



The “Blade of Victory”: A Chinese Perspective on Drone Swarms

OE Watch Commentary: Chinese military strategists and academics have been focusing on artificial intelligence (AI) and how it will reshape the future battlefield. The application of AI’s capabilities to military planning, operations, and decision support even has its own Chinese buzzword: “intelligentized” warfare. The growing number of articles and studies describing different aspects of “intelligentized” warfare are a clear indication of where China is heading. One such article, published in *Jiefangjun Bao*, the Central Military Commission’s official newspaper, offers an in-depth look at the use of drone swarms on the future battlefield. The article focuses on the advantages and potential operations in which drone swarms can be used.

The authors envision drone swarms as the “advance guard” and a force that “will likely become the ‘blade of victory’ in the hands of commanders at all levels on the future battlefield.” Drone swarm operations offer six “exceptional advantages,” according to the article. They have greater autonomy, possess more functional capabilities, are more resilient, have a more rapid response time, are more economical, and are less dependent on logistics and outside support. They can be used to implement multi-domain attacks. The authors explain that a drone swarm platform can even be used to carry a large number of individual drones in a multi-domain attack scenario. Swarm attacks can be carried out across all domains – on land, at sea, in the air, in space, along the electromagnetic spectrum, and in cyberspace. Multi-faceted attacks carried out simultaneously across multiple domains “will destroy the enemy’s cross-domain joint capabilities and achieve combat objectives at a relatively small cost.”

Drone swarms can also be used to conduct tactical deception and interference, reconnaissance, and “smart coordination.” For example, they can act as decoys to trigger enemy radar and air defense weapons to react and therefore expose their positions. This strategy can be likened to one of China’s 36 ancient stratagems, “Beat the grass to startle the snake,” an idiom that suggests taking just enough action to prompt the enemy to act and give away his strategy or position.

Finally, the authors describe ways that drone swarms can carry out reconnaissance to obtain enemy intelligence, and “smart coordination” in which drones “lead in battlefield reconnaissance and the elimination of targets.” However, the authors argue that drone swarm operations cannot operate completely independent of man. In situations deemed more risky to lives, due to their lower cost and versatility, a large number of drones can be used in front-line operations while a manned platform can provide “command and control of the drone swarms from the rear, guiding the swarms to strike targets in complex, high-risk areas.” **End OE Watch Commentary (Hurst)**

“Drone swarms will likely become the “blade of victory” in the hands of commanders at all levels on the future battlefield.”

Source: Xu Weiwei and Li Huan, “无人机集群作战的主要样式 (The Main Types of Drone Swarm Warfare),” *Jiefangjun Bao*, 23 January 2020. http://www.81.cn/jfjbmap/content/2020-01/23/content_252842.htm

The Main Types of Drone Swarm Warfare

...Drone swarm operations are emerging as an important form of intelligentized warfare. In the future, drone operations will become the “advance guard” in a battle between two armies. Drone swarms will likely become the “blade of victory” in the hands of commanders at all levels on the future battlefield.

...From their inception, drone swarm operations have always had many exceptional advantages over conventional operations. (1) ...Drone swarms can be flexibly organized into different units. They can adapt to different environments, possess different functions, and perform different tasks... (2) ...After equipping drones with different combat modules, a drone swarm formation can have multiple functions, such as reconnaissance and surveillance, soft and hard strikes, and combat assessment... (3) ...Drone swarm operations can quickly transmit battlefield information and accurately implement commanders’ intentions... (4) ...An individual drone has several advantages, such as being a small target, the ability to withstand impact, large overload capacity, maintaining flight under silent mode, and effective concealment on the battlefield, etc... (5) ...A drone swarm operation eliminates the limitations of human-operated machines. There is no need to install complex safety systems and protective facilities to ensure safety of personnel... (6) In the course of drone swarm operations, an individual drone’s dependence on logistics and support is low...

...The basic method of multi-domain attacks is to use a drone swarm platform to carry a large number of individual drones. During the battle, the drones are launched or deployed through the platform as battle groups to achieve data sharing, flight control, situational awareness, and intelligentized decision-making, so that the drones can flexibly respond to battlefield contingencies and conduct various combat missions, such as swarm reconnaissance, fighting, and attacks. The domains in which attacks by a swarm operation take place will be across all domains: on land, at sea, in the air, in space, along the electromagnetic spectrum, and in cyberspace. ...

...Based on mission needs, a drone swarm can be flexibly configured with various modules, such as modules for reconnaissance, information processing, and missile firepower, thereby forming a composite formation with reconnaissance, interference, and strike capabilities. Alternatively, several drone swarms can each be configured with reconnaissance and firepower modules, forming a large assault formation that penetrates deep into enemy territory and conducts real-time reconnaissance and strikes on key or high-risk targets, thereby achieving strategic operational goals.