry of Machinery Building' was established to direct China's nuclear industry and replace the three-member group. Little information about this ministry exists in the literature as it functioned in extreme secrecy. It supposedly played a dominant role ever since its establishment by overseeing several projects covering all aspects of the comprehensive nuclear programme. By October 1957, China and the Soviet Union signed an agreement whereby the Soviet Union provided China with a 'sample of an atomic bomb' and technical data. Subsequently, a gaseous diffusion uranium enrichment plant was constructed in Lanzhou to produce weapons-grade uranium. Between 1955 and 1959, the exchange of scientists between the two Communist powers increased significantly. Approximately, 260 scientists from both sides worked in each other's facilities.

Between 1959 and 1964, the organisational structure of China's nuclear weapons programme began to take a militaristic form, the reason being that the Communist Party's Great Leap Forward policy, launched in 1958 to overhaul the organisation of science and technology from the bottom, had disrupted the centralised control within the organisation and brought chaos to the nuclear weapons programme.14 The State Science and Technology Commission was established to oversee the civilian part of the nuclear programme, while the Defence Science and Technology Commission was established to oversee its strategic aspects. The Defence Commission emerged as the powerful body that controlled the scientific and technological resources of the People's Liberation Army (PLA) as well as the State Council's military industrial system. It also oversaw the ministry's Fifth Academy that was established later to manage China's strategic missile programme.

^{14.} Ibid.

During this period, the relations between the Soviet Union and China turned momentarily bitter. A significant reason for the deteriorating relations, as Lewis and Litai note, comprised the differences in their leaderships' views on the implications of nuclear weapons. While Mao regarded nuclear weapons as paper tigers that were never to be used, Khrushchev regarded them as weapons to fight the imperial forces. The gradually embittering relations resulted in the withholding of the prototype of the atomic bomb developed by the Chinese scientists with the help of the Soviet scientists in Moscow. However, anti-Soviet eruptions in Hungary and Poland led the Soviet leadership to resume cooperation with China.

CHINESE CONCEPTION OF NUCLEAR DETERRENCE

China successfully tested its first atomic bomb on October 16, 1964. Throughout the 1960s, Chinese scientists also worked towards developing thermonuclear weapons and an Intercontinental Ballistic Missile (ICBM). China tested its thermonuclear weapon in 1967 and conducted tests of a partial-range DF-5 ICBM in 1971. There existed a significant gap between the progress in China's technical programme and the development of a nuclear strategy. China's nuclear thinking continued to remain highly ideological; however, the operationalisation of China's nuclear weapons required a break from past thinking and involved articulating a defence strategy that incorporated the concept of nuclear deterrence.

There is also a marked difference in the way the United States and China perceive nuclear deterrence. While scholars in the United States consider deterrence as an appropriate strategy in both strategic and conventional military terms, the Chinese scholars think of it as an act of intimidation. The term associated with the concept of 'deterrence' in Mandarin is 'weishe', and refers to the coercive strategy of the United States. Many Chinese speakers use the term 'weishe' only to mean coercion.

^{15.} Lewis, n. 1, p. xx.

^{16.} Bing and Zhao, eds., n. 3, p. 18.

^{17.} Ibid.

In the standard definition, as developed by the United States, deterrence refers to the use of threat of force to prevent an adversary from taking action. It is closely related to the term compellence, which refers to the use of threat to force an adversary to take action. The distinction between the two concepts also lies in their outcomes. In the case of deterrence, a state, while forcing an adversary to forgo action, seeks to maintain the status quo; in the case of the latter, the state, while compelling a rival to take any action, seeks to change the status quo. In the Western conception, therefore, there lies a thin line between nuclear deterrence and compellence. 19,20

The Chinese scholars, however, do not make a distinction between nuclear deterrence and compellence, and often tend to conflate the two. The *PLA Encyclopaedia* defines deterrence as "the display of military power or threat of use of military power, in order to compel an opponent to submit". China's leadership perceives it to be analogous to the Western concept of coercion which encompasses defensive as well as aggressive actions. Thus, for a long time after China's first nuclear test, its leadership refrained from using the term deterrence in describing its military strategy. The leadership's opposition to the strategy of deterrence was reflected in the 1998 Defence White Paper, wherein the nuclear weapons states were condemned for accepting the concept of nuclear deterrence.

Following the test of its first atomic bomb, 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." After Mao's death, Deng Xiaoping first articulated the Chinese conception of deterrence by stating in a public speech that "if you want to destroy us, you have to suffer a little retaliation." ²¹ The Chinese leadership believes that an act of slight revenge, as opposed to a reciprocated

^{18.} Tomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966; reprinted with new Preface and Afterword, 2008), pp. 70–71.

^{19.} Susan T. Haynes, Chinese Nuclear Proliferation: How Global Politics Is Transforming China's Weapons Buildup and Modernization (Lincoln: University of Nebraska Press, 2016), p. xx.

^{20.} Weidi, in Bing and Zhao, n. 3, pp. 19-50.

^{21.} Ibid.

China's conception of nuclear deterrence is based on the minimum means of reprisal, meaning whereby that it seeks to maintain a survivable retaliatory nuclear strike capability. The guiding principle for China's nuclear deterrence, thus far, has been to resist intimidation by the adversary's nuclear weapons by striving to acquire similar capabilities.

retaliation, serves the purpose of making the adversary afraid. Thus, China maintains a small arsenal that serves as a restraining force to discourage its adversary from acting rashly.

The Chinese leadership conceives a limited role for its nuclear weapons. Historically, it has dealt with the weapons of mass destruction with caution. Sun Tzu wrote in the *The Art of War*: "The highest form of generalship is to thwart the enemy's plans; the next best is to prevent the alliance of the enemy's forces; the next is to attack the enemy's army in the field; and the worst of all is to

besiege cities." Thus, while nuclear weapons seemed to alter the methods of combat, the Chinese leadership continued to believe that they serve no warfighting purposes. Moreover, through the 1960s, lack of financial resources and technological constraints did not allow China to think otherwise. The theory of the 'few weapons' afforded China the freedom from intimidation from its nuclear adversaries and served the purpose of creating fear within its adversaries.

It was, however, only in the 2006 Defence White Papers that China officially began to change its thinking on the strategy of deterrence. In the paper, China accepted deterrence as its policy and noted that the objective of China's Second Artillery Force is to "to deter other countries from using or threatening to use nuclear weapons against China". Since then, China has continued to regard deterrence as a strategy in the Defence White Papers that have followed.

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On the day China tested its nuclear weapons, the Chinese government issued a statement proposing the global, comprehensive prohibition of nuclear weapons through their systematic destruction.

CHINA'S THINKING ON NUCLEAR NON-PROLIFERATION AND DISARMAMENT

In the 1950s, when China was in the process of acquiring nuclear weapons, it tended to support the Soviet policies and proposals on arms control. However, as the Sino-Soviet relations deteriorated by the late 1950s, China withdrew its support to the Soviet Union on negotiations leading to the Limited Test Ban Treaty (LTBT). The ban on atmospheric testing, that formed a significant component of the treaty, imposed significant constraints on China's nuclear weapons programme. To deflect the pressure from the developing countries on signing the LTBT, China offered several alternate arms-control proposals including the creation of nuclear weaponsfree zones, especially in Africa, and a summit of world leaders to discuss the "complete prohibition of nuclear weapons".²²

On the day China tested its nuclear weapons, the Chinese government issued a statement proposing the global, comprehensive prohibition of nuclear weapons through their systematic destruction. In the statement, the Chinese government maintained that China was compelled to develop nuclear weapons due to the persistent nuclear threats and nuclear blackmail it faced.²³

^{22.} Lewis, n. 1.

^{23. &}quot;Statement by the Government of the People's Republic of China," *People's Daily*, October 17, 1964.

China also put forward its policy of No First Use (NFU) whereby it stated that it would not be the first to use nuclear weapons at any time or under any circumstances in a conflict. It also urged the United States and the Soviet Union to accept the NFU proposal. Additionally, China condemned the existence of nuclear monopolies and criticised the United States and the Soviet Union for forcing the agenda of disarmament even as they significantly aggrandised their own nuclear capabilities. Following the tests, China dropped its campaign for a nuclear weapons-free zone in Asia and instead laid out a proposal for a summit of world leaders to discuss the prohibition of nuclear weapons. Jeffery Lewis in his book Paper Tigers argues that its policy of NFU, more than offering assurance to the other nuclear weapons states, served to support China's claims that a larger nuclear inventory, as possessed by the United States, has little coercive value.

The international environment began to change 1976 onwards once China developed formal diplomatic relations with the United States. During this time, the Chinese deputy foreign minister also held successive consultations with his Soviet counterpart that restored the channels of dialogue between the two countries. During those diplomatic interactions, China maintained its focus on planning the course of global disarmament. China also increased its participation in various international dialogues and promoted its goal of global nuclear disarmament. It dispatched representatives to the First Special Session of the U.N. General Assembly on Disarmament in New York and the Conference on Disarmament in Geneva. In 1983, it sent its first ambassador for disarmament affairs. In 1986, China presented two proposals on nuclear and conventional disarmament for the first time at the UN General Assembly, pointing out that the United States and the Soviet Union had special responsibilities for both nuclear and conventional disarmament.

The collapse of the Soviet Union in 1991 had put an end to the great power competition. The risk of another world war was tremendously reduced, and the countries began adjusting their military strategies according to the new order. Lewis notes that as the United States and Russia intermittently engaged in disarmament negotiations and made some progress in the reduction in the

size of their nuclear arsenals, China found itself in a complicated position regarding the global nuclear arms control and disarmament initiatives. China came under pressure by the mainstream non-proliferation regime to step out of its nuclear secrecy and participate in the global nuclear disarmament efforts. Notwithstanding, China complied with the efforts as it also led to a reduction in the arms race between Russia and the United States, especially in the hotspots in China's neighbourhood.

In 1992, China officially joined the mainstream non-proliferation regime by signing the nuclear Non-Proliferation Treaty (NPT). It had opposed the treaty for several decades as it previously held the view that all countries have the same right to develop nuclear weapon capabilities. The signing of the NPT was a marked shift in China's thinking on nuclear non-proliferation as, after condemning the then non-nuclear proliferation regime for nearly four decades for monopolising the possession of nuclear weapons, it ultimately integrated itself within the global nuclear order created by it. China also officially declared that it would continuingly report to the International Atomic Energy Agency (IAEA) about any export to, or import from, non-nuclear weapons states involving nuclear materials of one effective kilogramme or above.²⁴ In July 1993, China formally promised that it would voluntarily report to the agency about any import or export of nuclear materials, and all exports of nuclear equipment and related non-nuclear materials.²⁵ In 1996, China signed the Comprehensive Test Ban Treaty (CTBT), and, at the same time, issued a government statement whereby it reiterated its position on the complete prohibition and thorough destruction of all nuclear weapons.²⁶

At the turn of the century, China began to realise that its goal of achieving comprehensive disarmament was unrealistic as nuclear weapons had become

^{24.} Information Office of the State Council of the People's Republic of China, *White Paper, China: Arms Control and Disarmament*, Beijing, 1995.

^{25.} Ibid.

^{26.} Ministry of Foreign Affairs of People's Republic of China, "China's Signature on Comprehensive Nuclear Test Ban Treaty," n.d.fmprc.gov.cn/mfa_eng/ziliao 665539/3602 665543/3604 665547/t18043.html.

a cornerstone of its national security.²⁷ It also had overlapping security interests with several of the new states acquiring nuclear power, the reason being their shared animosity towards the United States or other adversarial states. As Susan Turner Haynes in Chinese Nuclear Proliferation: How Global Politics is Transforming China's Weapons Buildup and Modernization, notes, China has been subtly empathetic towards North Korea's predicament caused by the United States on the issue of the former's nuclear weapons programme. In many non-official statements, the Chinese leaders have downplayed the security challenge posed by North Korea's weapons programme. Similarly, China has diverged from the stance taken by the mainstream non-proliferation regime on Iran's nuclear programme that has included a series of economic sanctions, as the two countries share friendly relations and cooperate in various areas, including energy, trade and military technology.

The US congressional report published in August 2006 revealed that China had also offered nuclear material and expertise to Pakistan to establish Pakistan's enrichment programme on the 1990s.²⁸ China has also offered the designs and technology of its 'M' series of ballistic missiles to help Pakistan develop the medium-range ballistic missiles, Shaheen I and II, that came under scrutiny because of violation of the terms of the Missile Technology Control Regime (MTCR).²⁹ China has sought to proliferate nuclear material and expertise to Pakistan in an effort to threaten India's security.

In recent times, China's efforts have been primarily geared towards persuading nuclear weapons states to provide security assurances to all non-nuclear weapons states unconditionally. It has actively campaigned to establish an ad hoc committee to facilitate the security assurances in the Conference on Disarmament (CD).

^{27.} Tong Zhao, "Changes in, and the Evolution of, China's Nuclear Thinking", in Bing and Zhao, eds., n. 3, 2016, pp. 262-272.

^{28.} Federation of American Scientists, "Science for a Safer, More Informed World"; https://fas. org/sgp/crs/nuke/RL34248.pdf. Accessed on January 8, 2020.

^{29. &}quot;Pakistan and China's Almost Alliance", RAND Corporation Provides Objective Research Services and Public Policy Analysis | RAND. https://www.rand.org/blog/2015/10/pakistanand-chinas-almost-alliance.html. Accessed on January 8, 2020.

CHINA'S THREAT PERCEPTIONS POST-COLD WAR

By the 1990s, the Chinese leaders had adjusted to the view that a major war was unlikely to take place. They had begun to believe that China's national security environment had stabilised and that it was heading towards a long period of peace. The momentum of this optimism continued well into the turn of the century when its leaders declared that the first two decades of the 20th century would provide China with significant strategic opportunities that China must grasp.³⁰ Indeed, China made significant strides in its economic growth in the period following the end of the Cold War. From the 1990s, it consistently achieved 10 per cent annual Gross Domestic Product (GDP) growth, owing much to the liberal international economic order that prevailed in that period.³¹

China's relations with the United States also transitioned from being defined by zero-sum thinking, wherein China held that any country that is not its friend is an adversary, to a more complex relationship involving both cooperation and suspicion.³² Such complex relations further reduced the risk of nuclear war, and the vicissitudes of their relations shaped the nuclear dynamics in this period: the salience of nuclear weapons dramatically increases when states get involved in a conflict and rapidly subsides when they engage in some form of cooperation.³³

China often views the developments in Russia's nuclear programme with caution. Although both countries remain strategic partners as a result of marginalisation and vulnerability caused by the rise of the United States after the end of the Cold War, they have had a history of nuclear confrontation, wherein the Russian military newspaper issued a nuclear threat against China during their border conflict of 1969.³⁴ Notwithstanding, Haynes notes that despite Russia's sizeable nuclear arsenal and competitive

^{30. &}quot;China's National Defense in 2002," State Council Information Office, December 4, 2002.

^{31.} The World Bank. "China Overview." World Bank; https://www.worldbank.org/en/country/china/overview. Accessed on December 23, 2019.

^{32.} Weidi, n. 3, p. 31.

^{33.} Ibid.

^{34.} Lyle J. Goldstein, Do Nascent WMD Arsenals Deter? The Sino-Soviet Crisis of 1969, p. 60.

United States continues to be a heavyweight in China's nuclear calculus, and China's threat perception continues to be shaped by the US presence in its neighbourhood. The Taiwan issue continues to be a bone of contention and often brings the armed forces of the two countries face-to-face within the conventional domain.

delivery capabilities, China views Russia as a declining power that would not be able to sustain its large inventory of nuclear weapons or invest in advanced technology in the coming times.³⁵

Further, China remains concerned about Japan's potential acquisition of nuclear weapons, given its high stockpile of separated plutonium and available technological expertise, and long history of devastating wars. Japan has made claims over the disputed Senkaku and Diaoyu Islands, and while its Parliament passed a resolution in 1967 to never produce, procure, or store nuclear weapons, China remains sceptical of such promises and

believes that Japan might use nuclear coercion to gain leverage over the issue. China considers India to be a peripheral threat, but it publicly rejects it as a threat to its national security.36 Notwithstanding, China has sought to counter the challenge posed by India by aiding the latter's adversary, Pakistan, in developing its nuclear weapons programme, often by violating the terms of various non-proliferation efforts.

Nevertheless, the United States continues to be a heavyweight in China's nuclear calculus, and China's threat perception continues to be shaped by the US presence in its neighbourhood. Following the end of the Cold War—that coincided with heating up of the Taiwan independence movement—China has continuously claimed that the United States has been secretly providing support to the forces that are fighting for Taiwan's independence.³⁷ The Taiwan issue continues to be a bone of contention and often brings the armed

^{35.} Susan Turner Haynes, "China's Nuclear Threat Perceptions", Strategic Studies Quarterly, vol. 10, no. 2, 2016, pp. 25-62; www.jstor.org/stable/26271504. Accessed on January 8, 2020.

^{36.} Ibid.

^{37.} Ibid.

forces of the two countries face-to-face within the conventional domain.

In its first Defence White Paper released in 1998, the Chinese leaders referred to the development of a relatively stable international security environment. The paper stated that the region of the Asia-Pacific had grown stable but pointed out that hegemonism and power politics remain the main sources of threats to world peace and stability; the Cold War mentality and its

In the 2019 Defence White Paper, China stated that its nuclear capabilities remain a strategic cornerstone in safeguarding its national sovereignty and security.

influence still have a certain currency, and the enlargement of military blocs and the strengthening of military alliances have added factors of instability to international security.

However, when the United States identified the Taiwan Strait region as one of the seven possible nuclear weapons targets in its 2002 Nuclear Posture Review (NPR), China termed the US military presence and its bilateral military alliances in East Asia, along with its plans of the development and deployment of the Theatre Missile Defence (TMD) system as a particularly negative development. During this time, the United States also began working on its Ballistic Missile Defence (BMD) systems and improving the precision strike capabilities of its conventional long-range missiles to target China's nuclear assets.

In the 2005 Defence White Paper, the Chinese leadership raised concern regarding the complicated security factors in the Asia-Pacific where, as it pointed out, the United States was reinforcing its military presence. It also raised concerns regarding the constitutional overhaul in Japan, whereby it contended that Japan was adjusting its military and security policies and developing the missile defence system for future deployment. It stated that these developments had led China to enhance its nuclear counter-attack capabilities. In the several Defence White Papers that followed, China reiterated its concerns regarding the US interference in its neighbourhood. In the 2013 Paper, it stated that China would maintain an appropriate level

of readiness in peace-time, and further added that it would combine peacetime needs with war-time needs and maintain vigilance at all times to deter the enemy from using nuclear weapons against it.

By 2017, the US military footprint had expanded well into South Korea where it deployed the Terminal High Altitude Area Defence (THAAD), a globally transportable anti-ballistic missile defence system.³⁸ In 2019, the United States made plans to deploy medium and intermediate-range ground-based missiles in the Asia-Pacific region following its announcement to withdraw from the Intermediate-Range Nuclear Forces (INF) agreement it had signed with the erstwhile Soviet Union in 1987. The deployment of these missiles allows the United States to encircle China effectively. A potential counter-force use of such missiles against China poses a threat to the survivability of its nuclear weapons.

For China, these developments not only challenge its nuclear deterrent capabilities but also disrupt the regional balance of power. In the 2019 Defence White Paper, China stated that its nuclear capabilities remain a strategic cornerstone in safeguarding its national sovereignty and security. Subsequently, it has responded to these challenges by adopting a hedging strategy that has resulted in a sharp accretion in its nuclear capabilities.³⁹ In the last few years, China has rapidly modernised its nuclear weapons capabilities, and significantly expanded the range of its ICBMs to surpass the range of the US ICBMs. It has also incorporated new penetration capabilities such as Hypersonic Glide Vehicles (HGVs), decoys, or Multiple Independently Reentry Vehicle (MIRV) systems to counter the US Ballistic Missile Defence (BMD) systems.⁴⁰

^{38.} Michael D. Swaine, "Chinese Views on South Korea's Deployment of Terminal High Altitude Area Defense (THAAD)." Carnegie Endowment for International Peace. Last modified February 2, 2017; https://carnegieendowment.org/2017/02/02/chinese-views-on-southkorea-s-deployment-of-terminal-high-altitude-area-defense-thaad-pub-67891.

^{39. &}quot;China's PLA: New Weapons, New Approaches," IISS; https://www.iiss.org/blogs/militarybalance/2019/10/china-national-day-parade-pla. Accessed on October 12, 2019.

⁴⁰ Hans M. Kristensen and Matt Korda, "Chinese Nuclear Forces, 2019." Bulletin of the Atomic Scientists, 75, no. 4, July 2019, pp. 171-178; https://doi.org/10.1080/00963402.2019.1628511. Accessed on October 12, 2019.

CONCLUSION

This paper has traced the history of China's nuclear programme to identify changes in its nuclear thinking. The Chinese ideology that nuclear weapons are akin to paper tigers that are used to scare people and don't determine the outcome of war, continues to hold true. The Chinese leadership continues to modernise its nuclear weapons to be a nuclear power to be reckoned with, but remains committed to its principles of NFU, whereby it pledges not to be the first to use nuclear weapons at any time or under any circumstances. However, the Chinese thinking on the strategy of nuclear deterrence and non-proliferation has undergone changes.

With regards to nuclear deterrence, it has come a long way from condemning the use of nuclear weapons for nuclear deterrence by the nuclear weapons states during the Cold War to adopting the strategy of nuclear deterrence as a means of protecting its national security interests. In the earlier times, its leaders held the view that nuclear deterrence did not depend on immediate and precise counter-attack capability, but on the capacity to conduct nuclear retaliation. In contemporary times, however, its leaders seek to respond to China's threat perceptions by keeping China's nuclear weapons at an "appropriate level of readiness". This change in thinking has been continuously reflected in China's national Defence White Papers wherein it has emphasized the need for improving its nuclear quick-response capacity and nuclear strategic-warning capacity.⁴¹

China's thinking on non-proliferation has been directly influenced by its changing perceptions of the global security situation. It has ranged from resisting the non-proliferation efforts led by the United States in the 1950s and 1960s for monopolising the possession of nuclear weapons to joining the non-proliferation regime as the security environment in East Asia turned in China's favour in the 1990s. However, despite China's active participation in various non-proliferation programmes, there have been instances where China has either condoned the possession of nuclear weapons or proliferated nuclear weapons to its strategic partners when it suited its security interests.

^{41.} Zhao, in Bing and Zhao, eds., n. 3, pp. 262-272.

Thus, while China's nuclear thinking in terms of the purpose of its nuclear weapons has been linear, changes are conspicuous in its nuclear thinking on the strategy on deterrence and non-proliferation.