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# China's Military Advances Strengthen Case for Strategic Stability Dialogues

LORA SAALMAN

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I S S U E S

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### About the Author

*Dr. Lora Saalman is an adjunct senior fellow at the East-West Center and a senior researcher at SIPRI.*

*She can be reached at: [lora.saalman@sipri.org](mailto:lora.saalman@sipri.org)*

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**SUMMARY** China has long sought to distinguish its nuclear posture and force structure from those of Russia and the United States. However, its recent military advances and shifts in arsenal size, mating posture, alert status, dual-capable systems, and machine learning and autonomy demonstrate an ever-growing degree of convergence with these two countries. While introducing the potential for arms races or crises, these developments also increase the impetus for strategic stability dialogues. Unlike arms control negotiations, which tend to concentrate on limits to weapons development and numbers, strategic stability dialogues are broader and focus on weapons employment and escalation. Though past efforts at engagement have met with challenges, the appeal of strategic stability dialogues may be growing.

China has recently displayed a range of military advances that include its expansion of intercontinental ballistic missile silos, move towards nuclear submarine sea patrol, signs of a higher alert status, fielding of dual-capable systems and testing of a hypersonic glide vehicle on a fractional orbital bombardment system. These indicate its pursuit of technologies and postures currently—and in some cases previously—developed by the United States and Russia. While China’s growing similarity with these two countries may destabilize strategic relations, this increasing similarity also has the potential to pave the way toward strategic stability dialogues.

**Arsenal size.** China’s nuclear weapons arsenal is steadily growing, with a US Department of Defense estimate shifting from the low 300s to nearly 700 by 2027 and 1,000 by 2030.<sup>1</sup> While still markedly smaller than the nuclear arsenals of Russia and the United States, such an increase would represent a significant nuclear expansion for China. Its construction of new missile silos and fielding of such delivery systems as the Dongfeng-41 intercontinental ballistic missile, which is equipped to carry multiple warheads, suggest the operational requirement of an increased nuclear stockpile.

**Mating posture.** China is undertaking an apparent move away from de-mating, in which nuclear warheads are not mounted on their delivery systems during peacetime. Both Russia and the United States have long maintained nuclear forces that pre-mate their nuclear warheads to delivery systems.<sup>2</sup> Indications are that China is shifting towards premating of nuclear warheads to delivery systems, given its intended operation of nuclear-powered ballistic missile submarines on sea patrol, which would likely preclude demating since the process of loading nuclear warheads would require redocking, making the submarines vulnerable.

**Alert Status.** China may be shifting from launching nuclear weapons after it has weathered an initial nuclear strike to “launch on warning,” in

which retaliation occurs upon detection of an incoming strike.<sup>3</sup> Russia and the United States have long held launch-on-warning postures. China’s Tongxin Jishu Shiyuan-2, -5 and -6 satellites are believed to be early warning satellites, and it has deployed land-based, phased-array early-warning radars that enhance its ability to detect incoming ballistic missiles and to conduct space surveillance and satellite tracking, suggesting that its infrastructure increasingly supports a higher alert status.<sup>4</sup>

**Dual-capable systems.** China has deployed a number of dual-capable systems, which consist of delivery platforms and command-and-control infrastructure that support both nuclear and conventional operations. Russia and the United States also maintain dual-capable systems, which similarly may contribute to entanglement and escalation if conventional systems that also have nuclear applications are attacked.<sup>5</sup> China’s dual-capable platforms include its Dongfeng-26 intermediate-range ballistic missile, Dongfeng-17 medium-range ballistic missile, and Changjian-20 air-launched land-attack cruise missile.<sup>6</sup>

**Machine learning and autonomy.** China has accelerated its pace on machine learning and autonomy, which enable systems to learn from data and experience and to operate with limited to no human intervention. Both Russia and the United States have engaged in similar work. China has been integrating neural networks, which are a subset of machine learning, into hypersonic glide vehicles to enhance their maneuverability.<sup>7</sup> China’s coupling of such hypersonic glide vehicles with fractional orbital bombardment systems that offer no range limit as per its test, and fielding of autonomous systems that may eventually carry nuclear payloads—similar to Russia’s nuclear-armed, nuclear-powered Poseidon unmanned underwater vehicle—expands its ability to evade defenses from space and sea.<sup>8</sup>

*China has expanded its ability to evade defenses from both land and sea*

## Strategic Stability Dialogues as the Way Forward

While China has long sought to distinguish its nuclear posture and force structure from those of Russia and the United States, its military shifts in arsenal size, mating posture, alert status, dual-capable systems, and machine learning and autonomy demonstrate an ever-growing degree of convergence with these two countries indicating both destabilizing and stabilizing outcomes.

Among the destabilizing outcomes, US responses to China could lead to an escalating arms race or crisis. Recent official US statements suggest this potential, as with the response of US General Mark Milley, chairman of the Joint Chiefs of Staff, to China's test of a hypersonic glide vehicle on a fractional orbital bombardment system: "That's just one weapon system... They're expanding rapidly in space, in cyber and then in the traditional domains of land, sea and air."<sup>9</sup> While China may consider itself to be simply reacting to US pressure, the United States is also reacting to China's advances.

Yet some of these outcomes may also be stabilizing. As China's asymmetry begins to erode, strategic stability dialogues offer a platform to negotiate measures for crisis management. This is because official arms control negotiations tend to concentrate on limits to weapons development and numbers, while strategic stability dialogues are broader and focus on weapons employment and escalation.

For China, which has been reluctant to engage in official arms control negotiations with the United States—much less trilaterally to also include Russia—due to concerns over asymme-

try and resulting limits that could be imposed on its second-strike capability, strategic stability dialogues may have greater appeal. And there are indications that this engagement is already under review in China.

US National Security Advisor Jake Sullivan has stated that, during November 2021 talks, President Xi Jinping and President Joe Biden "agreed that we would look to begin to carry forward discussions on strategic stability."<sup>10</sup> And while a follow-on Chinese embassy statement is more muted, it notes that "two sides should enhance their understanding of each other's intentions through open and frank dialogue, and ensure that the competition between the two countries is fair and healthy and does not turn into a conflict," suggesting that China has not closed the door on such talks.<sup>11</sup>

Thus, while track-1 level US-China Strategic and Economic Dialogues and track-1.5 level China-US Strategic Nuclear Dynamics dialogues have faced previous challenges, the impulse for talks remains.<sup>12</sup> Further, even though US-Russia Strategic Stability Dialogues in 2021 did not forestall the current Ukraine crisis, they provided a valuable platform for anticipating the likelihood of conventional-nuclear escalation and interpreting recent Russian statements on raising its nuclear alert levels.<sup>13</sup>

By building upon US and Chinese official statements, past lessons from track-1 and track-1.5 level dialogues, as well as shifts in Chinese postures and technologies, China's growing convergence with the United States and Russia can offer new opportunities for engagement, rather than simply an impetus for new arms races or crises.

*While China may consider itself to be simply reacting to US pressure, the United States is also reacting to China's advances*

## Notes

<sup>1</sup> Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China 2021*, (Washington, D.C.: US Department of Defense, 2021), <https://media.defense.gov/2021/Nov/03/2002885874/-1/-1/0/2021-CMPR-FINAL.PDF>, p. 90.

<sup>2</sup> Office of the Secretary of Defense, p. 49 (note 1); Ankit Panda, "China Conducts First Test of New JL-3 Submarine-Launched Ballistic Missile," *The Diplomat*, December 20, 2018, <https://thediplomat.com/2018/12/china-conducts-first-test-of-new-jl-3-submarine-launched-ballistic-missile>.

<sup>3</sup> Liping Xia, "China's Nuclear Doctrine: Debates and Evolution," *Regional Insight*, Carnegie Endowment for International Peace, <https://carnegieendowment.org/2016/06/30/china-s-nuclear-doctrine-debates-and-evolution-pub-63967>.

<sup>4</sup> Riqiang Wu, "Assessing China-U.S. Inadvertent Nuclear Escalation," *International Security*, vol. 46, no. 3, pp. 154-155.

<sup>5</sup> James M. Acton ed., *Entanglement: Russian and Chinese Perspectives on Non-nuclear Weapons and Nuclear Risks* (Washington, DC: Carnegie Endowment for International Peace, 2017), [https://carnegieendowment.org/files/Entanglement\\_interior\\_FNL.pdf](https://carnegieendowment.org/files/Entanglement_interior_FNL.pdf).

<sup>6</sup> Office of the Secretary of Defense, p. 61 (note 1); Colin Meisel, “Changjian-20 (CJ-20),” Missile Defense Advocacy Alliance, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/china/changjian-20-cj-20>; Vincent Boulanin, et. al., *Artificial Intelligence, Strategic Stability and Nuclear Risk* (Stockholm: Stockholm International Peace Research Institute, June 2020), [https://www.sipri.org/sites/default/files/2020-06/artificial\\_intelligence\\_strategic\\_stability\\_and\\_nuclear\\_risk.pdf](https://www.sipri.org/sites/default/files/2020-06/artificial_intelligence_strategic_stability_and_nuclear_risk.pdf), pp. 67-78.

<sup>7</sup> Lora Saalman, “China’s AI-Enabled Offense: Hypersonic Glide Vehicles and Neural Networks,” in Wright, Nicholas (ed.), *AI, China, Russia, and the Global Order: Technological, Political, Global, and Creative Perspectives* (Washington, DC: Air University Press, 2019), [https://www.airuniversity.af.edu/Portals/10/AUPress/Books/B\\_0161\\_WRIGHT\\_ARTIFICIAL\\_INTELLIGENCE\\_CHINA\\_RUSSIA\\_AND\\_THE\\_GLOBAL\\_ORDER.PDF](https://www.airuniversity.af.edu/Portals/10/AUPress/Books/B_0161_WRIGHT_ARTIFICIAL_INTELLIGENCE_CHINA_RUSSIA_AND_THE_GLOBAL_ORDER.PDF), pp. 162-167.

<sup>8</sup> Mark Zastrow, “How Does China’s Hypersonic Glide Vehicle work?,” *Astronomy*, November 4, 2021, <https://astronomy.com/news/2021/11/how-does-chinas-hypersonic-glide-vehicle-work>; Lyle Goldstein, “UUVs are Giving China New Means of Naval Attack,” National Interest, March 7, 2021, <https://nationalinterest.org/blog/reboot/uuvs-are-giving-china-new-means-naval-attack-179452>; Jill Hruby, *Russia’s New Nuclear Weapon Delivery Systems: An Open Source Technical Review*, (Washington, DC: Nuclear Threat Initiative, 2019), [https://media.nti.org/pdfs/NTI-Hruby\\_FINAL.PDF](https://media.nti.org/pdfs/NTI-Hruby_FINAL.PDF).

<sup>9</sup> Robert Burns, “Pentagon Rattled by Chinese Military Push on Multiple Fronts,” *Associated Press*, November 1, 2021, <https://apnews.com/article/technology-china-asia-united-states-beijing-aea288656fab23253ee0397dc21ba68a>; Office of the Secretary of Defense, note i.

<sup>10</sup> The Brookings Institution, “Readout from the Biden-Xi Virtual Meeting: Discussion with National Security Advisor Jake Sullivan,” November 16, 2021, [https://www.brookings.edu/wp-content/uploads/2021/11/fp\\_20211116\\_biden\\_xi\\_sullivan\\_transcript.pdf](https://www.brookings.edu/wp-content/uploads/2021/11/fp_20211116_biden_xi_sullivan_transcript.pdf), p. 11.

<sup>11</sup> Embassy of the People’s Republic of China in the United States of America, “习近平同美国总统拜登举行视频会晤 [Xi Jinping and US President Biden Hold a Video Meeting],” November 23, 2021, [http://www.china-embassy.org/zmgx\\_1/zxxx/202111/t20211123\\_10451780.htm](http://www.china-embassy.org/zmgx_1/zxxx/202111/t20211123_10451780.htm).

<sup>12</sup> National Committee on American Foreign Policy, “New Report: US-China Strategic and Economic Dialogues,” September 13, 2021, <https://www.ncafp.org/new-report-us-china-strategic-economic-dialogues>; David Santoro and Robert Gromoll, “On the Value of Nuclear Dialogue with China: A Review and Assessment of the Track 1.5 ‘China-US Strategic Nuclear Dynamics Dialogue,’” *Issues and Insights*, vol. 20, no. 1, November 2020, [https://pacforum.org/wp-content/uploads/2020/11/issuesinsights\\_Vol20No1.pdf](https://pacforum.org/wp-content/uploads/2020/11/issuesinsights_Vol20No1.pdf).

<sup>13</sup> Associated Press, “China Calls US Invite to Nuclear Talks a Ploy to Derail Them,” July 8, 2021, <https://apnews.com/article/china-beijing-russia-us-news-asia-pacific-21d08a463232b140839345403407fa86>; Office of the Spokesperson, “Joint Statement on the Outcomes of the U.S.–Russia Strategic Stability Dialogue in Geneva on September 30,” US Department of State, September 30, 2021, <https://www.state.gov/joint-statement-on-the-outcomes-of-the-u-s-russia-strategic-stability-dialogue-in-geneva-on-september-30>.

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East-West Center  
1601 East-West Road  
Honolulu, Hawai’i 96848-1601

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