**Artificial Intelligence and the “Fog of War”**

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Clausewitz believed that the uncertainty, contingency and unpredictability in war are like fog covering the battlefield, making it difficult for commanders to make decisions based entirely on facts. With the development of artificial intelligence technology, some people are optimistic that artificial intelligence technology can eliminate the "fog of war". But in fact, while the development of artificial intelligence provides more possibilities for dispelling the "fog of war"**, it is also constantly promoting the evolution of the "fog" itself and making people's understanding of it more complex and diverse.**

While alleviating information overload, it is easy to create an "information cocoon". With the advancement of technology, the number of sensors deployed on the battlefield has increased significantly, and the sources of information have become more diverse. The amount of battlefield information collected has increased sharply, bringing about the problem of information overload. Artificial intelligence technology can quickly extract key elements from battlefield information through automatic screening, deep mining and correlation analysis, and provide commanders with comprehensive situational awareness, becoming an important tool to alleviate battlefield information overload. However, while artificial intelligence alleviates information overload, it also invisibly promotes the emergence of "information cocoons". Given that artificial intelligence is still in the weak intelligence stage, the performance of the algorithm depends on the scale and quality of the input data, and its functional implementation is mostly based on statistical learning, which is easy to cause a high degree of homogeneity in information push, resulting in the commander's information environment becoming closed, greatly limiting his battlefield vision and insight. In addition, according to the current recommendation algorithm principle, artificial intelligence algorithms mostly deliver content that commanders are interested in or concerned about, making it difficult for them to access diversified battlefield information, which can easily lead to the solidification of combat thinking and the shaping of combat concepts. Therefore, commanders need to actively adjust their information acquisition behaviors, broaden information source channels, overcome excessive reliance on artificial intelligence algorithms, combine objective battlefield realities, and make good use of critical thinking to leverage the advantages of artificial intelligence technology and reduce the negative impact of the "information cocoon."

While enhancing cognitive advantages, cognitive interference is prone to occur. Artificial intelligence technology achieves comprehensive perception and accurate prediction of enemy and our own situation and battlefield environment by building a real-time updated holographic intelligent database. On this basis, t**he use of intelligent algorithms** to extract rules from historical data, generate and optimize combat plans, can assist commanders in situation prediction and decision-making, and deeply empower commanders' battlefield cognition. But at the same time, we must also see the negative impact of artificial intelligence technology on commanders' cognition. Deep fake technology based on artificial intelligence can generate highly realistic false images, audio and video to confuse commanders. Artificial intelligence technology can also further influence commanders' cognition by manipulating public opinion. In addition**, artificial intelligence technology can also accurately portray target characters, dig out commanders' thinking habits and decision-making patterns, and formulate more accurate interference strategies, making commanders' decision-making process more complicated and difficult.** Therefore, in order to avoid the "fog of war" caused by cognitive interference, information verification and identification should be strengthened, and a multi-level information verification mechanism from source to terminal should be established to ensure the authenticity and accuracy of each piece of information. It is also necessary to improve the level of artificial intelligence technologies such as generative adversarial networks, and conduct in-depth analysis of multimedia information to effectively identify false information and minimize its interference with decision-making.

While empowering the combat system, it is easy to make the system fragile. Intelligent weapon systems empower the combat system, significantly enhance the flexibility and response speed of the combat system, break down information barriers, promote seamless cooperation between combat units, and reduce the impact of the "fog of war". However, a high degree of autonomy not only brings potential powerful capabilities, but also lays hidden risks that cannot be ignored. When the internal logical structure of algorithms and data becomes more complex, more unpredictable vulnerabilities often appear, making the system more vulnerable to external interference. These vulnerabilities may come from multiple aspects such as design defects of algorithms, errors in data processing, and interface problems between systems. Once these vulnerabilities are exploited by hostile forces or hackers, they may cause serious damage or interference to the combat system. In addition, with the widespread application of intelligent technology in the military field, various combat entities are closely connected, similar to the complex network formed by human neurons, which is very easy to produce emergence. This emergence phenomenon may achieve a synergistic gain of "1+1>2" under different environments, or it may cause a system crash of "100-1=0" due to a single point failure. Therefore, when building a combat system, we should emphasize flexible, changeable and sustainable combat ideas, pay attention to the modularization, intelligence and autonomy of the system, strengthen the security supervision and protection of artificial intelligence technology, and ensure that it can operate stably and reliably in the combat system.