**Military Forum丨Intelligent Communication: An Important Field for Cognitive Domain Operations**

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**Tips**

●In the intelligent communication environment, people constantly "absorb" information and become an extension of the media, and the media gradually becomes a "person with subject initiative." Both humans and machines achieve cyclic alternation and instant interaction, making cognitive attack and defense present uninterrupted and normalized characteristics.

● Intelligent communication can shape the relationship between users and information in all dimensions, at all times and in all domains, making public opinion guidance, concept shaping and behavior control more convenient. It is increasingly becoming a "brain control weapon" and gradually developing a complete set of practical techniques for cognitive manipulation.

With the rapid development of intelligent media and platform technologies, intelligent communication has gradually realized the cross-border integration and application of intelligent technology and communication media, which has not only greatly changed the production style and dissemination mode of information, but also profoundly affected human thinking logic and values. Intelligent communication provides strong support and broad space for influencing cognition, leading cognition, and subverting cognition, and is triggering iterative upgrades and profound changes in cognitive domain operations. Clarifying the mechanism and means of intelligent communication in cognitive offense and defense is of great significance for innovating cognitive domain combat tactics with the help of intelligent communication.

**Characteristics of cognitive domain of intelligent communication**

Intelligent communication is the application of technologies such as big data, cloud computing, machine learning, and virtual reality to the production and dissemination of information. Intelligent communication can continuously shape and deeply induce the value orientation and behavioral thinking of the target objects, and is increasingly becoming a new platform and important field for cognitive attack and defense.

**Everything is ubiquitously connected.**   
With the development and evolution of intelligent communication, people, things, and things will be connected. Any intelligent terminal can become a tool for users to receive information and a channel for platforms to deliver content, and the push capability is more powerful and the distribution scenarios are more extensive. Influenced by this, the role of the communication platform is no longer a pure information output, and its ability to shape the content of communication and even people's thinking, behavior, and various relationships will become more and more prominent. Intelligent communication can deeply intervene and promote interpersonal communication, data interaction, and information exchange, which invisibly greatly expands the combat space of the cognitive domain and the types of participating forces, and also realizes the full control of public thinking, cognition, and production communication. The continuous evolution of "ubiquitous interconnection of everything" makes all objects possible for media to realize information dissemination. Information is no longer restricted by the domain, and the subjects of cognitive confrontation are everywhere and the space is widely expanded.

**The real and the fake are intermingled and mutually constructed.**  
 In the diversified communication pattern enabled by intelligent technology, whether it is text, pictures, or products such as sound and video, they can be easily forged and widely spread. With the iterative evolution of deep fake technology, its production content can be presented to the general audience in a form that is infinitely close to the truth, which can easily affect the public's attitude towards a certain issue, event, or object. At the same time, social robots driven by code and algorithms can carry out "sprinkler-style" dissemination by extracting key information, liking, forwarding, and commenting, thereby continuously spreading false situations and false information to confuse public opinion, aggravate the public's irrational and emotional response to information, and then manipulate cognitive trends. Information dissemination is true and false, and true and false are mixed. This state of truth and falsehood mixed and mutually constructed can easily lead to a tear in group trust, making the situation of cognitive attack and defense more complex and difficult to control.

**Two-way interaction between humans and machines.**Intelligent media not only continuously enriches the input and output methods of information, but also increasingly blurs the originally clear boundaries between humans and media. It can not only simply execute user instructions, but also give more feedback based on the communication effect. In the long run, the public may subtly regard it as an external "brain" and be unconsciously influenced by it. With the support of technology, intelligent media can also obtain human-like perception, calculation and even emotional intelligence, and use human-computer interaction to reversely influence the user's way of thinking and shape the user's behavioral orientation through algorithm recommendations. In the intelligent communication environment, people constantly "absorb" information and become an extension of the media, and the media gradually becomes a "person with subject initiative." Both humans and machines realize cyclic alternation and instant interaction, making cognitive offense and defense present uninterrupted and normalized characteristics.

**The mechanism of cognitive domain in intelligent communication**

At present, intelligent communication has become an effective means to dominate information content and control the direction of public opinion. With the help of an all-round, multi-sensory media system, it mobilizes the target audience's immersive experience and subjective consciousness from shallow to deep, thereby deepening their perception, broadening their cognitive scope and influencing their value choices. It has gradually become an important way to infiltrate ideas and implement psychological warfare.

**Use situational immersion to exert cognitive influence.**  
 Psychological theory believes that the audience's body and its interaction with the environment play a key role in cognitive activities. As an artificial sensory system outside the human body, the evolving media technology can change or even reshape the way of perception. Intelligent media can superimpose, merge or simulate complex information that cannot appear in the same time and space at the same time, so as to restore the original appearance of the information to the greatest extent and provide the public with immersive sensory experiences such as vision, hearing, and touch. In this way, the communication effect is increasingly showing an immersive trend. Intelligent communication allows information to directly hit the sensory channels of the target audience in a more three-dimensional, time-space and shocking way, and thus give rise to a series of chain reactions of "sensory touch-psychological touch-emotional resonance", so as to achieve the influence and manipulation of their perception at the physiological level.

**Influencing cognitive trends through virtual mapping.**  
 The development and popularization of smart devices have improved people's "quantifiability" and "traceability". Some of these devices exist in the external environment, but in the future they will increasingly form an inseparable relationship with the human body. Thanks to this, the audience's behavior, activities, physical state, etc. can be mapped in the virtual world in multiple dimensions. Once people can truly experience the cognitive process and the environment in which they are located through "virtual entities", the relationship between the cognitive domain and the cognitive context will no longer be divided into two dimensions: virtual and real. In this process, as an audience, they are both enhanced, that is, they gain new perceptual experiences and realize the free extension of cognitive activities; at the same time, they are also constrained, that is, individuals who are digitally mapped are more easily perceived and manipulated by others.

**Use human-machine integration to strengthen cognitive intervention.**   
At present, social robots can shape a human-like communication object by capturing user emotional dynamics and analyzing information content and structure, and promote the transformation of the communication subject from "human" to "human-machine symbiosis". Based on user identity and real-time interaction, social robots can influence the public's thinking habits and behavior patterns to a certain extent, and have significant effects in spreading false information, manipulating public opinion, conducting social mobilization, and inciting public emotions. With the continuous improvement of technology, the image of social robots will be richer and more textured, and can even imitate human emotions. Some time ago, ChatGPT, which is based on generative AI, generated data and information that are easier for users to trust and accept, and has a more direct and effective impact on thinking and cognition. It can subtly change the user's consciousness and secretly and continuously construct the user's cognitive framework.

**Intelligent communication as a means of acting on cognitive domains**

Intelligent communication can shape the relationship between users and information in all dimensions, at all times and in all domains, making public opinion guidance, concept shaping and behavior control more convenient. It is increasingly becoming a "brain control weapon" and gradually developing a complete set of practical techniques for cognitive manipulation.

**Create information fog and attack cognitive black holes.**   
In the intelligent communication environment, deep fake information confuses the boundaries between existence and nothingness, reality and virtuality, and memory and forgetting. It can be used to distort the truth and influence the direction of public opinion, thereby achieving the purpose of influencing cognitive trends and strengthening cognitive intervention. In particular, intelligent programs represented by social robots have the ability to automatically identify, intelligently respond, and even brain-like thinking. They are tireless and work all the time. They can bombard the public with information in a large-scale, multi-channel, high-speed, and high-frequency manner, forming high-intensity cognitive oppression. Once false opinions or fake events form an opinion environment, it will greatly compress the individual's reaction time. Not only will it be difficult for the audience to think deeply, but they will also be easily driven by the herd mentality to produce a qualitative change from disbelief to belief, from non-acceptance to acceptance, and from non-identification to identification, thereby creating a false collective identity and leading the target object into a preset topic trap.

**Implement targeted attacks on the heart and build a cognitive cocoon.**   
In the era of informatization and intelligence, the public's cognition of things is potentially affected by various types of push information everywhere. Foreign militaries believe that by mastering the target object's Internet traces, shopping records, social status, etc., it is possible to quickly collect cognitive data of different dimensions, levels, and modalities, and provide support for efficiently mastering their values, public opinion positions, etc. On the basis of accurately drawing the cognitive landscape, it is possible to discover the doubts, weaknesses, and needs of the target object's cognitive system, and set the content theme, narrative method, and discourse framework according to their thinking preferences. Then, either select groups with similar understanding contexts and the same emotional characteristics, or select specific individuals who are easily influenced and have greater influence value, and deliver relevant information in a differentiated and segmented manner through selective recommendation and targeted filtering. With the help of targeted content delivery and channel precision attack, it is possible to carry out targeted attacks on the heart and continuous influence on the target object, effectively solidify its information acceptance range, continuously weaken its independent thinking ability, cause it to fall into a cognitive cocoon and thinking pattern, and even forcibly change its decision-making intentions and action deployment.

**Penetrate psychological cracks and break down emotional barriers.** Unlike previous communication methods, intelligent communication can build an immersive virtual environment. While expanding the user's sensory space and sensory dimension, it also naturally comes with strong sensory stimulation and perceptual cognitive bias, which wears down the user's rational cognitive level and value judgment ability. When the audience perceives the truth of an event, they will be more subject to the influence of perceptuality. If they want to pry open their cognition, they need to rely on perceptuality. Whether it is to attract people with gorgeous landscapes, or to seduce people with entertainment scenes, or to shock people with terrifying scenes, with the help of tactile, perceptible and interactive intelligent communication, a highly deceptive, confusing and inflammatory information scene is created, which strongly stimulates the user's psychological feelings and makes them deeply trapped without knowing it. Once they are immersed in emotions and scenes, they can use common emotions and common values ​​to incite emotions or morally coerce them, destroy their emotional dependence, undermine their value support, and then shock, occupy and even polarize the mind of the target object.

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