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## China's 2019 National Defense White Paper and Intelligent Warfare Masaaki Yatsuzuka, China Division, Regional Studies Department

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### Introduction

On July 24, 2019, the People's Republic of China issued its first national defense white paper (NDWP 2019) since 2015 entitled *China's National Defense in the New Era*. Compared to the previous two defense white papers (in 2013 and 2015) that focused on a specific theme, NDWP 2019 is a comprehensive explanation of China's defense policy, which appears to return to the format seen up until 2011. It discusses current military reforms, and a variety of information can be gained by reading between the lines. The NDWP 2019 also covers the Chinese government's harsh stance toward Taiwan and on territorial issues as reported in newspapers and other media.

Beyond this, one notable point of this defense white paper is that it hints at an awareness of a new form of war by mentioning "intelligent warfare is on the horizon." What impact will the People's Liberation Army's (PLA) renewed awareness of the state of war have on China's future defense policy? This paper focuses on intelligent warfare mentioned in the defense white paper, and discusses military strategies and related issues to counter them, while taking into account China's domestic discussions.

### The PLA's awareness of intelligent warfare

The PLA, the army of the Chinese Communist Party, has developed its own military strategy based on its state of affairs and the conduct of warfare of the era.<sup>1</sup> In the Mao Zedong era, military strategy was based on the theory of the People's War that believed in using a protracted war against stronger opponents, such as the

Kuomintang, Japanese Army, and even the United States and Soviet Union, that draws them deep into Chinese territory. In contrast to the People's War of the Mao Zedong era, the Deng Xiaoping era changed to a military strategy called the "People's War under Modern Conditions" that emphasized defense of the homeland beyond its borders. During the Jiang Zemin administration after the end of the Cold War, the PLA analyzed the impact of the development of high technology on war based on the lessons learned by the U.S. Army in the Gulf War, and sought strategies to counter it. Also, as China began full-fledged reforms and opening up, strategy was aimed at avoiding full-scale wars and responding to local conflicts, while focusing on economic development. Thus, the PLA presented the concept of "local wars under high-tech conditions" that emphasized high-tech weapons and their deployment. Their focus then shifted to the remarkable development of information technology in the 21st century, and during the Hu Jintao administration, emphasized the fact that information systems played a central role in linking all equipment, branches of the military, and command and control systems, which led to the promotion of a PLA built for "local wars under conditions of informatization."

NDWP 2019 updates the 2015 defense white paper stance that stated "the form of war is accelerating its evolution to informationization" with "war is evolving in form towards informationized warfare, and intelligent warfare is on the horizon."

What does intelligent warfare mean? NDWP 2019 states, "Driven by the new round of technological and industrial revolution, the application of cutting-edge

technologies such as artificial intelligence (AI), quantum information, big data, cloud computing and the Internet of Things is gathering pace in the military field. International military competition is undergoing historic changes. New and high-tech military technologies based on IT are developing rapidly. There is a prevailing trend to develop long-range precision, intelligent, stealthy or unmanned weaponry and equipment.” To borrow the concise definition of Li Minghai, associate professor at the PLA’s National Defense University, intelligent war is “integrated warfare based on IoT (Internet of Things) systems that uses intelligent weaponry and their corresponding strategy on land, sea, air, and space, and electromagnetic, cyber and intellectual domains.”<sup>2</sup>

The phrase “intelligent warfare” began to appear in Chinese academic papers and newspapers from around 2017. Since General Secretary Xi Jinping spoke about “speeding up development of intelligent military” at the 19th National Congress held in the fall of 2017, the debate over an intelligent army has suddenly become active in China.<sup>3</sup> However, the extent to which the debate in the PLA over how intelligent warfare differs from informatized warfare is neither clear, nor is it certain how deep the discussion within the PLA has developed as to how it should respond to this new war. At the very least, however, the fact that it is mentioned in the defense white paper means that the PLA has formed a certain level of consensus to prepare for intelligent warfare.

However, China has been a follower of the trends set by existing military powers, such as the U.S. and Russia, in its efforts on intelligent warfare. A commentary in the PLA’s newspaper, *People’s Liberation Army Daily*, sounded the alarm that the push toward intelligent warfare was accelerating, citing that the Congressional Robotics Caucus of the United States Congress established a *Roadmap for U.S. Robotics* in 2013, followed by the Russian Ministry of Defense announcing a plan called, “Creating of Advanced Military Robotics for 2025” in 2014. It noted that the United States and Russia are concentrating research and development on

robotics.<sup>4</sup> References to the United States and Russia are often seen as precedent in discussions on intelligent warfare published in China.<sup>5</sup>

### Military strategy and civil-military integration in the New Era

The PLA, which recognizes that a new form of war is on the horizon, will need to become an army that accepts it. From this point of view, it should be noted that what was described as “the military strategic guideline of active defense in the new situation” in the 2015 defense white paper has evolved into “the military strategic guideline for a New Era” in the 2019 defense white paper. Since the PLA does not disclose its military strategic guideline (军事战略方针), its details cannot be known, but it typically prescribes in detail the basic stance of the PLA, such as its military thinking and strategies, as well as operational doctrine, unit formations, and training. Since the term “military strategic guideline for a New Era” began to appear in the *People’s Liberation Army Daily* and other publications around January 2019, it is possible that the Central Military Commission adopted a new military strategic guideline around this time.

“The military strategic guideline for a New Era” seems to be a military strategy with intelligent warfare in mind, and the PLA will likely continue to further develop discussion around specific measures based on this. In fact, various discussions and proposals concerning intelligent warfare have already been made by people involved in the PLA. For example, Wang Peng, vice chief of staff of the Eastern Theater Command, points out that in such intelligent warfare it is important to seize “control of intelligence (制智权)” in the intellectual domain as the strategic core of new warfare that is linked to control of the sea and the air. He stresses that to build the military strength for this purpose requires that intelligence not only be incorporated into automating weaponry and building unmanned weapons systems, but also in operations and training.<sup>6</sup>

The Strategic Support Force created at the end of 2015 is considered to be the organization having a core role in

intelligent warfare in the PLA. The NDWP 2019 states that the role of this force is to “safeguard new technology testing” in addition to information security. It also states that “in line with the strategic requirements of integrating existing systems and aligning civil and military endeavors, the PLASSF is seeking to achieve big development strides in key areas and accelerate the integrated development of new-type combat forces.” This new operational capability is considered to include weapons and equipment that have been made intelligent with AI and robotics, in addition to cyber and electromagnetic capabilities. The NDWP 2019 clearly states that the Science and Technology Commission of the Central Military Commission also is mainly responsible for the strategic management of national defense science & technology (S&T), organizing and guiding cutting-edge technological innovation, and promoting the civil military integration of S&T.

It is clear that the military power behind intelligent warfare depends on the nation’s overall scientific and technological capabilities, not just in the military. From this perspective, actions not limited to the military, such as those of the Communist Party, governments, and even private companies that promote the development of military-civil fusion strategies cannot be ignored when observing them as the basis for strengthening the military power of China’s intelligent warfare. For example, *Made in China 2025*, which aims at domestically producing advanced core technologies, emphasizes the advancement of intelligence. The priority domain technology roadmap to realize *Made in China 2025* states that China will establish an industrial structure and technology innovation system for core information equipment in the field of advanced intelligence by 2025, with the goal of achieving over 60% of core information equipment in the field of intelligence supplied by the domestic market.<sup>7</sup> Also, the artificial intelligence development plan formulated by the Chinese State Council in 2017 clearly discusses promoting the conversion of artificial intelligence technology to both military and civil use, strengthening a new generation of

artificial intelligence technology into a powerful pillar for things such as command and control, military simulations, and defense equipment, indicating a strong intent to lead efforts in diverting it to advanced technology development and military technology in China.<sup>8</sup>

### Local conflicts in the New Era

Since the Chinese Communist Party has set a course for real reform and opening up, it believes that it may be involved in local conflicts, and this thinking extend even into intelligent warfare. This is because the Chinese Communist Party relies on sustained economic development for the legitimacy of its rule. The NDWP 2019 also maintains the awareness that this is an “important period of strategic opportunity” for the Chinese Communist Party to continue its economic development in a stable international environment amid the state of international affairs it finds itself in. Thus, even if a conflict occurs, it is important to prevent it from spilling over into economic growth, and localizing such conflict is key to sustaining the Communist Party of China rule.

From the perspective of localizing war, the PLA emphasizes managing conflict escalation and deterrence. For example, the 2015 defense white paper stresses “a holistic approach will be taken to balance war preparation and war prevention, rights protection and stability maintenance, deterrence and warfighting, and operations in wartime and employment of military forces in peacetime,” to create a favorable posture and “comprehensively manage crises, and resolutely deter and win wars.”<sup>9</sup> Even the strategic policy of the NDWP 2019 “places emphasis on both containing and winning wars,” which is weaker than what was stated in the 2015 defense white paper, but continues to make reference to managing the escalation of war.

In order to manage such escalations, it is important to operate not only regular military forces but also

paramilitary organizations, such as the People's Armed Police and militias. In the oceans, where China aims to gradually expand its interests, these quasi-military organizations have come to the fore in disputed waters with other countries, repeatedly claiming sovereignty and carrying out intimidation short of leading to military conflicts. The NDWP 2019 also mentions the South China Sea and the East China Sea in that it will uphold their sovereignty and territorial integrity. It also states that China will exercise national sovereignty based on law by conducting patrols in the waters of the Senkaku Islands in the East China Sea, as well as stresses the role of law enforcement agencies such as the coast guard.

There are those who feel that intelligence should be promoted in the operation of paramilitary organizations that would seem to have little to do with intelligent warfare. For example, there are officials at the PLA Army Academy of Border and Coastal Defense who want to see the implementation of the "five in one" model that links the Party, government, military, police, and civilians (which corresponds to the Communist Party, the government, the navy, coast guard, and maritime militia or civilian vessels) in the defense and management of current frontiers and oceans, but point out that intelligent distant ocean defense will become an inevitable trend due to the rapid development of modernized technology with artificial intelligence at its core.<sup>10</sup> In maritime policy, due to the complexity of command and control systems of organizations such as the navy, local governments, the police, and the coast guard, and structuring the maritime militia into an organization being a single issue, promoting intelligence is considered a prescription to alleviate this problem.<sup>11</sup> The aforementioned authors expect that pushing forward with intelligence could reduce the number of personnel engaged in the routine assertion of interests through unmanned operations, accurately handle sudden events with AI, reduce public pressure domestically and abroad, and seize control of international conflicts.

It should also be noted that the actions of making the military intelligent is not in the distant future but already part of reality. For example, after a swarm of 67 unmanned aircraft was unveiled at the Zhuhai Aviation & Aerospace Exhibition in 2016, China showed it is enhancing technical capabilities for both military and civilian use with efforts such as repeating the swarm flight experiment of unmanned aircraft equipped with AI.<sup>12</sup> In addition, from the perspective of drone operations around Japan's borders, a small Chinese drone flew for a period time in the territorial waters of the Senkaku Islands in May 2017, and an aircraft thought to be a Chinese reconnaissance UAV flew for several hours in Japan's Air Defense Identification Zone north of the Senkaku Islands in April 2018. The fact that Air Self-Defense Force fighters scrambled in response to these incidents may be the intelligent warfare on the horizon that the PLA has been talking about. These UAV activities create asymmetry in equipment and gaps in communication with rival countries and increase the burden of rivals to counter them, which entails risks that could lead to unforeseen circumstances. Furthermore, if UAVs and other equipment are operated intelligently, for example, by using AI instead of remote control, the situation will be even more complicated both politically and legally.

## Conclusion

The Communist Party of China under the Xi Jinping administration aims to make the People's Liberation Army into be a world-class army by the middle of the 21st century, and in order to realize this goal, will continue to build forces that can win in intelligent warfare that it posits in the NDWP 2019 as a the future of warfare. These actions include the formulation of operational doctrines based on military strategic guideline for a New Era, reform of unit formations, implementation of training, and equipment development.

As noted in this paper, these actions are not limited to

the PLA, but encompass China's overall scientific and technological capabilities, including the development of advanced technology such as AI and robotics. However, as is well known, ambitious and exclusive science and technology policies, such as *Made in China 2025*, have created friction with the international community (especially with Western countries, primarily with the United States) from a security perspective. This prolonged friction with the international community entails risks that could rattle the stable economic growth that is the foundation of China's international position and the legitimacy of the Communist Party of China. The roadmap drawn by the Communist Party of China appears to be difficult.

On the other hand, the reform of the PLA and the promotion of science and technology have made strides since the Xi Jinping administration, and points to the fact that its progress has advanced on a scale that largely exceeded Japan's expectations. It is undeniable that the PLA's steps toward intelligent warfare and progress have been rapid. Further advances in intelligence may complicate the nature of conflicts involving China and lead to unexpected developments. It will be necessary to closely monitor the construction of the PLA in the New Era while keeping this possibility in mind.

(Completed on August 20)

<sup>1</sup> See Taylor Fravel, *Active Defense: China's Military Strategy since 1949*, Princeton University Press: Princeton and Oxford, 2019 for details on the historical development of the Communist Party of China's military strategy.

<sup>2</sup> Li Minghai, "What is driving the war to become intelligent?" *People's Liberation Army Daily* (李明海「是什么在推动战争向智能化演变」『解放军报』)(November 6, 2018)

<sup>3</sup> "Xi Jinping calls for strong military with Chinese characteristics and promotes the modernization of national defense and the military," *Xinhuanet* ([http://www.xinhuanet.com/politics/19cpcnc/2017-10/18/c\\_1121820910.htm](http://www.xinhuanet.com/politics/19cpcnc/2017-10/18/c_1121820910.htm)). Last accessed on August 19, 2019.

<sup>4</sup> Yang Yuhui, "The Door to Intelligent Warfare," *People's Liberation Army Daily* (杨皓晖「智能化战争的大门」『解放军报』)(December 1, 2017).

<sup>5</sup> For example, Yang Yi, Ren Huiqi, "Conception of National Defense Engineering Construction under the Condition of Intelligent Warfare," *Defense Engineering* (杨益, 任辉启「智能化战争条件下国防工程建设构想」『防护工程』)(Vol. 40, No. 6), December 2018, pp. 65-69.

<sup>6</sup> Wang Peng, "Understanding the Law of Characteristic, Characteristics of Intelligent Warfare and Promoting the Development of Intelligent Training and Innovation," *National Defense Technology*, (王鹏「把握智能化战争特点规律 推动智能化训练创新发展」『国防科技』) Vol. 40, No. 1 (February 2019), pp. 1-4.

<sup>7</sup> National Manufacturing, Strategy Advisory

Committee and the Strategic Consulting Center eds., *Green Paper on Technological Innovation in the Key Fields of Made in China 2025: Technology Roadmap (2017)* (国家制造强国建设战略咨询委员会·中国工程院战略咨询中心编著『《中国制造 2025》重点领域技术创新绿皮书:技术路线图(2017)』)(Publishing House of Electronics Industry, 2017), p. 27.

<sup>8</sup> State Council, "Notice of the State Council on Printing and Distributing a New Generation of Artificial Intelligence Development Plan," (国务院「国务院关于印发新一代人工智能发展规划的通知」) July 8, 2017 ([http://www.gov.cn/zhengce/content/2017-07/20/content\\_5211996.htm](http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm))

<sup>9</sup> "China's Military Strategy," State Council Information Office, June 2015.

<sup>10</sup> Huang Zicai, He Chunyao, Yang Yuan, "The Construction of Intelligent Coastal Defenses" *National Defense Technology*, (黄子才、和春耀、杨元「智能化边海防建设」『国防科技』) Vol. 39, No. 3 (June 2018), pp. 14-16.

<sup>11</sup> See "China's Advance into the Ocean and the Maritime Militia," *NIDS Commentary*, No. 53, July 15, 2016 for discussion of the problems of organizing the maritime militia. See <http://www.nids.mod.go.jp/english/publication/commentary/pdf/commentary053e.pdf>

<sup>12</sup> China Electronics Technology Group successfully conducted flight experiments with 119 fixed-wing UAVs in 2017. "When UAVs Have 'Swarm Intelligence,'" *Xinhuanet*, July 7, 2017 ([http://www.xinhuanet.com/info/2017-07/07/c\\_136424681.htm](http://www.xinhuanet.com/info/2017-07/07/c_136424681.htm))

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