



BEIJING'S OPERATING POSTURE DILEMMA: BASTION OR OPEN PATROL

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Introduction

The operational strategy of the People's Republic of China's (PRC) ballistic missile submarine fleet, or SSBNs, is influenced much by its assigned role of strategic nuclear deterrence. Internal discussions on China's desired SSBN operational strategy reveal Beijing's strategic focus on two main deployment strategies: 'open ocean' patrol and the 'bastion' strategy. Under

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open ocean patrol, SSBNs rely on their own stealth capabilities to conduct long patrols in deep waters and stay undetected in the open ocean. This operating posture is similar to the American approach to SSBN operations. On the other hand, the bastion strategy is similar to the Soviet policy of SSBN operations that began in the late 1970s. Under this strategy, the Soviet Navy deployed additional naval assets in its coastal waters to create anti-access safe havens for its SSBNs (called submarine bastions) to stay protected from advanced enemy antisubmarine warfare (ASW) capabilities. This strategy ensured that 'noisy' Soviet SSBN, also referred to as 'boomers', got the necessary protection from other elements of the Soviet Navy in order to increase their survivability.

Chinese Interest's in Open Ocean Patrol

The open ocean patrol strategy has many backers in the strategic community of China. With an open patrol strategy, Chinese Sea-launched Ballistic Missiles (SLBMs) have increasing chances of penetrating US ballistic missile defences (BMD). Strategic

imperatives aside, the technological limitations of the current Chinese SLBM also strengthen the case for open patrol. The People's Liberation Army Navy's (PLAN) latest SLBM, the Julang-3 (JL-3), has an estimated range in excess of 10,000 kilometres, according to the National Air and Space Intelligence Center (NASIC) of the US Air Force.¹ If fired from the coastal waters of China in the South China Sea, JL-3 SLBMs have the potential to reach most parts of the continental US. However, that won't be enough to reach Washington DC or New York City.

On the other hand, JL-3's predecessor and workhorse of the Chinese SLBM force, JL-2, has a range of 7,200 km, which is not enough to reach the continental United States from the South China Sea. The JL-2 may be able to hit US territory abroad, like Guam and Hawaii, but it would still have a diminished deterrent impact since the SLBM won't be able to target the US mainland from the coastal waters of the PRC. Therefore, in order to sufficiently maintain the credibility of its second-strike capability, the Chinese SSBN fleet will perhaps need to make a hazardous journey out of the South China Sea to the Pacific Ocean. In a nutshell, what this implies is that JL-3 and JL-2 SLBMs will only be credible vis-a-vis the United States if Chinese SSBNs start operationalising an open ocean patrol strategy.

In any case, the open ocean patrol strategy demands very quiet submarines. The present class of Chinese boomers, the Type 094 or Jin-class, suffers from significant shortcomings. Matthew P. Funaiole and Joseph S. Bermudez Jr of CSIS writes that, "The Type 094 is reported to be two orders of magnitude louder than current US and Russian boomers, and according to the US Office of Naval Intelligence, the Type 094 is noisier than the Delta III SSBN first launched by the Soviet Union in 1976."² Tong Zhao, Senior Fellow Carnegie China, in his analysis, points out the large missile compartment, the numerous flood openings in the casing, and the skewed propeller of the boat as some of the design features that make it very difficult to reduce its noise level.³ An US Office of Naval Intelligence (ONI) report also found that of the 12 submarines examined, the Jin-class SSBN was the fourth most-detectable submarine.⁴ This means that in deep waters, Type 094's noise will render it more vulnerable to enemy detection.

Due to these factors, Chinese strategists are working on decreasing the acoustic signature of their upcoming Jin-class submarine, the Type 096. Since there is still no guarantee of Type 096's acoustic sophistication against proven American and allied ASW forces, the bastion strategy seems to offer a better near-term solution for the Chinese leadership.

Bastion: A More Pragmatic Option?

The Yellow Sea, East China Sea, South China Sea, and Bohai Gulf are the seas that border China. Among these four water bodies, the South China Sea is considered the most likely SSBN bastion for the Chinese Navy, as it has a maximum depth of 140 m and a mean depth of 46 m.⁵ According to Zhao, “Its water temperature and salinity are both more conducive to generating thermocline and pycnocline, features that affect sound propagation underwater and complicate submarine detection”.⁶

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China, however, will face some inherent problems associated with the bastion strategy as well as problems of its own caused by technological limitations and geopolitics. To begin with its own problems, the establishment of a Chinese bastion in the South China Sea will lack credibility because JL-3 will not be able to target major centres of gravity on the east coast of the continental USA. Next, unlike Russia, China does not enjoy the benefit of having relatively isolated coastal waters. The South China Sea is neither the Okhotsk Sea nor the Kara Sea, which sees very little commercial shipping traffic. Due to the presence of many busy international commercial shipping lanes as well as being surrounded by numerous countries, the South China Sea inevitably attracts many foreign navies. Therefore, it is not the most ideal place for a bastion!

Geopolitics aside, there are some inherent problems with bastion strategy that can upend Chinese SSBN operations. First, the bastion strategy requires additional forces, often in crisis, with a great deal of coordination for its maintenance. Victor Mizin and Michael Jasinski, researchers at the Center for Nonproliferation Studies (CNS), Monterey Institute of International Studies, explain, “During the Cold War, the Soviet Union felt compelled to dedicate considerable effort to construct a large surface fleet that would protect the ‘SSBN bastions’ against NATO naval task forces”.⁷ Bastion’s strategy also requires a great deal of anti-access area denial (A2/AD) capabilities to create a highly reliable SSBN safe zone in its coastal waters. Zhao argues that China’s A2/AD is not reliable enough. He also adds that “China has reportedly developed and deployed various A2/AD capabilities, designed (in part) to keep large enemy surface ships away from its coast, however, their capabilities to hinder the operations of enemy submarines and aircraft, which could pose a serious threat to China’s SSBNs, are less sophisticated.”⁸

Expense is another drawback of the bastion strategy. Roy Kamphausen Roy of the US-based National Bureau of Asian Research (NBR) and Andrew Scobell of the United States Institute of Peace (USIP) argue that the Type 094 “would become a resource black hole if the PLA had to create a Soviet-like ‘bastion’ defence to protect them”.⁹ The Soviet Union

practised the strategy of bastions at the height of the Cold War. Moscow was aware that its boomers were exposed to superior American SSNs, which compelled the Soviet Navy to deploy the most modern of their surface forces in defence of Soviet SSBNs”.¹⁰ The Chinese leadership, if they decide on a bastion strategy, must also extend a great deal of the People’s Liberation Army Navy’s (PLAN) surface force efforts to meet the modern anti-American SSN challenge.

The final bastion strategy shortcoming in a busy area like the South China Sea will be its inherent escalatory nature, which Samuel D. Bell explains as:

“If Beijing is in a crisis with another country, and it deploys its SSBNs (even for a routine or training mission), it is likely that the competing country will see this as an escalatory act. China, with its ingrained no-first-use policy, has refrained from using nuclear weapons in an escalatory or threatening manner since the successive tests in 1969. Other countries may perceive the deployment of weapons as a signal that Beijing is departing from its policy of no-first-use, something that Chinese leadership will likely not risk.”¹¹

Bastion or Open Patrol?

From the above analysis, it is apparent that the Chinese SSBNs currently enjoy neither favourable conditions nor have the technological wherewithal to execute either bastion or open ocean strategy credibly. Notwithstanding these limitations, the Pentagon’s 2022 China Military Power report suggests that the Type 094 submarines have begun “conducting continuous at-sea deterrence patrols” for the first time in its littoral waters.¹² While the latest JL-3 would not reach Washington DC from China’s coastal waters, Beijing will look to develop even longer-range SLBMs, a JL-4, perhaps in future.

Experts also opine that, apart from bastion and open patrol, China could also break away from the mould and adopt a mix of both strategies. Wu Riquiang, a noted Chinese strategist, believes that the noise level of the existing Chinese SSBNs, as well as PLAN’s inexperience in open ocean deterrence patrol, will combine to influence Beijing to undertake a combination of bastion and coastal patrol strategy.¹³ On the other hand, explaining their version of what a hybrid strategy could mean for Chinese operating posture, Toshi Yoshihara of the United States Center for Strategic and Budgetary Assessments and James R. Holmes of the US Naval War College write:

“Chinese may keep their options open, alternating among them as security conditions warrant. For example, Beijing may be content to rely on a bastion strategy during peacetime, when no immediate threat is evident. In times of conflict, it may permit more active coastal patrols or slip its SSBNs into open waters to signal resolve or

counter nuclear coercion from an adversary.”¹⁴

However, Bell points out the fallacy in that logic by arguing that a hybrid strategy overstates its ability to ‘slip’ an SSBN into open waters during a crisis.¹⁵ Hostile powers with viable SSN forces can engage in large-scale ASW operations to track Chinese SSBNs, already noisy, in their transit period from the port to the open ocean patrol area.

Therefore, weighing all the arguments in favour or against the open ocean, bastion, and hybrid strategy, one can postulate that Beijing’s best option in the near term is moving ahead with a bastion strategy for its SSBNs in its territorial waters. Bastion strategy will serve as a backbone to China’s sea-based nuclear deterrence strategy until PLAN SSBNs are stealthy and survivable enough to dive through the harrowing chokepoints of SCS into the Pacific waters.

Notes:

¹ Hans M. Kristensen & Matt Korda, “Chinese nuclear weapons”, *Bulletin of the Atomic Scientists*, 77 (6), 2021, p. 330.

² Matthew P. Funaiole and Joseph S. Bermudez Jr., “A Glimpse of Chinese Ballistic Missile Submarines”, CSIS, 4 August 2021, at <https://www.csis.org/analysis/glimpse-chinese-ballistic-missile-submarines>. Accessed September 19, 2023.

³ Tong Zhao, *Tides of Change: China’s Nuclear Ballistic Missile Submarines and Strategic Stability* (Washington DC: Carnegie Endowment for International Peace, 2018), p. 26.

⁴ Funaiole and Bermudez, n.2.

⁵ Wu Riqiang, "Survivability of China's Sea-Based Nuclear Forces," *Science & Global Security*, 19 (2), 2011.

⁶ Tong Zhao, “China’s Sea-based Nuclear Deterrent”, *Carnegie Endowment for International Peace*, 30 June 2016, <https://carnegieendowment.org/2016/06/30/china-s-sea-based-nuclear-deterrent-pub-63909>. Accessed September 20, 2023.

⁷ Victor Mizin and Michael Jasinski, “The Future of the Russian Sea-Based Deterrent,” *The Journal of Slavic Military Studies*, 16 (1), July/September 2003, p. 82.

⁸ Zhao, no. 3, p. 30.

⁹ Roy Kamphausen and Andrew Scobell, “Right Sizing the People’s Liberation Army: Exploring the Contours of China’s Military”, Strategic Studies Institute, U.S. Army War College, September 2007, p. 512.

¹⁰ Kenneth R. McGruther, *The Evolving Soviet Navy*, Naval War College Press, Newport, 1978, p. 54.

¹¹ Samuel D. Bell, *The impact of the Type 094 ballistic missile submarine on China's nuclear policy*, Naval Postgraduate School, Monterey, California, June 2009, pp. 48-49.

¹² Office of the Secretary of Defense, *Annual report to Congress: military and security developments involving the People’s Republic of China 2022*, U.S Department of Defense, 2022, p. 94.

¹³ Riqiang, no. 5, p. 98.

¹⁴ Toshi Yoshihara and James R. Holme, "China's New Undersea Nuclear Deterrent: Strategy, Doctrine, and Capabilities," *Joint Forces Quarterly* (JFQ), 50(3), 2008, p. 37.

¹⁵ Bell, no. 11, p. 52.



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