

Chinese Stealth Bomber Development Efforts and Implications:

What should we understand at the present time?

America, Europe, and Russia Division, Regional Studies Department **AITA Moriki**

Introduction

The comment of a certain top official from the People's Liberation Army (PLA) gained attention on March 11, immediately after the 2024 sessions of the National Committee of the Chinese People's Political Consultative Conference and National People's Congress [全国两会] ended. In response to a question from a media reporter, Deputy Commander Wang Wei of the PLA Air Force hinted that a strategic stealth bomber would be unveiled to the public soon.¹

Over the past few years, there have been repeated reports that a new stealth bomber might be unveiled.² This new model of strategic bomber, the aircraft intended to replace the PLA Air Force's H-6 bomber, is called the "Hong-20 (hereinafter, referred to as the "H-20") and is anticipated to be a bomber equipped with "stealth technologies" which limit the extent to which it is detected by enemy radar, similarly to the United States (US) Air Force's B-2 stealth bomber. These technologies include applying a paint which absorbs radio waves and adopting a shape which minimizes the reflection of radio waves.³ In particular there has been enthusiasm inside China at the prospect of the H-20's maiden flight almost every year, including 2018,⁴ 2020,⁵ 2021,⁶ and 2022,⁷ so the overseas media have also reported the possibility of the maiden flight of the H-20.

Nonetheless, contrary to these rumors, there was no unveiling of the H-20 on any of these occasions, and some overseas observers have even gradually begun to doubt or even ridicule the technological capabilities of China.⁸ What do these series of events mean?

Meanwhile, I personally believe that it is highly likely that the H-20 will be released in the near future, as it was hinted at for the first time by the deputy commander of the PLA Air Force in this case on March 11, 2024. It will be interesting to see how the H-20 performs, but unfortunately it does not make much sense to evaluate its capabilities based solely on the H-20 prototype aircraft that has just been released to the public. This is because the performance of a prototype aircraft is completely different from the mass-produced aircraft. Furthermore, in China there is traditionally a culture in the aircraft industry of mass-

producing aircraft while making design modifications as necessary,⁹ so presumably there will be large margins of error in the evaluations of the capabilities of H-20s which will be operated in the future.

Therefore, I believe that it is more important to understand the future implications in advance than to evaluate capabilities at the present time.

In fact, important implications are inherent in the H-20 which is likely to be unveiled in the near future. It is not enough to merely interpret it as “China has begun to possess strategic stealth bombers;” we must be aware of the particular circumstances of China’s domestic politics, changes to the role of the PLA Air Force as a “military service” and changes related to the nuclear triad (three-pronged structure of nuclear forces). With this in mind, this paper discusses the matters which the surrounding countries should understand in advance.

First implication: the battle to gain budget funds among the services of the military

The manufacturer of the H-20 is Xi'an Aircraft Industrial Corporation (XAC), but its parent company, the Aviation Industry Corporation of China (AVIC), is one of the world’s leading military-industrial complexes,¹⁰ and it is thought that the group companies under its umbrella are combining all of their resources to work toward the maiden flight of the H-20.

As stated above, there have been rumors about the maiden flight of the H-20 virtually every year for at least the past five years, and those rumors fizzled out every time. This series of events originating in China is really strange, but if we interpret these events purely, we can conclude that it tells a story of how China has been held up by the technical hurdles pertaining to the development of a strategic stealth bomber.

On the other hand, the particular nature of China’s domestic politics shows through in the background of a top official in the PLA Air Force hinting for the first time at the unveiling of the H-20. In the present National People’s Congress period, a top official in the PLA Navy has clearly stated that a fourth aircraft carrier would be constructed,¹¹ and immediately after that the top official in the PLA Air Force hinted at the unveiling of the H-20, suggesting that those two services of the military are competing with each other in order to promote themselves.

In related developments, six months before this Rocket Force Commander Li Shangfu was forced out due to the widespread corruption in the PLA Rocket Force, and many high-ranking officials are in the situation of being investigated by the Commission for Discipline Inspection.¹² For Central Military Commission (CMC) Chairman Xi Jinping [习近平], who has been eradicating the corruption in the PLA under the slogan “cracking down on both tigers and flies,” a corrupt situation which cannot be overlooked is still continuing

even today. For that reason, the top officials of each service of the military in the PLA are concerned about the trend of discipline inspections.

Furthermore, if we look at the trends in the PLA, the fact is that the aircraft carriers of the PLA Navy have a large impact so they gain the spotlight relatively easily. In this context, the top official of the PLA Air Force probably wanted to demonstrate to CMC Chairman Xi Jinping that the PLA Air Force is making an effort which can hold its own with the PLA Navy. At a time when clouds are beginning to gather over the Chinese economy, it appears that the PLA Air Force is working as hard as it can to demonstrate that it is itself making an effort, in order to not lose the battle to gain budget funds among the services of the military.

Second implication: the military service character (role) of the PLA Air Force as becoming a “strategic air force”

As stated above, in response to a question from a media journalist on March 11, 2024 regarding when the stealth bomber would fly, Deputy Commander Wang Wei of the PLA Air Force said “it will be unveiled shortly, just wait.”¹³ Immediately after this press conference, an article with the headline “China has taken eight years to develop a stealth bomber” was simultaneously reported by multiple media.¹⁴ This period of eight years is thought to be period calculated from September 1, 2016, the time when PLA Air Force Commander Ma Xiaotian stated that “we will manufacture a new strategic bomber in order to strengthen our long-range attack capabilities.”¹⁵ Media reports claiming that a strategic bomber was developed in this short period of a mere eight years were boasting about the high level of the technological capabilities of China and also giving the impression that the development was the “great achievement” of Xi Jinping.¹⁶

Nonetheless, it is difficult to think that China has been able to develop a strategic stealth bomber in the short period of eight years. This is because it takes nearly 20 years to develop military aircraft utilizing the latest technology. Certainly, it is a fact that the current global trend concerning the form of air forces is to pursue streamlining and shorten development periods, as seen in the digital transformation (DX) promoted by the US Air Force.¹⁷ For example, in research and development in the US, simulations and management using data have improved, and there was even the case in which an advanced jet trainer (the T-7) was developed in an extremely short period.¹⁸

Similarly, in China, the Chengdu Aircraft Industrial Group (CAIG), which handles the cutting-edge J-20 stealth fighter aircraft, commenced fully digitalized development of aircraft from about 2020.¹⁹ The aircraft design is fully paperless [飞机设计完全无纸化], and CAIG is attempting to dramatically shorten the production cycle of the prototype aircraft by fundamentally redesigning the aircraft research and development model and processes.²⁰

Despite this, it is difficult to think that a strategic stealth bomber, a complex collection of systems, was developed using DX in a mere few years. If I tease apart the historical background, it appears that the development of the H-20 originated with the new “historical mission” CMC Chairman Hu Jintao [胡锦涛], demanded from the PLA 20 years ago (2004), rather than being due to the impact of CMC Chairman Xi Jinping. This mention of an historical mission by Hu Jintao was originally intended to expand the active regions of the PLA outside of China through non-war military operations (military operations other than war: MOOTW), such as peacekeeping operations (PKOs), in order to protect the overseas interests of China.²¹

However, a variety of interpretations other than MOOTW began to emerge within the PLA and the keywords “strategic air force” emerged and resonated in the PLA Air Force. Voices calling for “new capabilities” such as strategic early warning capabilities, strategic power projection capabilities, strategic bombing capabilities, etc. gradually grew louder, and the PLA Air Force achieved a transformation together with China’s aircraft industry, later equipping itself with aircraft possessing “new capabilities,” namely aircraft equipped with the airborne early warning and control system (the KJ-2000) and large transport aircraft (the Y-20).²²

The gradual expansion of this interpretation of the historical mission can be inferred from a past article by Xu Qiliang [许其亮], who finally retired last year (2023) as CMC Vice Chairman, the highest military rank in China. In November 2009, Xu Qiliang, who was PLA Air Force Commander at that time, emphasized the need for the PLA Air Force to transform in an article he published in *Qiushi* [求是], the Chinese Communist Party’s official magazine.

“We must accelerate the transformation of our Air Force strategy, build a modern Air Force commensurate with the international status of China and capable of strategic missions while ensuring national security, fulfil our historical mission to integrate aviation and space power, and strike and defense capabilities, strengthen our strategic early warning [战略预警], strategic strike [战略打击], strategic power projection [战略投送], and strategic deterrence [战略威慑] capabilities, and realize a transition from mechanization to informationization.”²³

Furthermore, *the Theory on the Building of a Strategic Air Force* [战略空军建设论], a doctrinal document of the PLA Air Force published in 2010, similarly emphasizes that cooperation between the fields of politics, industry, science, and the military is essential for the PLA Air Force to transform rapidly into a “strategic air force.”

“The strong long-range strike capabilities of a strategic air force cannot be achieved overnight and there are no shortcuts. A strategic air force must depend on tireless investment and construction by the state and the military, unceasing progress in national science and technology, unceasing innovation in strategies and tactics, and far-sighted guidance by national and military leaders.”²⁴

In this way, the development of a strategic stealth bomber had begun from before 2012 when the Xi Jinping

administration began,²⁵ and at the same time the character (role) of the PLA Air Force as a service of the military has been changing to being a “strategic air force.” In other words, it can be predicted that in the future, when operational structures have been established for the H-20, the PLA Air Force will also be a service of the military which can carry out independent strategic missions.²⁶

Third implication: changes to the nuclear triad (three-pronged nuclear forces structure)

The process of the PLA Air Force, which was traditionally “air units subordinate to the army,” being reborn as a “strategic air force” capable of executing operations independently is closely related to the modernization of the bombers.²⁷ We must not forget that the appearance of the H-20, which represents those “new capabilities,” is at the same time linked to China’s nuclear triad (three-pronged nuclear forces structure).

The PLA Air Force began to be involved in the nuclear strategy comparatively early, the year after its successful nuclear test in 1964. At least 12 of the nuclear weapons detonated from 1965 to 1979 were dropped from PLA Air Force aircraft.²⁸ Nonetheless, ballistic missiles as a means of delivery of nuclear weapons became a global trend, and there were limits to the performance of PLA Air Force aircraft, so the nuclear capabilities of its air-launched cruise missiles (ALCMs) were left unbuilt for a long time. As a result, unlike intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs), the nuclear capabilities of strategic bombers and ALCMs were undervalued and China’s nuclear triad continued in an unbalanced state for a long time.²⁹

Meanwhile, the PLA Air Force, which made public the fact that it would aim to be a “strategic air force” in 2015,³⁰ commenced the modernization of its strategic bombers. The first stage of that modernization was the conversion of the H-6, a domestically-produced version of the Tu-16 bomber acquired from the Soviet Union from the 1950s, into an aircraft equipped with nuclear weapons. This H-6N aerial refueling bomber, the nuclear-equipped version of the H-6, was acknowledged for the first time when it flew past in the military parade commemorating the 70th anniversary of the founding of the People's Republic of China in 2019. The H-6N, which is capable of aerial refueling, has been upgraded so that it can carry ballistic missiles equipped with nuclear warheads,³¹ and it has been pointed out that the nuclear mission of the PLA Air Force has been resumed.³²

Nonetheless, the situation was that the proportion of ALCMs remained small and furthermore it was difficult for the H-6N to attack the US mainland without flying across Russia proper and the Pacific Ocean accompanied by aerial refueling aircraft, so it was thought that the nuclear missions for which the PLA Air Force is responsible had the role of intimidating surrounding countries with nuclear weapons (deterrence)

rather than nuclear attacks on the US mainland.³³

The second stage of the modernization is the existence of the H-20 which is expected to be unveiled shortly. Concerning this modernization, which symbolizes the transformation into a “strategic air force,” eminent nuclear expert Hans M. Kristensen also stated in 2020 that China was developing a long-range stealth bomber which could be equipped with nuclear weapons and predicted it would start mass production within the next ten years (by 2030).³⁴ Furthermore, in 2016 PLA Rear Admiral Yi Zhuo [尹卓] also claimed that China was developing a strategic bomber possessing stealth performance equal to that of the US Air Force’s B-2, and predicted that the strategic bomber would symbolize the strategic missions of the PLA Air Force.³⁵

Last year (2023), the US Department of Defense estimated that China’s nuclear warheads would increase to 1,000 by 2030.³⁶ Surrounding countries must pay new attention to how this large increase in the number of nuclear warheads will affect the nuclear missions of the PLA Air Force in the future.

In this way, the PLA Air Force, whose character as a service of the military is transforming into a “strategic air force,” is advancing the modernization of bombers and potentially bringing about changes to the nuclear triad at the same time. In other words, it can be predicted that in the future, when operational structures have been established for the H-20, China’s nuclear strategy will also change.

Conclusion

Since March 11 when the hint was dropped regarding the unveiling of the H-20, the H-20 has still not been unveiled. Perhaps the PLA Air Force is being guided and controlled by the CMC to ensure that it does not get in the way of the PLA Navy’s anniversary (April 23) or the test unveiling of the third aircraft carrier called Fujian. On the other hand, based on the fact that a top official of the PLA Air Force dropped a hint for the first time, surely the H-20 will make an appearance at some point.

As indicated at the start of this paper, there is little relevant information at the present time, and there are many matters for which the evidence is uncertain, so there is not much point in discussing the capabilities of the H-20. It is probably more beneficial to understand the future implications in advance. With this in mind, this paper has started this process by presenting three implications.

¹ “Official announcement! Deputy Commander of the Chinese Air Force: “The H-20 bomber will be unveiled shortly. I would like you to wait! [官宣! 中国空军副司令: “轰-20 快了, 你们等着!],” *china.com* [中华网], March 12, 2024.

² “PLA top official acknowledges the development of China’s long-range stealth bomber [解放军高官确认中国将研制远程隐身轰炸机],” *huanqiu.com* [环球网], October 23, 2013; “Extremely rare! China’s secret project comes to light in advance [非常罕见! 中国绝密项目提前曝光],”

huanqiu.com [环球网], May 9, 2018.

³ 2021 was also dubbed the “first year of the strategic air force” and was met with enthusiasm, especially in the Chinese media.

⁴ “China’s Top-Secret H-20 Stealth Bomber to Make Maiden Flight Soon,” *SPUTNIK International*, October 10, 2018, <https://sputnikglobe.com/20181010/china-top-secret-bomber-maiden-flight-soon-1068771641.html>; “Is it a rip-off of the US Air Force aircraft B-2? Military experts predict the capabilities of China’s stealth bomber Hong-20 [米空軍機 B-2 のパクリか？軍事専門家が予想する、中国のステルス各爆撃機『轟—20』の実力],” *Shupure NEWS* [週プレ NEWS], October 29, 2018.

⁵ “Hong Kong newspaper reports that China’s stealth bomber might be unveiled in the autumn [中国のステルス爆撃機、秋公開か香港紙が報道],” *Sankei Shimbun* [産経新聞], May 5, 2020.

⁶ Wang Xinjuan, “Ten years after J-20’s maiden flight: expect the next X-20,” *China Military Online*, January 12, 2021, http://eng.chinamil.com.cn/OPINIONS_209196/Opinions_209197/9966765.html.

⁷ Akhil Kadidal, “China’s H-20 stealth bomber close to first flight,” *JANES*, July 3, 2022, <https://www.janes.com/defence-news/news-detail/chinas-h-20-stealth-bomber-close-to-first-flight>.

⁸ Howard, Brad, “What We Know About China’s Secretive New Stealth Bombers: As rumors continue to circulate on Chinese social media about the People’s Liberation Army Air Force’s much-anticipated stealth bomber, the...,” *Task Purpose*, May 10, 2018, <https://taskandpurpose.com/news/china-h-20-stealth-bomber/>; “China Media Dismisses Stealth Bomber Reveal as ‘Fake News’,” *Newsweek*, May 26, 2021, <https://www.newsweek.com/china-media-dismisses-stealth-bomber-h20-reveal-fake-news-1594964>; “China’s stealth bomber H-20 may fail to breach US defences,” *The Meghalayan*, February 2, 2022, <https://themeghalayan.com/chinas-stealth-bomber-h-20-may-fail-to-breach-us-defences/>.

⁹ Aviation Industry Corporation of China, Ltd. [中国航空工業集团有限公司], “J-20 general designer Yang Wei: (Your) expectations will all be realized [殲 20 総設計師楊偉：你期待的都会实现],” *China Aviation News* [中国航空報], October 2, 2021. Based on the statement by a designer in China’s aircraft industry, we can decipher the fact that conducting advanced research while also making incremental improvements is encouraged, and the uniqueness that performance evolved during production and after each deployment to military units. Aita, Moriki [相田守輝], “Analytical Report based on “Derek Solen: Third Combat Brigade of PLA Air Force Likely Receives Stealth Fighters (China Aerospace Studies institute, USAF)” [分析レポート『中国人民解放軍空軍において 3 番目の戦闘旅団がステルス戦闘機を受領したかもしれない』を踏まえて],” *Hoyu* [鵬友], April 2022 Issue, Vol. 48, No. 1, p. 37.

¹⁰ AVIC Xi’an Aircraft Industry Group Company Ltd. (XAC) [中航西安飞机工业集团股份有限公司] <https://www.xac.com.cn/>; XAC is a Chinese aircraft industry company which mainly handles large aircraft, and in recent years it has started development and mass production of the Y-20 large transport aircraft.

¹¹ “Clear statement regarding construction of 4th aircraft carrier, Chinese Navy top official: “no technical impediments” [4 隻目の空母建造明言、中国海軍高官「技術に障害なし」],” *Nihon Keizai Shimbun* [日本経済新聞], March 7, 2024.

¹² “China removes Defense Minister Li Shangfu from office after just 7 months, reason unknown but corruption suspected [中国、李尚福国防相を解任在任わずか 7 カ月、理由不明汚職疑惑も],” *Mainichi Shimbun* [毎日新聞], October 24, 2023.

¹³ “Official announcement! Deputy Commander of the Chinese Air Force: “The H-20 bomber will be unveiled shortly. I would like you to wait! [官宣！中国空军副司令：“轰-20 快了，你们等着！],” *china.com* [中华网], March 12, 2024.

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¹⁶ “Could this be the highlight of the Conference and the Congress? Chinese military official reveals that the H-20 bomber under development for 8 years will be unveiled shortly [或成兩會一亮點中國軍方透露研發 8 年轟炸機 20 快亮相了],” *RFI (Radio France Internationale)*, March 13, 2024.

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¹⁸ Daryl Mayer, “eT-7a earns digital designation,” *Air Force Life Cycle Management Center*, last updated February 26, 2021, <https://www.afclmc.af.mil/News/Article-Display/Article/2517676/et-7a-earns-digitaldesignation/>.

¹⁹ AVIC Chengdu Aircraft Industrial (Group) Co., Ltd. [成都飛機工業（集團）有限責任公司] <https://cac.avic.com/>.

²⁰ “Chengdu Aircraft Industrial Group Corporation, as part of its mission, is supporting the strong development of the Chinese Air Force [航空工業成飛與使命同行，助推中国空軍奮力騰飛],” *People’s Liberation Army Daily* [解放军报], April 15, 2022.

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PROFILE

AITA Moriki

Research Fellow, America, Europe, and Russia Division, Regional Studies Department
Field of expertise: Chinese security

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Planning and Coordination Office

National Institute for Defense Studies

Telephone (direct) : 03-3260-3011

Telephone (general) : 03-3268-3111 (ext. 29177)

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