



CHINA AND MULTI-DOMAIN STRATEGIC STABILITY

Workshop Summary

October 7-8, 2021

Center for Global Security Research
LAWRENCE LIVERMORE NATIONAL LABORATORY

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On October 7-8, 2021, the Center for Global Security Research (CGSR) at Lawrence Livermore National Laboratory (LLNL) hosted a workshop titled “China and Multi-Domain Strategic Stability.” The workshop evaluated the China’s progress in building a multi-domain force that operates jointly and the future of strategic stability with China. Participants were drawn from across the policy, military, and academic communities in the United States and allied countries. Panels focused on the base lines of China’s progress since military reforms in 2015 to tackle complexity and strategic stability, potential strategies to cooperate with China to reduce risk, and proposed solutions for a future without bilateral cooperative risk reduction methods. The workshop covered the specific military applications of strategically latent technologies ranging from the operational level to strategic planning.

The workshop highlighted: 1) Choosing a decisive course of action to address China’s multi-domain security threat is paramount, but no easy answers are on the horizon; 2) China is making considerable investments in conventional weapons, emerging technologies, and nuclear weapons to offset perceived United States’ leads in various domains; and, 3) Bilateral senior discussion at Track 1.5 and 2 dialogues (if China continues to refuse to engage in Track 1s) is essential to communicate red lines and to recognize the limits of technology, particularly the growth of a false confidence in the power of technology to control escalation and war.

Discussion was guided by the following key questions:

- What is China’s approach to multi-domain strategic stability?
- What can and should the US and its allies do to promote their interests in strategic stability with China?

Key take-aways:

1. China has set out a comprehensive approach to multi-domain conflict emphasizing “integrated joint operations” as central to “winning informationized local wars.” The PLA identifies the domains as ground, air, space, cyber, and electromagnetic. It describes outer space as “a commanding height in international strategic competition.” It sometimes refers

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to nuclear as a distinct domain. PLA theorists also discuss information and cognitive domains, encompassing adversary psychology and morale and thus their ability to continue to wage war. PLA writings are explicit that domains incorporate both offense and defense.

2. China has taken significant steps to integrate multi-domain operations into plans and forces. Twenty years ago, China's military guidelines emphasized "coordinated joint operations." The 2020 revised concept emphasizes "integrated joint operations" as "the basic form of operations" at the strategic, operational, and tactical levels. The PLA implements this concept through an Integrated Command Platform and the Strategic Support Force.
3. China judges its competitive position vis-à-vis the US is improving. The expert community cannot judge, however, whether or how this translates into leadership confidence in seizing the initiative and controlling escalation. China's lack of real-world experience in fighting multi-domain wars against capable adversaries suggests its leaders may overestimate China's ability to master complexity while underestimating the adversary's ability. There is some limited evidence China's improving understanding of multi-domain complexity is having a sobering effect by illuminating the risks of unwanted escalation. There is also limited evidence China's leaders may calculate that their hard-won progress in leveling the military playing field with the United States may slip away as the US refocuses on the multi-domain challenge and pursues integration.
4. The growing strategic reach of China's multi-domain toolkit raises a basic question about whether the term "local wars" continues to have some meaning to China as a planning guideline. Any military flashpoint in East Asia could immediately have global dimensions, given China's capabilities for counter-space, critical infrastructure-related, and long-range kinetic strike operations. But the term remains meaningful for PLA planners—not necessarily in a geographic sense, but as an alternative to the premise that guided Chinese military planning during the Cold War (i.e., Mao's direction: plan for early war, major war, nuclear war). A "local war" would be limited in terms of stake and scope and should be juxtaposed with "total" or "unrestrained" war.
5. China's approach to multi-domain strategic stability begins with an assessment of risk. It identifies the following risks: 1) a politically hostile United States that chooses containment over cooperation, 2) a hegemonic America that chooses to try to keep China weak, 3) Chinese weakness so egregious as to invite attack, 4) unwanted and uncontrolled escalation resulting from inadequate Party control of the military, and 5) cyber means undermining both domestic social order and PLA operations.
6. For each of these risks, Beijing has created specific military and political measures aimed at risk reduction. China sees its military modernization as addressing multiple sources of risk simultaneously. More capable multi-domain warfighting capabilities deter and dissuade the United States from resorting to force to defend its interests, but they also contribute to China's approach to escalation management, premised on giving Party leaders the tools to vary the timing, pace, and scope of violence.

7. Some of China's new military practices aimed at reducing risk as they perceive it aggravate risk as the US perceives it. For example, placing multiple independently targetable reentry vehicles (MIRVs) on large missiles and shifting to a launch on warning posture are perhaps seen by Beijing as assuring retaliation and thus deterrence in the face of developments in the U.S. offense-defense posture. The US sees such steps as increasing crisis instability. Such changes in China's posture reflect a subtle shift from "active defense" to "pro-active defense"—that is, to a posture that is more offense than defense, with greater capacity and readiness for preventive and preemption action.
8. As unwelcome as these developments are from a U.S. perspective, they may have a salutary benefit in diminishing the asymmetries in nuclear strategy and capabilities that have long blocked the pursuit of shared interests in strategic stability. Still uncertain is how emerging notions of pro-active defense will refract through what appears to be continued overconfidence within the PLA on China's ability to control escalation. Chinese confidence in its capabilities may create space for strategic stability measures, but these incentives may be diminished if China does not share U.S. notions of strategic stability.
9. There is a growing question about the political will of either capital to assure the other. Strategic stability depends in part on assurances that each side respects the interests of the other, insofar as those interests are mutual. Beijing has so far been reluctant to believe U.S. assurances. This raises a debate about whether the CCP's self-perceived vulnerability and weakness render it incapable of receiving the assurances of a strong potential adversary, particularly given the increasing assertiveness of Chinese diplomacy. There is also a growing question about the will and capacity of the US to believe PRC assurances, given growing suspicions about the regime's strategic intentions and increasing US bipartisan interest in Chinese capabilities and intentions. These constraints may be exaggerated by features of each side's political system. In China, by a fragmented bureaucracy competing for influence with the Party center and, in the United States, by the absence of a clear political consensus on competitive and cooperative risk reduction measures.
10. A key uncertainty in the first year of the Biden administration is whether China is willing and able to engage at Track 1 on multi-domain strategic stability. The signs are mixed. Beijing has rejected sustained and substantive dialogue at the strategic level for decades. However, its political interest in dialogue of any kind appears high at this moment. Dialogue could identify options to avoid miscalculation and unwanted multi-domain escalation, leading to a joint political statement at the presidential level on stabilizing the US-PRC nuclear/strategic relationship. Dialogue could also focus on evolving national discussions about concepts of strategic stability and of codes of conduct in cyber space and outer space. Track 1.5 should be re-engaged to pioneer new thinking in support of a Track 1.
11. The United States' strategies for strategic stability cannot count on the desired partnership with China in defining and protecting mutual interests, even as the United States should continue to seek such cooperation. Lacking such partnership, the United States must determine what is necessary and possible in the US-PRC strategic military relationship and what direction it would like to try to move that relationship. These are high order political questions requiring leadership decisions. The United States must then determine how to

align its strategic posture to support those objectives. National political strategy should determine force posture, not the opposite. They also touch directly on the interests of US allies, especially Japan, and thus require full consultation. The United States needs a better understanding of the risks it confronts and the tradeoffs inherent in mitigating some or all of these risks. Some risk-acceptance on the part of the United States may also be necessary until the United States and China arrive at a more stable competitive relationship.

12. The US, and thus also its allies, faces decisions on:

- How to respond to the current and projected growth of China's deployed nuclear forces
- How to tailor its improving capabilities for non-nuclear attacks with strategic effects to align with its views of the requirements of strategic stability
- How to determine what kinds of additional allied capabilities are needed to reinforce deterrence
- Whether and how to alter other practices of unilateral restraint in the development of its strategic military posture

There is no uncontroversial choice. Any change from existing the United States' practice would be hotly contested as unnecessarily costly or escalatory. Any decision to stick with existing practice would be energetically criticized as failing to respond to the "pacing threat."

13. A central question for U.S. policy is whether to answer China's long-standing question about whether the United States accepts mutual vulnerability as the basis of the strategic military relationship. Beijing has long sought such an assurance, though the participants questioned whether it would now have any significant impact on the well-formed views of China's current leaders about U.S. strategic intentions. Moreover, such an assurance would be troubling to Japan, where experts worry about parallels between such a declaration and the U.S. acquiescence to Mutual Assured Destruction as the Soviets conducted their large nuclear build up in the 1970s. That acquiescence led to the Euro-missile crisis of the 1980s, as the United States' allies in Europe struggled with basic questions about how to ensure that extended nuclear deterrence would remain credible in the new strategic context. An Asia missile crisis of the 2020s is entirely plausible.

Panel 1: China's Approach to Multi-Domain Complexity

- What roles do cyber and outer space have in China's military strategy?
- What steps has it taken to integrate multi-domain operations into its plans and forces?
- How does it understand its competitive position vis-à-vis the U.S.?

The domains of cyber and space figure prominently in the People's Liberation Army's (PLA's) military strategy to compete with United States by achieving efficient joint operations and information dominance. PLA thinking on joint coordinated operations materialized in 1999, yet the ability to achieve jointness sputtered until Xi's announcement of PLA reforms in 2015. Xi's reforms identified space and cyber as the new commanding heights of strategic competition and created the Strategic Support Force (SSF) to prepare for offensive and defensive operations in both domains. The PLA initiated a reorganization of strategic, operational, and tactical planning to cement multi-domain joint operations integrated with the SSF. PLA writings envision a command, control, communication, computers, intelligence, surveillance, and reconnaissance (C4ISR) architecture integrating cyber, space, and AI under the SSF's command. The SSF coordinates with the services in wargaming, exercises, and red teaming to defend China's reliance on cyber and space as well as to launch kinetic and non-kinetic attacks against adversaries in the early stages of a conflict. Increasingly, the PLA champions AI to produce synergies across cyber and space, where the PLA considers it feasible to achieve cognitive overmatch against the United States.

Since 2015, strategic planners in the Chinese Communist Party (CCP) and the PLA drove toward the establishment of a joint force to meet Xi Jinping's wish for a Chinese "world-class military by mid-century." PLA theorists studied U.S. war fighting and vulnerabilities in the 1990s, and their analyses influenced Chinese theories that matured into multi-domain informatized war. Recent Chinese thinking on cognitive domains shifted from informationized war to an "intelligentized" way of war that reaps projected benefits from artificial intelligence (AI) and other emerging technologies to improve decision-making, command and control, and interservice coordination. The feasibility of integrating technologies across domains remains unclear, and PLA planning may exaggerate the potential of technology for improved theater operations. The United States as well as the PLA should strive to reduce misperception as both states structure military planning around multi-domain joint operations.

China's military strategists imagine integrated multi-domain operations leveraging space, cyber, AI, and the electromagnetic spectrum to gain advantage against the conventionally superior United States. PLA theorists acknowledge a U.S. lead in these domains, yet Chinese countermeasures need not reach the same level of sophistication to achieve strategic or tactical effect. The PLA's current multi-domain capabilities can level the playing field to steer escalation in their favor and prevent the outbreak of an international conflict. The PLA prioritizes prominent attack vectors for coordinated cyber attacks, such as against the Department of Defense's classified and unclassified networks. Anti-satellite attacks likewise can create a favorable battlefield for a local war.

PLA writings on the future of war argue for a tilt in their advantage by "intelligentized" multi-domain joint operations that will prove survivable in an attack by the United States that would degrade command and control. Panelists concluded that the PLA should temper its enthusiasm

for technology's ability to overmatch with ease. Misperceiving multi-domain war fighting could convince the PLA that its forces maintain an asymmetric and exploitable advantage against the United States. Track 1.5 and 2 dialogues are useful in disabusing PLA futurists of the notion that AI is a battlefield panacea or to overstate the United States' weaknesses in domains where capabilities are closely guarded. Discussion with Chinese counterparts are essential for establishing red lines to stave off a crisis between two advanced militaries deploying un-tested technologies in war.

Panel 2: China's Approach to Multi-Domain Strategic Stability

- How do China's experts characterize the risks of instability associated with competition for military benefit in the new domains and with their exploitation in crisis and war?
- What policies and strategies has China elaborated to manage and reduce risks?
- How should we assess these? Are they serious and substantive or largely polemical?

Concerns about instability abound in the writings of Chinese experts, in respect to both international geopolitics as well as the domestic situation inside of China. Five abiding sources of instability exist from their perspectives, starting with the political hostility in the bilateral relationship. Through Beijing's eyes, poor relations can be attributed solely to the United States, its steadfast inability to accept China's rise and its pursuit of multi-domain preeminence without admitting vulnerability. PLA experts fret over the country's myriad security weaknesses, motivating higher ranking PLA officers to spearhead the development of novel conventional capabilities. CCP leadership, on the other hand, questions the PLA's crisis management capacity. They worry lower-level officers could precipitate escalation or the fielding of autonomous or inaccurate weapons platforms could trigger an escalatory spiral. Despite wolf warrior diplomacy, Xi and the members of the Politburo also fear reputational harm abroad and at home that could be stoked to undermine the regime. The CCP exerted top-down pressure over the PLA to extinguish potential sources of instability: opening a cyber test range; ensuring accuracy of conventional missiles; adding non-debris creating anti-satellite weapons; and enhancing strict civilian control of the military by the CCP. CCP leadership also granted authority for Chinese experts to sustain Track 1.5 and 2 dialogues with the United States' interlocutors to unearth areas where the two sides disagree on escalation or catalysts. These measures, a panelist suggested, could be interpreted as evidence of Beijing's desire to manage stability with a modernized military that competes with the United States.

The substantive improvements to China's services and readiness, ranging from greater political control over the PLA to better missile accuracy, are policies aimed at managing instability and competing with the United States. These measures can be traced in part to a Chinese yearning to be taken seriously as a strategic competitor. They are grounded in an awareness of security vulnerabilities that plagued the country and an overriding historical lesson within the PLA that weakness invites attack. Since 2015, Chinese investments in strategic intellectual capital and the reorganization of the PLA illustrate the CCP's desire to manage risks in great power competition.

To respond to the threat environment, and remedy asymmetries of capabilities, Chinese strategists warmed to pro-active defense for cyber, space and other domains. The writings from China's strategic community increasingly adopted the term pro-active defense that could result

in risky behaviors during crises. References in the Chinese security literature point to the influence of U.S. force posture and doctrine—such as US Cyber Command’s Persistent Engagement—in shaping Chinese readiness to interdict and define an adversary’s operational latitude. Pro-active defense allocates greater resources for offensive measures to manage competition as well as performances of conventional military posture. The PLA Air Force’s 2021 incursions into Taiwan’s airspace to demonstrate resolve provides one recent example of the CCP’s and PLA’s emphasis on pro-active conventional measures. An embrace of pro-active defense has not seeped into discussions of China’s nuclear arsenal, launch on warning, hypersonic missiles, or autonomous vehicles. The Chinese shift may prove advantageous for long-term progress on bilateral strategic stability, but it remains too soon to tell if the changes will inspire an atmosphere where senior Chinese leaders will feel confident to earnestly talk with the United States.

Panel 3: A Cooperative Risk Management Approach

- In the near term, are there real opportunities to cooperate with China to promote strategic stability in cyber space, outer space, and more broadly? If so, where?
- Looking to the longer term, what might be done now to lay the foundations for future cooperation?

Today’s diplomatic vantage point might not inspire a great deal of confidence for the prospects of bilateral efforts for cooperative risk management. Surveying the landscape of cooperative bilateral approaches, panelists proposed short-term and long-term solutions to promote strategic stability despite what may appear to be limited appetite in China. Nevertheless, as one panelist emphasized, investing now in Track 1.5 and 2 dialogues will reap dividends in the future. Pressing China to reinvigorate the informal exchanges will produce the machinery for ideas to filter up into official dialogues. Panelists were frank in their assessment that the CCP refuses Cold War great power diplomacy and suspects U.S. intentions to restrain China. It is incumbent on the United States to highlight the long-term benefits of promoting strategic stability in space, cyber, and other domains through dialogue. Convincing CCP senior leaders to join arms control discussions will depend on China’s perceptions of threats and incentives.

Although the current climate of bilateral relations is trending downward, one panelist enumerated practical steps to reverse the deepening fissures. The most obvious starting point remains the Track 1.5 and 2 meetings where differences of opinion on a litany of strategic topics came to the fore. Learning from counterparts reduces the chance for miscommunication and pushes ideas up to senior leaders who are interested in cooperative strategic risk reduction. Multi-domain strategic stability will best be served by sponsoring military-to-military working groups to identify friction points that lead to miscalculation and escalation. Like the Track 1.5 and 2 dialogues, members of the joint working groups learn from each other and start relationships that contribute to genuine improvement in bilateral relations. Lastly, the United States should urge a formal Biden-Xi summit focusing on stability of the mutual deterrence relationship. Seemingly intractable dilemmas such as launch on warning can be resolved with reciprocal agreements at a leader-to-leader meeting that are not feasible in lower-level official-to-official exchanges. Treating China with respect and recognizing vulnerability may precipitate a declaration that shifts the relationship to a more stable strategic footing.

The possibility of arms control, however remote, could improve with two approaches. First, China must feel that the threat environment is significant enough to welcome arms control. The United States and allies' adoption of a joint integrated deterrence architecture may create a window of opportunity, especially if Japan, South Korea, or Australia attain longer-range, high precision, prompt strike capabilities. If Beijing faces greater instability through the lens of a regional arms race, then the chance for regional arms control may improve. Second, the United States and allies must be willing to allow China to experience success at the bargaining table. Conducting deep research on Chinese aims from arms control will reveal the basis for commencing legitimate, verifiable limits. Additionally, cooperation between the United States and its Asian allies will present Beijing with a united front that could alter its threat calculus. Understanding China's threat perception and domestic political motors may persuade the CCP to restrain its accelerating tempo of arms racing to upset the strategic balance and cement a drive toward regional hegemony.

Panel 4: Risk Mitigation in the Absence of Cooperative Approaches

- What can and should the U.S. and its allies do to promote strategic stability in cyber space, outer space, and more generally in the absence of a willing Chinese partner? Diplomatically? Militarily?
- What should they NOT do?

Panelists agreed that the time for making hard decisions on China policy is overdue, and avoidance will only exacerbate a deteriorating regional security environment. The discovery of China's recently constructed intercontinental ballistic missile (ICBM) silos hastens the need for policy decisions that are not backward-looking or ill-informed. An expansion of China's ICBMs with MIRVs forces the United States and its allies to reexamine choices on weapons platforms and capabilities that were once off the table. Bolstering deterrence means questions on hypersonic missiles, space, cyber, and autonomous vehicles must be answered, in spite of controversy.

The worsening regional security imbalance, as one panelist insisted, demands the United States cooperate with allies to offset China's conventional strike advantages. The PLA Rocket Force quickly amassed an arsenal of dual capable long-range precision strike missiles that engendered a one-way vulnerability relationship in the Indo-Pacific. Quietly tolerating one-sided regional kinetic superiority places Japan, South Korea, and Australia in an uneasy security position. The likelihood of silo-based MIRVs introduces the possibility of first-strike incentive for China—tilting the discrepancy even further in China's favor. Should the United States accept mutual vulnerability with China, the consequences for regional security will be pronounced. Allies may require a U.S. nuclear presence along with sharing of long-range precision strike capabilities to hold Chinese targets at risk. One panelist insisted that the Chinese do not accept strategic stability, and thus adopting a Cold War stance of mutual vulnerability will usher in a volatile regional security dynamic that would embolden China's aspiration of regional hegemony.

In the absence of cooperative risk reduction methods, the United States' senior leaders stare down decisions less and less appealing. Presidents from Bill Clinton to Donald Trump adopted a

laissez faire approach to China's nuclear weapons modernization. The decades old order of things has now reached an end. A solution must be found to China's projected doubling of its nuclear arsenal. Scant excess remains in the United States' nuclear stockpile after an 88 percent reduction to 3,750 warheads from its Cold War peak of 31,255. Leadership must carve out a lane between increasing or further reducing the stockpile, either of which will trigger political fallout. Adding to the dilemma, anticipating non-nuclear attacks with strategic effect calls for solutions on the deployment of hypersonic missiles, counter-space capabilities, and missile defense. Curtailing a policy of restraint in the United States' conventional and strategic weapons and allies' conventional capabilities necessitates a robust policy review on ways, means, and ends.

National security policy makers may find themselves present at the creation of a new security order—an analogous position to Dean Acheson and others in the late 1940s. Today's leaders must summon the intellectual capital and foresight to imagine how the United States will compete with China in a shifting security paradigm. The United States cannot return to a laissez faire stance, ink agreements with Russia that ignores the Indo-Pacific, or kick the can down the road. No simple solutions exist for the array of strategic predicaments facing the United States and its allies on cooperative risk reduction.



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