The View From Zhongnanhai – Rethinking China's No First Use Policy in Support of Modern Nuclear Deterrence?

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Formations of Dongfeng-41 intercontinental ballistic missiles of the People's Liberation Army Rocket Force in review on the 70th anniversary of the founding of the People's Republic of China, 1 October 2019. Photo: Xinhua via CBS News

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Nuclear Capacity Building as Pragmatic Statecraft

The lynchpin of governance legitimacy in the People's Republic of China (PRC) rests on more than the Communist Party of China's (CPC) ability to meet its implicit contractual obligations to a domestic constituency; both forecasting and bringing to fruition outcomes favorable to the overall well-being of Chinese society, while rectifying internal malfeasance that triggers its agitation.[1] In the post-reform era, the contemporary 'test' for gauging the durability of the CPC overemphasizes socioeconomic development and topline economic data. As has long been known through publicly available information, the political leadership prioritizes the domination of various non-economic domains with the objective of shaping narratives and commanding the deference of the Chinese nation, as well as the respect of foreign states, allies, and adversaries alike. Chronic political insecurity within the Party plays an important role in setting the state's foreign policy priorities,[2] and as such a more comprehensive understanding of its underpinnings can be gained by examining the CPC's efforts to shape a favorable external environment in support of its enduring position atop China's political hierarchy. Consolidating the Party-state's legitimacy

[1] Chu, Yun-han (2013). Sources of Regime Legitimacy and the Debate over the Chinese Model, *China Review*
[2] Bishop, Christopher: "To Understand China's Aggressive Foreign Policy, Look at Its Domestic Politics," *Council on Foreign Relations*, 8 October 2020

abroad, as well as its seat among other leading powers in the Xi Jinping era, is China's status as a nuclear state. From its infancy, China's nuclear weapons development has served well the Party's foreign policy priorities by heading off the worst excesses of an emerging 'conspiracy' against China by external powers. Domestically, a nascent nuclear weapons program also showcased the tangible achievements of a polity reeling from the devastation of the Great Leap Forward and on the cusp of plunging the nation into the extreme tumult of the Cultural Revolution.

Conceived as an instrumental guarantor in its foreign relations, the primary objective of attaining nuclear status was to lend the PRC credibility in its convictions, as well as to establish a minimum deterrent capability against the United States, and later the Soviet Union. Through a vow of 'assured retaliation,' CPC leadership during the Mao Zedong era sought to stave off both a nuclear strike against and diplomatic coercion of the PRC.[3] While the Cold War's foremost nuclear powers incorporated elements of their extensive nuclear capabilities into conventional warfighting strategies, for Mao – known to favor overwhelming manpower in warfare rather than a technological advantage – acquiring basic nuclear capabilities achieved an important end: the atom bomb was, in principle, a 'paper tiger' with little practical utility in war, and as such rival nuclear states would not dare harness its awesome power to cause such utter devastation.[4] Empirical evidence and anecdotal remarks from PRC leaders on the aims and objectives of its nuclear program confirm this view. As discussed herein with a focus on the political motivations and tradeoffs in its early stages of development, PRC and People's Liberation Army (PLA) leadership maintained a comparatively underwhelming and particularly vulnerable nuclear arsenal throughout the Mao and Deng Xiaoping eras. Of primary concern for the leadership during this period was maintaining nominal status as a nuclear state, much less teasing out feasible survivability and retaliatory strike strategies. Despite a historical lack of political support for a more robust deterrent capable of breaking the nuclear duopoly, the CPC's bringing to fruition China's quest for nuclear status provided the foundation for later generations of leadership to build a more sophisticated and diversified nuclear arsenal. Today, as concerted efforts striving for nuclear modernization in all respects are underway – which predate current General Secretary Xi Jinping – they serve a different set of political priorities in the current era: to bolster hard power projection as China strives to realize the 'Chinese Dream' (Zhongguo Meng), embodied in the aims and objectives of the 'great rejuvenation of the Chinese nation.'[5] These objectives include the complete 'reunification of the motherland,' preserving 'territorial integrity, and securing the new era development period. These grand ambitions are not exhaustive, rather they are the most important issues that are inextricably linked to an external security environment the PRC must reckon with on its way to national renewal. China's current external conditions, however, dictate that its current nuclear strategy and underlying policies are untenable amid a more fluid security environment chiefly manifested by converging external pressures.

Although the Party has agency in reacting to changes in China's security situation, the present conditions, willed or otherwise, dictate the policy. This remains the general theme of Xi Jinping's tenure thus far. Leadership can, however, maximize the benefits of a needed policy adjustment by

[3] Zhang, Hui: "China's Nuclear Weapons Modernization: Intentions, Drivers, and Trends." Presentation, 15 July 2012.
[4] Fravel, M. Taylor and Medeiros, Evan S. (2010). China's Search for Assured Retaliation, *International Security*
[5] Annual Report to Congress: Military and Security Developments Involving the People's Republic of China, United States Department of Defense, 1 September 2020

fully leveraging the strategic opportunities presented. These two thematic drivers of policy change feature prominently when assessing the need to rethink outdated nuclear doctrine, policy, and strategy due to both maturing nuclear capabilities and an increasingly unfavorable security environment. Furthermore, the pursuit of National Rejuvenation (minzu fuxing) poses fresh challenges for the CPC due to Xi's artificial accelerating of the timeline on which some of the most pressing security issues must be brought to their correct conclusion. China's rise as a modern nuclear power, chiefly manifested in the PLA's forging a credible nuclear triad,[6] continues unabated even in the face of calls for it to scale back its nuclear ambitions and join multilateral arms reduction negotiations. Unburdened by arms control regimes restricting the arsenals of the United States and Russia, the PRC has an opportunity to play 'strategic catch up' in its nuclear modernization with an eye to various contingencies. China's outgrowing existing framework within which its nuclear program was conceived is the result of a multi-generational focus on capacity building.[7] On the whole, the forging of a modern nuclear deterrent over successive generations of leadership should be understood as an exercise of pragmatic statecraft, stemming from a desire to shape outcomes favorable to the longevity of the political system generally, and head off external threats to a fixed blueprint for national renewal specifically.

Political Underpinnings of 'Assured Retaliation' in the Mao & Deng Eras

From the beginning of the PRC's nuclear program starting in the 1950s, its political foundation closely tracked Mao's view on the imperative of countering aggression from 'hostile powers.'[8] First, the United States and its closest allies posed not only a challenge to Mao's vision of fomenting proletarian revolution beyond China but also constituted an existential threat to the PRC itself. China's intervention in the Korean war in support of the North laid bare the desires of some in the US government and military to loosen constraints on the use of nuclear weapons.[9] Successive US administrations also left open the possibility of a preemptive nuclear strike to delay the progression of China's nuclear weapons program or (attempt to) disable it together.[10] From the perspectives of Mao, Premier Zhou Enlai, and Defense Minister Lin Biao, these threats would endure so long as China lacked its own means for appropriate and proportional retaliation.[11] Second, the Sino-Soviet split placed an intolerable amount of political stress on the CPC. The advent of de-Stalinization in the Soviet Union marginalized Mao, who had co-opted the Soviet dictator Joseph Stalin's policy prescriptions for rapid industrialization and economic development, political education and suppressing dissent, and supporting political agitation around the world. Soviet deviation from Stalinist orthodoxy – or, according to Mao, the correct interpretation and

[6] A nuclear triad, or just 'triad,' refers to a three-pronged force structure that enables nuclear weapons to be launched via ground, sea, and air platforms, making a country's arsenal more survivable in theory. For a general overview, see: "Nuclear triad, military strategy," *Encyclopædia Britannica*: https://www.britannica.com/topic/nuclear-triad

[7] The terms 'generational' and 'generation of leadership' are in the context of official Chinese political discourse beginning with Jiang Zemin. It is not meant to be conflated with the widely-held understanding of 'generation.' For more, see: Jiang Shigong: "Philosophy and History: Interpreting the 'Xi Jinping Era' through Xi's Report to the Nineteenth National Congress of the CCP," 强世功, "哲学与历史—从党的十九大报告解读'习近平时代,'" 开放时代, 2018 年第 1 期。, Reading the China Dream

[8] Former Major General Yang Huan: "China's Strategic Nuclear Weapons," paper excerpted, *National Defense Industry Press* and *Federation of American Scientists*, 1989

[9] Dingman, Roger (1988). Atomic Diplomacy during the Korean War, *International Security*

[10] Gady, Franz-Stefan: "How a State Department Study Prevented Nuclear War With China," *The Diplomat*, 25 October 2017

[11] Fravel, M. Taylor, *Active Defense: China's Military Strategy Since 1949*, Princeton University Press 2020

implementation of Marxism-Leninism[12] – over the decade following Stalin's death in 1953 precipitated a complete and politically painful fracturing of Sino-Soviet relations. The split heralded a host of complications for which China proved woefully unprepared – from the withdraw of crucial economic development aid and halting support for the PRC's fledgling nuclear program,[13] to protracted territorial disputes along a vast, shared border that at times devolved into armed conflict.[14] Illustrative of the depths to which Sino-Soviet relations deteriorated, the Soviets also made preparations for a nuclear strike against the PRC in 1969, only to pull back due in part to being strongly rebuffed by the United States.[15] The PRC's having been at odds with the world's foremost nuclear powers and their allies solidified an internal narrative of a China under siege.

Mao, in his renowned speech 'On The Ten Great Relationships' spoke of the atom bomb: "In today's world, if we don't want to be bullied, then we cannot do without this thing."[16] The ultimate aim of China's nuclear weapons development was for its eventual nuclear status to play a limited role in supporting its foreign and defense policies: establishing a credible minimum deterrent against superior nuclear states by way of 'assured retaliation.' Assured retaliation – the promise of a nuclear reprisal capable of inflicting unacceptable damage to an adversary[17] – served as the basic foundation upon which the PRC's nascent nuclear capabilities were further developed in the Mao and Deng eras. China's commitment to a policy of No First Use (NFU) narrowed the scope within which its nuclear arsenal could be employed. PRC leaders also sought to placate non-nuclear states, pledging to refrain from going nuclear in a conventional war. On the same day of its successful first detonation of the atom bomb in 1964, Zhou Enlai announced the NFU policy's coming into effect as the mainstay of an overall defensive nuclear posture.[18] What remained unclear was whether the leadership fully understood what resources and level of political backing were required to build up a survivable nuclear weapons stockpile – surely due in part to the opaqueness of decision-making and deliberation within the Party-state, but undoubtedly also because of the apparent lack of seriousness afforded to nuclear strategy given Mao's favored style of asymmetric warfare.[19] These contradictions made – and to a lesser extent still do – a complete and accurate assessment of PRC nuclear doctrine and strategy difficult to garner. What is known about the simplicity of China's nuclear thinking is that both Mao and Deng showed little interest in neither their practical utility nor taking part in the Cold War arms race. In the paramount leaders' view, nuclear arms could not serve in furtherance of military objectives. PRC nuclear capabilities were never expansive, neither in quantity, as shown in figure 1, nor quality.

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[12] Mao Zedong: "On Krushchov's Phoney Communism and Its Historical Lessons for the World," *Foreign Languages Press*, originally published by People's Daily, 14 July 1964

[13] Shen, Zhihua and Yafeng Xia (2012). Between Aid and Restriction: Changing Soviet Policies toward China's Nuclear Weapons Program: 1954-1960

[14] Gerson, Michael S. (2010). The Sino-Soviet Border Conflict, *CNA Analysis & Solutions*

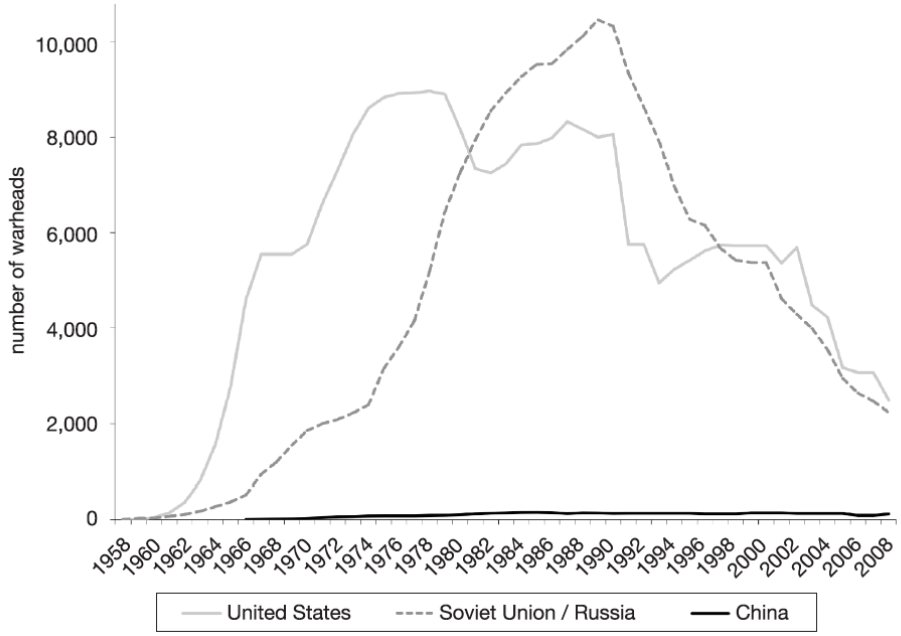
[15] Goldstein, Lyle J. (2003). Do Nascent WMD Arsenals Deter? The Sino-Soviet Crisis of 1969, *Political Science Quarterly*

[16] Fravel, M. Taylor and Medeiros, Evan S. (2010).

[17] Ibid

[18] Pan, Zhenqiang (2018). A Study of China's No-First-Use Policy on Nuclear Weapons, *Journal for Peace and Nuclear Disarmament*

[19] Ibid



'Figure 1: U.S., Soviet/Russian, and Chinese Warheads, 1958-2008'[20]

China's ability to carry out a retaliatory nuclear strike never had the full confidence of its nuclear rivals. Years after its first successful nuclear detonation, the PLA had no more than 75 nuclear warheads and a small batch of gravity bombs.[21] Ballistic missile stocks before the 1980s comprised only the intermediate-range Dongfeng 3 (DF-3) and DF-4.[22] Both the DF-3 and DF-4 placed operational constraints on the former Second Artillery Corps,[23] the strategic force responsible for operating and maintaining the PLA's nuclear arsenal: the missiles each required two to three hours' response time, during which they would be vulnerable to a preemptive strike.[24] Preparing them for the launch was an onerous and dangerous process in and of itself.[25] Doubt over China's ability to guarantee effective nuclear retaliation persisted throughout the Deng era, as it possessed only a handful of DF-5 intercontinental ballistic missiles (ICBM) capable of reaching Moscow and Washington.[26] China's nuclear program was further hamstrung by The Cultural Revolution, (1966-1976) as scientists and Party cadres working at the Lop Nor nuclear research facility in Xinjiang Province faced relentless political persecution, suspicion, and harassment. Across the country unceasing conflict between factions led to mistrust and contributed to the attrition of key scientific and political personnel, dealing with significant setbacks to the advancement of China's nuclear program.[27] Furthermore, Mao and Deng's misgivings about the utility of nuclear weapons

[20] Norris, Robert S. (1994). Nuclear Weapons Databook, Vol. 5: British, French, and Chinese Nuclear Weapons p. 359; "Archive of Data," Natural Resources Defense Council
[21] Fravel, M. Taylor and Medeiros, Evan S. (2010).
[22] Ibid
[23] The Second Artillery Corps was renamed the People's Liberation Army Rocket Force (PLARF) in 2016.
[24] Kan, Shirley A. (2000). China: Ballistic and Cruise Missiles, CRS Report for Congress, Congressional Research Service
[25] Fravel, M. Taylor and Medeiros, Evan S. (2010).
[26] Lewis, John Wilson and Hua Di (1992). China's Ballistic Missile Programs: Technologies, Strategies, Goals, *International Security*
[27] Wu, Riqiang (2013). Certainty of Uncertainty: Nuclear Strategy with Chinese Characteristics, *Journal of Strategic Studies*

– which still partly underpin China's status as the only nuclear state with an explicit, unconditional NFU policy[28] – have endured even as the technical development of the PLA's nuclear warheads, delivery vehicles, and platforms reflect an implicit acknowledgment of the need to reckon with the changing dynamics of existing security threats.

The unquestioned political authority of Mao and Deng meant that their personal nuclear doctrines – if they can be called that – erected insurmountable obstacles to not only the further development of China's nuclear arsenal but also prevented a further building out of a defensive framework on the part of the Party-led PLA.[29] Mao in particular reasoned that only a few atom bombs' would suffice in staving off a nuclear attack against China.[30] Without additional detailed considerations on the PRC's nuclear doctrine and policy, however, the Party's lack of investment in nuclear development – in both thought and resources – can be reasoned with given the finite resources available to the leadership after the Sino-Soviet split. Periods of extreme political infighting, economic stagnation, and social strife in the Mao years further bred mistrust within the CPC and PLA and consequently circumscribed PRC nuclear ambitions.[31]

Nuclear Development & Enduring Strategy Under Jiang Zemin & Hu Jintao

The PRC's nuclear architecture endured through the tenures of CPC leaders Jiang Zemin and Hu Jintao. Having both held power as former Party General-Secretaries and Chairmen of the Central Military Commission (CMC), Jiang and Hu were unwavering in their public commitments to maintaining the defensive nature of China's nuclear strategy.[32] Simultaneously, over the course of their combined tenures as heads of the Party (1989-2012) – and varied timelines as CMC heads – China furthered its nuclear development through overall capacity building and made strides toward realizing full triad capability. Jiang and Hu's promotion of strategic arms control diplomacy nevertheless was a consistent theme of both their tenures as Party, military, and state heads.

In his 1999 speech to the Conference on Disarmament, Jiang Zemin tacitly played both sides of the coin, leaving ajar a strategic window for future leadership groups: while reaffirming the centrality of China's NFU policy, swearing off use of nuclear weapons against non-nuclear states, and opining about the need to avoid a new nuclear arms race, Jiang stressed parity and strategic equilibrium among nuclear states.[33] Such public remarks fit with China's then-nuclear capabilities and level of development. The PLA's ability to deploy nuclear weapons from land, air, and sea-based platforms was long plagued by readiness and technological and survivability issues. Throughout the 1990s, China's less favorable liquid-fueled ballistic missiles made up the bulk of its land-based deterrent.[34] The People's Liberation Army Air Force's (PLAAF) Soviet-modeled strategic bomber fleet was limited in range and its exact strike capabilities were difficult to discern,

[28] Panda, Ankit: "No First Use' and Nuclear Weapons," *Council on Foreign Relations*, 17 July 2018
[29] Fravel, M. Taylor and Medeiros, Evan S. (2010).
[30] Pan, Zhenqiang (2018).
[31] Ibid.
[32] Jiang Zemin: "Promote Disarmament Process and Safeguard World Security," Address at the Conference on Disarmament, 26 March 1999; Hu Jintao: "Work Together and Build a Safer World for All," Statement by President Hu Jintao at the UN Security Council on Nuclear Non-Proliferation and Nuclear Disarmament, 24 September 2009
[33] Jiang Zemin: "Promote Disarmament Process and Safeguard World Security"
[34] Kan, Shirley A. (2000).

making it inefficient to maintain compared to a more reliable ground element.[35] Its sea-based platform centered on the Type 092 Xia-class nuclear-powered ballistic missile submarine (SSBN), with the Ju Lang 1 (JL-1) submarine-launched ballistic missile (SLBM) as its nuclear armament.[36] The People's Liberation Army Navy (PLAN) commissioned only one Xia-class SSBN, which never proved operational in support of China's minimum deterrence strategy; it remains uncertain whether the SSBN, when not in dry dock for overhauls to core operating systems, ever patrolled beyond China's regional waters.[37] Moreover, the PLA's nuclear command and control infrastructure was believed to be vulnerable to disruption, and to what extent a coherent targeting and launch strategy had been teased out is unclear.[38] These structural weaknesses outlasted Jiang's tenure as head of the CMC, though steady investments were made in and political support is given to nuclear expansion and modernization with an eye to potential contingencies, such as an outbreak of war in the Taiwan Strait or on the Korean Peninsula, among others.[39]

Efforts to modernize China's nuclear weapons, their delivery vehicles, launch platforms, and other supporting infrastructure were given further play during Hu Jintao's time as head of the CPC and CMC. Hu, widely judged as a less authoritative leader of the political establishment compared to his predecessors[40] – and in particular his successor, Xi Jinping – explicitly stuck to a strategy of minimum deterrence and the NFU policy. Hu's CPC kept to a two-pronged approach of reinforcing China's international status as a legitimate nuclear weapons state while taking up the mantle of representing the developing world's non-proliferation agenda. Hu's public stances notwithstanding, the PLA made important progress in developing a modest nuclear arsenal by undertaking sustained efforts to build up its air- and sea-based deterrents. During the Hu era the PLA debuted or finished testing and development of several new nuclear platforms and ballistic missiles, such as the second-generation Type 094 Jin-class SSBN, the Ju Lang 2 SLBM (JL-2), the DF-16 short-range ballistic missile (SRBM), and the DF-31 ICBM, to name a few. Following its growing pains with the 'slow and noisy' Xia-class SSBN, the PLAN today has in service at least four Jin-class SSBNs,[41] with each purportedly able to take on twelve JL-2 SLBMs.[42] The PRC began at-sea deterrence patrols with the Jin-class in 2015.[43] With a planned eight SSBNs for the fleet by 2030,[44] the Jin-class would substantially increase the ability of the PRC's nuclear forces to survive a first strike, complementing its more robust ground element and in keeping with a defensive nuclear strategy. The PLAAF apparently maintained a number of nuclear-capable air-based platforms whose strike capabilities are as yet unclear; it continued to develop a strategic bomber fleet in the Hu era based on variants of the Xi'an H-6. Today the H-6N bomber, having

[35] Wu, Riqiang (2013).
[36] Kristensen, Norris, McKinzie (2006). Chinese Nuclear Forces and U.S. Nuclear War Planning, *Federation of American Scientists/Natural Resources Defense Council*
[37] Ibid
[38] Fravel, M. Taylor and Evan S. Medeiros (2010).
[39] Haynes, Susan Turner (2016). China's Nuclear Threat Perceptions, *Strategic Studies Quarterly*
[40] Duchâtel, Mathieu and François Godement (2009). China's Politics under Hu, *Journal of Current Chinese Affairs*
[41] There are reports that two additional Jin-class SSBNs are now operational, bringing the total currently to six. See: "China Submarine Capabilities," *James Martin Center for Nonproliferation Studies*, 17 February 2021, Masterson, Julia (2020). China Deploys New Missile Submarines, *Arms Control Association*, and O'Rourke, Ronald (2020). China Naval Modernization: Implications for U.S. Navy Capabilities – Background and Issues for Congress, Congressional Research Service
[42] Kristensen, Hans: "Chinese Jin-SSBNs Getting Ready?," *Federation of American Scientists*, 2 June 2011
[43] Baker, Benjamin David: "China Deploys First Nuclear Deterrence Patrol," *The Diplomat*, 19 December 2015
[44] O'Rourke, Ronald (2020).

entered service in 2019, is purportedly able to be loaded out with an air-launched ballistic missile (ALBM).[45] Circumstantial evidence points to this conclusion, given the H-6N's extended range due to its aerial refueling capability, as well as its ability to take on an oversized weapons payload,[46] all key deficiencies of the PLAAF's earlier platforms. The resources invested into developing these advanced systems across the PLA's land, sea, and air platforms would have been made during the Jiang or Hu leadership periods.[47] Continuity was therefore a theme of Hu's tenure, with the CMC and PLA pacing capacity building in both the quantity and, more notably, the quality of its deployable nuclear weapons. Overall, China made incremental progress toward building a credible nuclear triad, although its ground element continued to play an outsized deterrence role. This gradualism proceeded without formal changes to nuclear policy, strategy, or a significant shakeup of political authority within the CPC or CMC.

Nuclear-capable Ballistic and Cruise Missiles of the People's Liberation Army[48]

- **Dongfeng series (DF)**
    - **DF-4** – The DF-4 appears to be one of the last remaining liquid-fueled (two-stage) ballistic missiles in the PLA arsenal. An intermediate/intercontinental ballistic missile (IRBM/ICBM), the DF-4 has a range of 4,500-5,500 kilometers and is believed to have been in service since 1980. It can carry a single nuclear warhead and is deployed from a missile silo, but is also transportable. The DF-4 may now be retired from service, but this cannot be confirmed.[49]
    - **DF-5** – The DF-5 is a two-stage liquid-fueled ICBM. It has the longest confirmed range of any ICBM in the PLA Rocket Force's (PLARF) arsenal (13,000 kilometers) and is capable of reaching the contiguous United States. Conceived in the 1960s and entering service in 1981, the DF-5's upgraded versions (the DF-5B and DF-5C) feature improved accuracy and MIRV capability (multiple independent reentry vehicles).[50]
    - **DF-11 –** Entering service in 1992, the DF-11 is a short-range ballistic missile (SRBM) with a range of 280-600 kilometers (depending on the variant). It is solid-fueled (single-stage) and part of the PLA's ground element (road-mobile).[51]
    - **DF-15 –** The DF-15 is a solid-fueled, road-mobile SRBM with a range of 600-900 kilometers. In service since 1990, it is a tactical weapon made to strike specific enemy assets. DF-15 variants are believed to feature a maneuverable warhead.[52]

[45] Waldron, Greg: "Chinese H-6N appears with mysterious ballistic missile," *Flight Global*, 19 October 2020
[46] Yang, Sheng and Xuanzun Liu: "China unveils new H-6N bomber with extended range, extra capabilities," *Global Times*, 1 October 2019
[47] The development timelines of various platforms and ballistic missiles vary. However, an overview of PRC nuclear force development provided by the CSIS Missile Defense Project and other sources included herein indicate that the research and development stages of weapons systems entering service in the last decade would have been undertaken or completed in the Jiang and Hu eras (1989-2012).
[48] Missile Defense Project, "Missiles of China," *Missile Threat*, Center for Strategic and International Studies: https://missilethreat.csis.org/country/china/.
[49] "DF-4 (Dong Feng-4 / CSS-3)"
[50] "DF-5 (Dong Feng-5 / CSS-4)"
[51] "DF-11 (Dong Feng-11 / M-11 / CSS-7)"
[52] "DF-15 (Dong Feng-15 / M-9 / CSS-6)"

- **DF-16 –** Solid-fueled, road-mobile SRBM with a range of 800-1,000 kilometers. The DF-16 entered service in 2011 and is believed to be capable of carrying up to three MIRV nuclear warheads.[53]
- **DF-17 –** It remains unclear when the DF-17 entered service. It featured on parade on the seventieth anniversary of the PRC in 2019. The MRBM/hypersonic glide vehicle has a range of 1,800-2,500 kilometers.[54] It was announced at the 2019 military parade that the DF-17 was a conventional-only weapon,[55] however, it is believed to have a dual function.
- **DF-21 –** The DF-21 is an MRBM and is solid-fueled with a maximum range of 2,150 kilometers. It entered service in 1991 and can carry a single nuclear warhead, though it also has other-than-nuclear tactical uses.[56]
- **DF-26 –** With a range of 3,000-4,000 kilometers, the DF-26 is a solid-fueled (two-stage) IRBM with a road-mobile platform. It entered service in 2015 and there is speculation that an anti-ship variant is in development.[57]
- **DF-31 –** The DF-31 and its variants (DF-31A, DF-31AG) are rail and road-mobile and have a range of between 8,000-11,700 kilometers. It is a solid-fueled, three-stage ICBM and carries a single nuclear warhead. The DF-31 entered service in 2006.[58]
- **DF-41 –** An ICBM with a range of 12,000-15,000 kilometers, the DF-41 also appeared on parade marking seventy years since the founding of the PRC. Its existence was not acknowledged until 2014. The DF-41 can be launched from a missile silo and is also rail and road-mobile. It is solid-fueled (three-stage) and can carry up to ten MIRV warheads (disputed).[59]

- **Ju Lang (JL)**
  - **JL-2** – Successor to the first-generation JL-1; solid-fueled SLBM with a range of 8,000-9,000 kilometers. The JL-2 is the nuclear armament for the PLAN's Type 094 Jin-class SSBN. It is possible that the JL-2 can be fitted with multiple MIRV warheads.[60]
  - **JL-3** – The third-generation SLBM is currently in development, and is expected to be the nuclear armament of the PLAN's future Type 096 SSBN sometime in the next decade. It is expected to surpass the JL-2's strike range with a payload of multiple MIRV warheads.[61]
- **Hongniao series (HN-1, -2, -3) / Chang Jian (CJ-10)**
  - The hongniao, sometimes referred to in the media as the CJ-10, and its variants are a series of nuclear-capable short-to-medium range cruise missiles. They have a

[53] "DF-16 (Dong Feng-16 / CSS-11)"
[54] "DF-17"
[55] Panda, Ankit: "Is China's DF-17 hypersonic missile a serious threat to the United States?," *South China Morning Post*, 5 October 2019
[56] "DF-21 (Dong Feng-21 / CSS-5)"
[57] "DF-26 (Dong Feng-26)"
[58] "DF-31 (Dong Feng-31 / CSS-10)"
[59] "DF-41 (Dong Feng-41 / CSS-X-20),"
[60] "JL-2 (Ju Lang-2/CSS-NX-14),"
[61] China Power Team: "How is China Modernizing its Nuclear Forces?," *China Power*, Center for Strategic and International Studies, updated 28 October 2020

varied strike range of between 600-3,000 kilometers and are capable of being deployed via ground, sea, and air assets.[62]

Securing the New Development Period in the Xi Jinping Era with a New Nuclear Strategy

The rise of the People's Republic as a military and economic power – its accumulation of structural power within the regional and global order – changes the nature of existing security threats from the perspective of CPC leadership. While noting the serious intraparty turbulence in the lead-up to the 18th CPC National Congress,[63] Xi Jinping's rapid ascent to the top of China's political hierarchy in 2012 coincided with more acute external threats. The interpretation of these threats is reflected in political messaging and State Council Defense White Papers; they provide insights into new conclusions emerging from internal debates on the direction of nuclear weapons development in the Xi era but are not yet publicly supported by nuclear policy. From Beijing's view, China's external conditions today are generally shaped by headwinds to the 'Chinese Dream:' the 'great rejuvenation is a comprehensive set of political, economic, social, and military benchmarks aimed at redeeming a previously impotent state, partitioned country, and downtrodden nation on the path to forging a modern socialist country by the centenary of the PRC in 2049.[64] Beijing's most pressing security challenges today are not new, but increasingly fluid. Longtime security predicaments are beginning to strain the PRC's economic and diplomatic capacities to shape favorable outcomes both in the region and globally.[65] A politically defiant Taiwan, less-than-favorable bilateral relations with a nuclear and unpredictable North Korea,[66] maritime disputes with US allies and partners in both the South and East China Seas, and China's protracted, simmering border dispute with nuclear-armed India – which escalated into a more intense militarization of the Line of Actual Control area (LAC) and violent hand-to-hand combat in 2020 – make up only part of the security contingencies confronting an invigorated one-party state. At a minimum, they provide the impetus for what is likely to be a comprehensive review of nuclear strategy, if one has not already been undertaken. They may also impel an update to China's NFU policy, as well as an adjustment to the 'defensive' orientation of its nuclear forces.

It would be fair to critique the taken position as overweighted toward security threats. The PRC's gaining momentum in realizing the Xi leadership's flagship economic policies and political priorities centered on a China-centered economic integration in the Asia-Pacific and increased political deference further afield is indeed important. A more wholesome assessment may lend credence to the maintaining of current PRC nuclear policies and strategy and might regard a 'hard

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[62] "Hong Niao Series (HN-1/-2/-3)"

[63] This refers to the political downfall, purging, and incarceration of Party heavyweights Zhou Yongkang and Bo Xilai. Zhou is a former member of the elite Politburo Standing Committee of the CPC Central Committee. Bo is a former Party Secretary of Chongqing municipality and member of the 25-person Politburo of the CPC Central Committee. The events leading to the downfall of both men are believed to have played a part in setting the course of Xi's governance of the Party. For more, see: Lim, Benjamin Kang and Ben Blanchard: "Exclusive: China ex-security chief warned Bo Xilai he would be ousted – sources," *Reuters*, 15 April 2015

[64] The blueprint for 'National Rejuvenation' is provided in Xi Jinping's collected speeches and remarks in *The Governance of China* book series.

[65] Zhang, Ketian Vivian: "Chinese non-military coercion – Tactics and rationale," *Brookings Institution*, 22 January 2019

[66] Xi Jinping signaled China's displeasure early on in his tenure. At the Boao regional business forum in 2013, Xi declared: "No one should be allowed to throw a region and even the whole world into chaos for selfish gain," Jane Perlez and Choe Sang-hun reporting for The New York Times, 7 April 2013

hedging' against more unfortunate developments in the security domain as unnecessary. Where such an approach fully misses the mark: security contingencies tethered to PRC nuclear capabilities are at the core of governance legitimacy for the CPC, and as such, it is reasonable to imagine that achieving anything short of the desired outcome of any one-armed contingency would pose an existential threat to the political establishment in its current form. Additionally, achieving 'complete reunification,' maintaining 'territorial integrity,' and protecting China's development interests are stipulated conditions for the Xi leadership in China's quest to become strong and fulfill the 'Chinese Dream.'[67] These considerations notwithstanding, to date there are no signals that a formal retraction of NFU is in the cards. PRC Defense White Papers in the Xi era, of which there have been three, do not reflect any departing from the strategy of minimum deterrence.[68] However, in an implied break from the salient thought of Mao Zedong and Deng Xiaoping on the utility of nuclear weapons, efforts to forge a credible nuclear triad through enhancing its land-based nuclear deterrent while raising the capacities and technological sophistication of its air- and sea-based platforms indicate a desire for flexibility in dealing with the new security environment. Moreover, with Xi apparently preparing to remain at the pinnacle of the Party-state beyond the 20th CPC National Congress in 2022, a formal change in nuclear policy – within the framework of bringing 'National Rejuvenation' to fruition – is not a remote possibility.

The 2019 Defense White Paper provides the policy space for ongoing nuclear development, qualifying the modernization drive as necessary for the maintenance of a nuclear deterrent capability commensurate with China's national security conditions.[69] Though consistent with prior generations of leadership, the steady maturing of China's nuclear forces raises important questions as to the future trajectory of nuclear strategy. Should the PLA continue to build out its air- and sea-based nuclear platforms, a reworking of nuclear strategy at some point during Xi's tenure is likely. A significant weakening of China's NFU policy appears far off, but adding qualifying exceptions or redefining what constitutes a nuclear attack could provide strategic flexibility.[70] With a diversified warhead stockpile and improved delivery vehicles and platforms, it appears China's more potent nuclear forces under the centralized command of the Central Military Commission and fielded by the branches of the PLA could, in time, bridge the technical gaps needed to coordinate and carry out the first strike, depending on the adversary and theater. This does not mean, however, that the NFU policy is merely an amenity. In addition to its close association with the revered Mao Zedong and omnipresent legacy of Deng Xiaoping, it is a legitimate policy product of its time, serving the immediate interests of a poorer, materially disadvantaged, and significantly outgunned Party-state. The demands of a pre-reform political economy, as well as the rigid ideological constraints placed on its nuclear program, relegated the PRC to negligible nuclear status. As a result, China has not been, nor is it currently, a party to binding nuclear arms reduction treaties. This includes the series of Strategic Arms Reduction Treaties (START), which capped and reduced – with an enforceable mutual verification scheme – the nuclear stockpiles of the

[67] Stevens, Friso M.S. (2020). China's long march to national rejuvenation: toward a Neo-imperial order in East Asia?, *Asian security*

[68] The 2013 White Paper titled 'The Diversified Employment of China's Armed Forces' gives China's nuclear forces a retaliatory function. English language translations of both the 2015 and 2019 White Papers explicitly mention the NFU policy as well as the defensive role of China's nuclear weapons.

[69] State Council Information Office of the People's Republic of China: "China's National Defense in the New Era," *Foreign Languages Press* via Xinhua, 24 July 2019

[70] Pan, Zhenqiang (2018).

United States and the USSR, now Russia, at the close of the Cold War and afterward.[71] This is an important caveat when considering the differing dynamics of the various security threats mentioned previously. Taking stock of the increasing complexity of China's growing ballistic missile arsenal – particularly the role of its intermediate-range ballistic missiles (IRBM) as part of an anti-access area denial (A2/AD) strategy to limit the operations of US forces in the region – the United States is eager to bring China into the fold of trilateral arms reduction negotiations.[72] China's out of hand dismissal of the Trump administration's formal invitation to talks on a post-New START framework signals an intent to further develop its comparatively modest nuclear forces. Now, with the New START extended for a five-year period,[73] the PRC's historical reputation as a weak nuclear state affords it a strategic window of opportunity to expand and refine its nuclear capabilities without triggering a fresh arms race. Outwardly China can continue hewing to an official position of nuclear restraint, multilateral arms control, and non-proliferation while summarily rejecting calls for its own nuclear ambitions to be reined in.

The Chinese state, with Xi Jinping at the core of its political establishment, appears set to continue balancing its unvarying nuclear weapons development with restrictive policies governing their use while promoting an arms control and non-proliferation public diplomacy agenda. However, this approach will prove unsustainable if China is to truly 'seek truth from facts and proceed from reality' in addressing its security dilemma. The most urgent drivers that could lead to a revamping of PRC nuclear policy and strategy are twofold: first, the self-imposed deadline for 'National Rejuvenation' – 2049 – requires an ironclad, if unfavorable, insurance policy in order to bring 'complete reunification' to its correct conclusion. Sociopolitical factors are pushing Taiwan further away from Beijing's political grasp, and the de facto state remains unbowed amid unrelenting pressure from the mainland. Furthermore, China would need to strong-arm the United States, Taiwan's security guarantor, in the event of a war in the Strait. Second, on China's development, the state needs to enhance hard power projection to safeguard its tangible interests regionally and further afield which may not touch a vulnerable political nerve, but are nonetheless vital. The state and PLA's increasing economic and military engagements in the region and beyond give way to the typical vulnerabilities associated with such activities.[74] State and military leaders have taken steps to mitigate risks associated with China's deepening integration into the global economy and a more extended PLA. These include but are not limited to basing through both unilateral, legally dubious measures (man-made military installations in the South China Sea), as well as engagement with host nations (logistics support base in Djibouti).[75] These are pragmatic steps regardless of the legal and geopolitical ramifications, but they do not provide the strongest guarantees. The requisite conditions for 'National Rejuvenation,' as well as the need to safeguard the assets and investments of a truly global China are by no means exhaustive. They are rather two primary catalysts for an inevitable reassessment of how to expand a hard power toolkit to best protect state interests of tremendous political importance. One option for the leadership is to harness an emerging nuclear

[71] "Treaty Between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START*)," James Martin Center for Nonproliferation Studies*, updated 25 February 2021
[72] Chan, Minnie: "China may seek to close nuclear gap after US and Russia agree to extend New START treaty," *South China Morning Post*, 31 January 2021
[73] Antony J. Blinken, United States Secretary of State: "On the Extension of the New START Treaty with the Russian Federation," press statement, U.S. Department of State, 3 February 2021
[74] Heath, Timothy R. (2018). China's Pursuit of Overseas Security, *RAND Corporation*
[75] Ibid

triad, built upon a set of appropriate underlying policies and a revamped strategy, in support of modern nuclear deterrence. Securing the new development period and solidifying China's place in the global community necessarily calls into question the utility of an unconditional NFU policy as an anchor of minimum deterrence strategy. The political path to reconciling these contradictions will be difficult. Forging a new path forward will test the authority of the political core. In the end, on the road national renewal and in keeping with precedent, the conditions will dictate the policy.

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