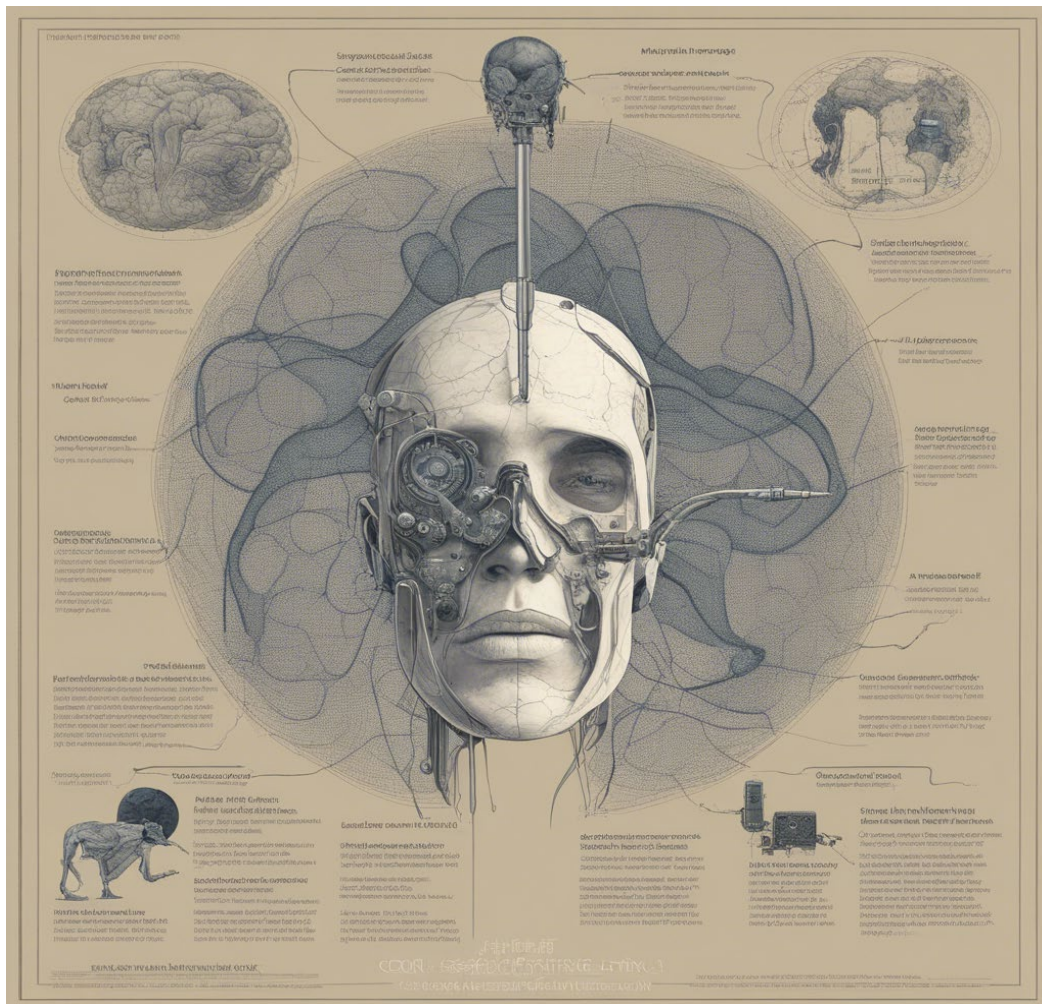




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Warfare in the Cognitive Age: NeuroStrike and the PLA's Advanced Psychological Weapons & Tactics



Executive Summary

This report provides an in-depth analysis of the evolving landscape of modern warfare, particularly focusing on the integration of psychological warfare strategies and NeuroStrike capabilities. Our original report centered on the development of the NeuroStrike program by the Chinese Communist Party (CCP) and the People's Liberation Army (PLA), which highlighted a strategic shift in warfare tactics, emphasizing the targeting of cognitive functions as a means of combat. **The new information brought forward by PLA officers Wang Dan and Zhang Xu further elaborates on the expanding role of psychological warfare in military operations, underscoring the PLA's focus on this dimension of warfare.**

Key Findings from the Original Report:

- The NeuroStrike program signifies a major shift in military strategy, moving from conventional kinetic warfare to techniques that directly affect cognitive functions.
- This program integrates advances in neuroscience and technology to develop weapons capable of impairing cognition, reducing situational awareness, and causing long-term neurological degradation.
- The strategic implications of the NeuroStrike program include a fundamental change in the nature of military engagement, raising ethical, legal, and strategic concerns.

New Insights on Psychological Warfare:

- The PLA's integration of psychological warfare techniques reflects a recognition of the psychological state of combatants as a crucial factor in the success of military operations.
- Advanced technologies like AI and Brain-Computer Interfaces (BCIs) have introduced new dimensions to psychological warfare, enabling the PLA to manipulate information, perceptions, and decision-making processes.
- The development of biological weapons targeting cognitive functions adds a novel aspect to psychological warfare, inducing psychological trauma and confusion.

Implications for Future Warfare:

- Future conflicts are likely to be characterized by a blend of traditional kinetic operations and advanced psychological and cognitive warfare.
- There is a need for comprehensive legal frameworks and ethical guidelines to govern the use of such technologies.
- Military training and preparedness must adapt to address the challenges of technological and psychological warfare.

Recommended U.S. Policy Responses:

- Develop legal frameworks and ethical standards to respond effectively to NeuroStrike and psychological warfare threats.

- Enhance military training programs to integrate physical, technical, and psychological preparedness.
- Invest in research and development for defensive technologies and strengthen psychological support systems within the military.

In conclusion, the integration of NeuroStrike capabilities with psychological warfare strategies represents a transformative development in the conduct of military operations, necessitating a multifaceted approach in response. Understanding and adapting to these evolving strategies are crucial for maintaining operational effectiveness and ethical conduct in modern warfare. The report emphasizes the need for strategic, legal, and ethical preparedness to navigate the complexities of this new era of military engagement.

NeuroStrike and the Evolving Landscape of Cognitive Warfare

The terminology used to describe the intricate realm of advanced cognitive disruption technology reflects a paradigm shift in the nature of warfare in the 21st century. This evolution necessitates the incorporation of terms such as "Anomalous Health Incidents" (AHI) and "Unconventionally Acquired Brain Injury" (UBI), both officially recognized by the US Defense Department as indicators of a novel form of covert offensive capabilities. Notably, the term "Havana Syndrome" is inherently intertwined with these concepts, coexisting within the broader term "NeuroStrike," which merits its unique definition.

The ongoing research efforts by the Chinese Communist Party (CCP) in these domains are not to be underestimated; they are both significant and strategically motivated. Over the past decade, technologies originally developed to address brain disorders, traumatic brain injuries (TBI), and cognitive impairments have unfortunately fallen victim to dual-use scientific research. These once-healing systems have been repurposed as covert weapons platforms, operating discreetly and insidiously to inflict severe cognitive harm and disrupt brain function among targeted individuals. This unsettling development marks the expansion into the realm of sixth dimension warfare, where the human body and brain serve as the battleground.

A substantial geopolitical contest is currently unfolding, focused on the neutralization, deterrence, and defense against weapons designed to incapacitate the cognitive health and neural well-being of military personnel, leaders, and ordinary citizens alike. The sustained research activities undertaken by the CCP in this field demand closer scrutiny and a significant shift in our strategic preparedness to safeguard the cognitive health, security, and overall well-being of our populace. This report sheds light on the extent and scope of the CCP's research endeavors, aiming to amplify and enhance their research and operational capabilities with the potential to redefine the very nature of warfare.

Anomalous Health Incidents: "I take very seriously the safety, health, and welfare of our personnel. To that end, I want to address with you a matter of significant concern: what we have called Anomalous Health Incidents (AHI). Although it is unlikely to have affected the vast majority of DoD personnel, I want to provide information on how to report potential AHI. Over the course of the last several years, and predominantly overseas, some DoD personnel have reported a series of sudden and troubling sensory events such as sounds, pressure, or heat concurrently or immediately preceding the sudden onset of symptoms such as headaches, pain, nausea, or disequilibrium (unsteadiness or vertigo). As part of a government-wide effort, the Department is committed to finding the cause and the source of these AHI and ensuring that affected individuals receive appropriate medical care as quickly as possible when needed." – Sept 2021 Secretary of Defense Lloyd Austin Memo for all DoD Employees

Unconventionally Acquired Brain Injury: "A cluster of neurosensory and cognitive symptoms of unknown etiology/origin with at least one of the following symptoms: vestibular deficits/disturbances, oculomotor deficits, headaches/head pressure, anxiety, sleep impairment, light sensitivity, nose bleeds, ear pain, disrupted executive function, disorientation, auditory symptoms, vision changes, and nausea. A secondary phase of symptoms related to vestibular

disturbances or cognitive deficits may potentially present after the initial phase." – Unconventionally Acquired Brain Injury Guidance and Instruction About an Emerging Challenge to Warfighter Brain Health, Adam T. Biggs, PhD; Sarah M. Henry, PhD; Scott L. Johnston, PhD; David R. Whittaker, MD; Lanny F. Littlejohn, MD // US Special Operations Command, Policy Memo 20-02: Unconventionally acquired brain injury reporting and health guidance for Special Operations Forces, Tampa, FL; 2020

NeuroStrike: Entails the covert utilization of combined RF, low MHz acoustic, nanotech, and electromagnetic technologies to inflict direct, non-kinetic, permanent neurological damage and cognitive degradation clandestinely. It targets unwitting individuals using a focused energy beam for several minutes, resulting in lifelong neuro-cognitive injury. [Reference: McCreight/2018 and Small Wars Journal, Neuro-Cognitive Warfare: Inflicting Strategic Impact via Non-Kinetic Threat 9-16-2022 [McCreight], and see also Havana Syndrome— a series of targeted neurological attacks against diplomats, intelligence experts, and military personnel since 2015, leading to memory loss, impaired gait, vestibular injury, and confirmed brain damage. Such attacks persist to this day. [Reference: National Academy of Sciences report, Dec 2020]

Navigating the New Terrain of Warfare: Unpacking the CCP's NeuroStrike Program and Psychological Warfare Dynamics

In an era marked by rapidly changing warfare dynamics, the importance of integrating diverse strategies is paramount for maintaining global competitiveness. This report delves into the complex interplay between advanced technological warfare, as epitomized by the CCP NeuroStrike program, and the increasingly crucial role of psychological warfare in modern military tactics. **Our aim is to offer a comprehensive analysis that builds upon the existing framework of the NeuroStrike program, supplementing it with vital insights into the psychological aspects of warfare. This is particularly illuminated by recent research titled “Improving psychological protection capabilities to help win future battles” authored by staff officers Wang Dan (王丹) and Zhang Xu (张旭) of the 94969 and 96812 Army Staff Departments of the People's Liberation Army (PLA).**

The integration of psychological elements with the NeuroStrike capabilities signifies a transformative shift in the conceptualization and execution of military engagements. The NeuroStrike program, initially developed by the CCP, showcases an advanced approach in deploying technologies designed to target and manipulate neurological functions. This program is a key example of a broader trend in modern warfare, where cutting-edge technology is utilized for strategic advantage. However, the true efficacy of such technologies hinge not only on their technical capabilities but also on their interplay with the psychological states of both combatants and civilian populations.

Contemporary warfare extends beyond physical confrontations, engaging combatants mentally as well. Psychological warfare, comprising various tactics from information management to direct cognitive interventions, has emerged as an integral part of military strategy. The latest

contributions from PLA researchers Wang Dan and Zhang Xu underscore the criticality of psychological protection in warfare. They highlight the necessity to safeguard against both traditional psychological stressors and those arising from innovative technologies like NeuroStrike.

This report is dedicated to exploring the synergistic relationship between the technological developments of the NeuroStrike program and the requisite psychological strategies for effective defense and offense. The integration of these elements in the context of modern warfare is profoundly significant. As military conflicts evolve to become more technologically intricate and psychologically complex, a nuanced understanding of both technological and psychological dimensions is essential for effective forecasting, preparation, and engagement in future conflicts. Through this analysis, we aim to present a strategic framework that encapsulates this dual focus, providing valuable insights and recommendations relevant to policymakers, military strategists, and defense analysts.

Background and Context: Decoding the CCP’s NeuroStrike Program and Its Implications in Modern Warfare

Our original report titled “**Enumerating, Targeting and Collapsing the Chinese Communist Party’s NeuroStrike Program**”¹, centered around the CCP’s NeuroStrike program, presents a critical analysis of a groundbreaking shift in the landscape of modern warfare. NeuroStrike, as delineated, is a program developed by the CCP and its PLA that pioneers in the realm of non-kinetic warfare, focusing on technologies capable of targeting and potentially controlling mammalian brains, including humans. This program is not merely a set of isolated initiatives; it represents a strategic direction, integrating neuroscience and technology to develop weapons systems that can impair cognition, reduce situational awareness, and degrade neurological functions over the long term. The CCP’s vision for NeuroStrike encompasses a holistic approach, part of a broader asymmetric warfare strategy aimed at establishing a strategic edge over adversaries, particularly the United States and perceived rivals in the Indo-Pacific region, such as Taiwan, Japan, Australia, or India.

The strategic importance of the NeuroStrike program lies in its potential to transform the battlefield dynamics fundamentally. By focusing on non-kinetic means, the CCP aims to achieve strategic objectives without the conventional use of force. The program’s focus extends beyond individual targets, envisioning a capability that could potentially influence large population segments, thereby opening new frontiers in psychological warfare and information control. As outlined in the report, the NeuroStrike program is part of the CCP’s standard order of battle, indicating its integration into regular military operations rather than being reserved for extreme circumstances.

¹ [Enumerating, Targeting and Collapsing the Chinese Communist Party’s NeuroStrike Program — The CCP BioThreats Initiative](#)

Transitioning to the importance of psychological aspects in warfare, the new information provided by Wang Dan and Zhang Xu adds a crucial dimension to our understanding of the PLA's contemporary military conflicts. In today's technologically advanced and information-saturated world, the psychological state of combatants and civilian populations has become a pivotal battlefield. The new insights emphasize the concept of "psychological protection", which includes educational guidance, psychological regulation, and information management to counteract the psychological impacts of warfare. This protection is essential not only to resist the direct effects of psychological and neurological weapons, such as those developed under the NeuroStrike program but also to navigate the broader psychological challenges posed by modern warfare, such as information overload and cognitive dissonance.

In essence, the integration of psychological aspects into warfare strategy reflects a growing recognition of the human mind as a critical battlefield. The advancements in technologies that target cognitive functions necessitate a parallel development in defensive psychological strategies. This dual focus – technological advancement in offensive capabilities and the enhancement of defensive psychological strategies – underscores a comprehensive approach to modern warfare. As we delve further into this report, the interplay between these two facets – the technological prowess of the NeuroStrike program and the psychological resilience necessary to counteract its impacts – will be explored in greater detail, providing a nuanced understanding of their collective significance in contemporary and future military strategies.

Analysis of the NeuroStrike Program: Unveiling CCP's Advanced Warfare Strategy

The NeuroStrike program represents a significant leap in the realm of military technology, positioning the CCP at the forefront of a new domain in warfare. This program is a testament to the CCP's commitment to integrating advanced technology with military strategy, aimed at developing capabilities that transcend traditional kinetic warfare.

Development of the Program: The NeuroStrike program was initiated as part of a broader strategy by the CCP to gain a strategic advantage in asymmetric warfare. This initiative is rooted in the CCP's perception of modern warfare, where cognitive and psychological dominance is as crucial as physical supremacy. The program has evolved over the years, leveraging advancements in neuroscience, biotechnology, and information technology. It is a multidisciplinary endeavor, incorporating insights from military science, psychology, and technology.

Technological Aspects: At the core of the NeuroStrike program is the development of technologies capable of targeting mammalian brains. This involves the use of microwave and directed energy weapons, which can be deployed through various platforms, ranging from handheld devices to broader electromagnetic spectrum tools. The technology is designed to impair cognitive functions, diminish situational awareness, and induce long-term neurological degradation. Furthermore, the program explores the use of human-computer interfaces and other bio-technological advancements, aiming to control or influence large populations.

A critical technological aspect of the NeuroStrike program is its emphasis on non-kinetic means of warfare. This approach signifies a departure from traditional weaponry, focusing instead on incapacitating the enemy through cognitive and psychological means. Such technologies are not limited to battlefield scenarios but have broader applications in psychological warfare and population control.

Strategic Implications: The strategic implications of the NeuroStrike program are profound and multifaceted. Firstly, it represents a shift in the nature of military engagement, where the focus is on incapacitating the enemy by targeting cognitive abilities rather than causing physical destruction. This aligns with the CCP's broader strategy of asymmetric warfare, seeking to exploit vulnerabilities in conventional military thinking and capabilities.

Secondly, the program has significant implications for international security and the balance of power. The ability to target cognitive functions adds a new dimension to warfare, raising ethical, legal, and strategic concerns. It challenges existing international norms and conventions on warfare, potentially leading to a new arms race in non-kinetic military technologies.

Finally, the NeuroStrike program reflects the CCP's understanding of the importance of psychological dominance in modern warfare. By focusing on cognitive and psychological targets, the CCP aims to weaken the resolve and operational effectiveness of its adversaries. This approach extends beyond the battlefield, encompassing broader strategies for information control, psychological operations, and influence campaigns.

In conclusion, the NeuroStrike program is a pivotal development in the landscape of modern military technology. Its emphasis on non-kinetic means, targeting cognitive and psychological functions, represents a significant shift in warfare tactics and strategy. The program's advancement underscores the need for comprehensive understanding and response strategies, both technological and psychological, to address the challenges it presents in the realm of international security and warfare.

The Expanding Role of Psychological Warfare in PLA Strategies

The evolution of modern warfare, as illuminated by recent research conducted by PLA officers Wang Dan and Zhang Xu, underscores the growing significance of psychological warfare. This shift reflects the PLA's acknowledgment of the expanding nature of military conflict, where the battlefield now encompasses cognitive and psychological dimensions. In this context, psychological warfare strategically influences, undermines, or manipulates the psychological well-being of adversaries, achieving military objectives that extend beyond traditional physical confrontations. The report introduces the concept of '认知迷雾' (cognitive fog) in an information-driven society. Within this environment, '信息搭载互联网以瞬时计算' (information carried on the internet is instantaneously processed), rapidly reaching a broad audience. This results in an information landscape where '重复性、选择性、精准性信息从各种渠道交叉渗透' (repetitive, selective, and precise

information permeates through various channels), creating a scenario in which individuals, despite being inundated with information, have already been subtly influenced by numerous stimuli, establishing a '心锚' (mental anchor) in their minds.

The PLA's Five Battles of Cognition

The PLA's report titled "Aiming at future wars and fighting the 'five battles' of cognition" first released in the PLA Daily in August 2022 (Figure 1), presents a groundbreaking perspective on modern warfare strategies, highlighting the expanding roles of Psychological Warfare in PLA strategies. The concept of the "five battles" of cognition introduced in the report underscores the critical importance of cognitive operations in future conflicts, shaping the battlefield beyond traditional physical confrontations. These battles encompass various dimensions, including information warfare, psychological operations, and strategic narratives, emphasizing the need to control the cognitive domain. The comprehensive framework presented in Table 1, detailing the "five battles" of cognition, describes the PLA's evolving landscape of modern warfare with a focus on cognitive operations and psychological warfare.



Figure 1 Aiming at future wars and fighting the “five battles” of cognition, Source: China Military Network - People's Liberation Army Daily

Table 1 “Five Battles” of cognition descriptions

Battle of Cognition	Description
Battle of Preemptive Cognition	Involves shaping the cognitive environment before the war begins by strategically influencing the physiological, psychological, and value-based cognitive factors of target objects. The goal is to dominate the cognitive space efficiently and establish the moral high ground.
Battle of Cognitive Precision	Focuses on precise cognitive operations and strategies. It involves identifying cognitive gaps, utilizing advanced technologies like big data and AI, and targeting key information of cognitive subjects to achieve effective penetration and early deterrence.
Battle of Cognitive Domination	Aims to penetrate the entire cognitive territory, including both physical "hard destruction" methods and "soft kill" effects achieved through cognitive shaping, induction, intervention, and control. The objective is to create a powerful deterrent and asymmetric advantage.
Battle of Cognitive Information	Recognizes the importance of strong information support in future wars. It involves building cognitive offensive and defensive operations resources, integrating media communication, and developing core technologies for cognitive information fusion.
Battle of Cognitive Coordination	Emphasizes multi-dimensional efforts and coordination in joint operations across various domains. It involves integrating human intelligence, geographical intelligence, and open source intelligence to establish an all-domain joint force with high connectivity and achieve "integrated deterrence."

The report further introduces the concepts of '软杀伤' (soft kill) and '硬摧毁' (hard destruction) within the context of cognitive operations. '软杀伤' acknowledges the importance of cognitive shaping, induction, intervention, and control in achieving military objectives without direct physical destruction. '硬摧毁' recognizes the significance of physically disrupting key enemy nodes, including decision-making centers and command hubs, using advanced strike methods while embedding cognitive domain operations to expand combat power into the cognitive dimension.

In summary, the PLA's report emphasizes the expanding roles of psychological warfare in contemporary warfare and underscores the importance of mastering cognitive operations to gain a strategic advantage in future conflicts.

Impact of Precision Strike Weapons: The PLA's development of precision strike weapons has markedly changed the nature of its military engagements. Characterized by their accuracy and lethality, these weapons systems not only ensure physical dominance but also have a profound psychological impact. The presence or even the potential use of such precise weaponry can instill fear and anxiety, undermining the morale of both enemy combatants and civilian populations. This aspect of psychological warfare requires PLA strategists to consider the mental and emotional effects of their technological capabilities alongside their physical destructiveness.

Role of AI in Psychological Warfare: Artificial intelligence systems have introduced a novel dimension to the PLA's psychological warfare strategy. With their advanced data processing and pattern recognition capabilities, AI systems allow the PLA to predict and analyze adversary behaviors with remarkable accuracy. This predictive capacity can be exploited to manipulate decision-making processes, sow confusion, and create uncertainty within enemy ranks. Additionally, AI-driven propaganda and disinformation campaigns can be used to influence public opinion and morale, both domestically and internationally. Integrating AI into psychological operations represents a sophisticated PLA approach to undermine adversaries' cognitive resilience and decision-making abilities.

Cognitive Warfare as a Strategic Focus: Cognitive warfare has emerged as a new frontier in the PLA's conflict strategy. This approach, which capitalizes on advances in neuroscience and psychology, aims to target the human mind directly. Going beyond conventional propaganda and psychological tactics, it involves technologies capable of influencing or controlling cognitive functions and emotional states. The PLA's exploration of cognitive warfare techniques presents significant ethical and strategic considerations. The ability to impair judgment, disrupt cognitive processes, or manipulate emotions could decisively influence military confrontations. However, it also challenges established norms of warfare and raises questions about the autonomy and dignity of individuals targeted by such tactics.

The PLA's growing focus on psychological warfare mirrors the broader evolution of conflict in the 21st century, where sophisticated and technologically driven strategies increasingly emphasize the psychological dimensions of warfare. For the PLA, understanding and effectively employing these strategies are crucial for achieving military success while navigating the ethical

complexities they present. The challenges posed by precision strike weapons, AI, and cognitive warfare techniques highlight the necessity for robust psychological defenses and ethical considerations in the PLA's military planning and operations.

Enhancing Psychological Defense in PLA Warfare

The PLA focus on enhancing psychological defense mechanisms in modern warfare is a critical response to the evolving nature of conflict, particularly with the advent of advanced technologies like the NeuroStrike program. Recognizing that mental resilience is as vital as physical prowess, the PLA has been concentrating on strategies and practices to fortify the mental and emotional resilience of its military personnel. This approach is crucial for ensuring effectiveness and resilience against the psychological challenges posed by contemporary warfare tactics.

Significance of Psychological Protection in Military Conflicts: In the PLA's strategy, the psychological state of combatants is acknowledged as a significant factor influencing operational outcomes. Technologies like those in the NeuroStrike program, which directly target cognitive functions, place the psychological well-being of soldiers at the forefront of military concerns. Therefore, psychological protection is a pivotal defense mechanism within the PLA, designed to safeguard personnel from cognitive and emotional manipulations, thus ensuring their operational effectiveness in diverse scenarios.

Synergizing with the NeuroStrike Program: The objectives of the NeuroStrike program, focusing on cognitive and psychological warfare, demand a robust system of psychological protection for its effective implementation. While the program is designed to diminish the adversary's psychological resilience, the PLA simultaneously emphasizes strengthening its own forces against similar threats. Integrating psychological protection strategies ensures that PLA personnel are prepared not only for traditional combat stressors but are also equipped to counteract sophisticated psychological and cognitive warfare techniques.

Educational Guidance as a Key Component: A critical element in the PLA's psychological defense is educational guidance. This entails training military personnel to recognize and understand the nature and tactics of psychological threats present in modern warfare. By educating soldiers about these aspects, they become more proficient in identifying potential threats and deploying effective mitigation strategies. This educational facet also extends to understanding the ethical and legal implications of engaging in psychological warfare.

Focus on Psychological Regulation: The PLA prioritizes psychological regulation, involving practices and interventions to maintain or restore the mental health of its personnel. This includes stress management techniques, coping mechanisms, and therapeutic interventions aimed at addressing issues like anxiety, fear, and trauma. Active management of psychological well-being ensures that PLA forces remain focused, resilient, and mentally prepared for the demands of modern warfare.

Strategic Information Management: In today's information-centric warfare landscape, the PLA places great emphasis on controlling and managing information. This involves safeguarding

sensitive information and strategically disseminating content to manage perceptions and morale, both within military ranks and among civilian populations. Effective information management is key in countering enemy propaganda, preventing misinformation, and maintaining a positive psychological state among troops and allies.

In conclusion, the PLA's integration of psychological protection within its military operations represents a comprehensive approach essential for the success of modern military endeavors. This strategy not only complements the technological objectives of programs like NeuroStrike but also ensures that soldiers are psychologically resilient. Such an approach indicates a holistic perspective on warfare, where physical capabilities and psychological strength are equally prioritized to achieve strategic objectives.

Impact of Advanced Technologies on PLA Warfare

The PLA is at the forefront of incorporating advanced technologies such as Artificial Intelligence, Brain-Computer Interfaces (BCIs), and novel biological weapons into its military strategies. These technological advancements are not only transforming the physical capabilities of the PLA but are also having significant psychological impacts on both its combatants and civilian populations. The recent development of brain-control weapons, as noted in the research, embodies the realization of the concept '不战而屈人之兵' (subduing the enemy without fighting), positioning these as one of the ultimate weapons to alter future battlefields. Such an array of emerging biological weapons not only impacts the physiological and psychological states of combatants but also poses significant threats to their physical and mental well-being, as described in the research findings. The following **Table 2** provides an overview of the advanced psychological weapons mentioned in the PLA's report. These weapons, including sleep-inducing technologies, brain-computer interfaces, genetic drugs, and brain-controlled weaponry, have the capability to directly impact cognition, emotion, will, and behavior from a physiological perspective. They represent a significant shift in modern warfare, offering new avenues for psychological influence and manipulation that go beyond traditional methods. This table outlines each weapon type and provides a brief description of its intended effects and applications in military contexts.

Table 2: Advanced Psychological Weapons Described in the PLA Report

Weapon Type	Description
Sleep Weapons	Biological weapons designed to induce sleep or sleep-related disturbances in the target, affecting cognition and alertness.
Brain-Computer Interfaces	Devices that establish a direct connection between the brain and external technology, potentially influencing cognitive processes and decision-making.
Brain-Controlled Weapons	Weapons controlled by the user's brain signals, enabling precise targeting and manipulation of cognitive functions in the target.
Genetic Drugs	Pharmaceuticals designed to modify the genetic and physiological makeup

	of individuals, potentially impacting cognitive, emotional, and behavioral traits.
Sleep Glasses	Wearable devices that aim to enhance wakefulness and alertness, counteracting the effects of sleep deprivation.
"Nightless" Drugs	Medications that prevent sleep and maintain wakefulness, ensuring continuous readiness in military personnel.
Soft-Kill Radio Waves	Electromagnetic waves used for non-lethal purposes, such as inducing drowsiness or cognitive impairment in adversaries.
Genetically Modified Soldiers	The use of genetic engineering to enhance or alter the physiological and cognitive capabilities of military personnel.
Brain-Controlled Weapons (Recent Developments)	Advanced weaponry that can be controlled directly by the user's thoughts, offering new possibilities for cognitive manipulation and control.

Artificial Intelligence in PLA Strategies: In the realm of PLA warfare, AI has become a central component due to its exceptional capabilities in data analysis, simulation, and autonomous decision-making. AI systems enable the PLA to process and interpret vast quantities of data, predicting enemy movements, identifying vulnerabilities, and formulating optimal combat strategies. The psychological influence of AI is profound, as it engenders an environment of uncertainty and unpredictability for adversaries. AI's non-traditional warfare strategies can disrupt conventional military thinking and operations. Additionally, the PLA's use of AI in psychological operations, such as targeted propaganda and disinformation campaigns, can demoralize and mislead enemies, thereby weakening their resolve and decision-making abilities.

Brain-Computer Interfaces (BCIs) in the PLA: BCIs mark a revolutionary leap in military technology, offering direct links between the human brain and external devices. Within the PLA, these interfaces hold the potential to significantly enhance the cognitive and physical abilities of soldiers, potentially leading to superhuman capabilities in combat scenarios. However, the psychological aspects of this technology are complex. Enhanced soldiers might experience heightened confidence and reduced fear or fatigue, fundamentally altering their combat experiences. Conversely, ethical concerns regarding such enhancements and their potential effects on soldiers' identities and mental health are subjects of ongoing debate. The possibility of adversaries possessing similar technology also introduces new psychological challenges, potentially generating anxiety and fear among PLA personnel.

Biological Weapons in Psychological Warfare: The PLA's exploration of advanced biological weapons, particularly those targeting cognitive functions or manipulating emotional states, introduces a novel aspect to psychological warfare. Unlike traditional biological weapons, these advanced tools can cause psychological trauma and confusion, leading to incapacitation without physical harm. The mere threat of such weapons can exert a paralyzing effect, both on military personnel and civilians, due to their uncertainty and invisibility, thereby establishing a constant psychological threat.

In summary, the PLA's integration of cutting-edge technologies such as AI, BCIs, and biological weapons into its military arsenal brings significant psychological dimensions to warfare, extending beyond their physical effects. These advancements enhance the PLA's military

capabilities while also introducing new psychological challenges and ethical dilemmas. It is imperative for PLA strategists and policymakers to comprehend and address these impacts effectively, ensuring the optimal use of these technologies while maintaining the psychological well-being of their forces and adhering to the highest ethical standards in modern warfare.

PLA Approaches Towards Enhancing Psychological Resilience

In modern warfare, as extensively studied and implemented by the PLA, psychological resilience is as critical as physical strength. Recognizing the significance of mental fortitude in combat, the PLA has developed comprehensive strategies to bolster the psychological resilience of its soldiers. These strategies are essential for maintaining operational effectiveness under extreme psychological pressures.

Comprehensive Training Programs: The PLA emphasizes the importance of all-encompassing training programs that incorporate psychological preparedness along with physical and tactical skills. Such programs include modules on stress management, emotional regulation, and cognitive flexibility. They are designed to educate soldiers about various psychological threats, including propaganda, misinformation, and the challenges posed by advanced warfare technologies like AI and BCIs. By equipping soldiers with this knowledge, the PLA empowers them to effectively recognize and counteract psychological threats.

Simulation Exercises: Realistic simulation exercises are a cornerstone of the PLA's strategy for building psychological resilience. These exercises mimic the stressors of warfare, including scenarios involving advanced technologies like the NeuroStrike program. The intensity of these simulations is progressively increased, allowing soldiers to gradually build resilience. Exposure to simulated high-stress environments is crucial for developing coping mechanisms and mental toughness, which are vital in real combat situations.

Development of Psychological Recovery Equipment: Investment in psychological recovery equipment is another critical strategy of the PLA. This range of equipment varies from simple stress-relief gadgets to more advanced systems such as virtual reality setups for therapeutic purposes. Technologies like biofeedback devices enable soldiers to monitor and control their stress responses. Immersive VR environments can be utilized for exposure therapy or relaxation training, aiding in rapid recovery and resilience building.

Mindfulness and Resilience Training: Mindfulness training is a key component of the PLA's psychological resilience strategy. Practices focusing on mindfulness, meditation, and relaxation techniques help soldiers maintain calm and focus in high-stress scenarios. These techniques play a significant role in regulating emotions, reducing anxiety, and enhancing overall mental well-being.

Peer Support Systems: The PLA recognizes the value of strong peer support systems within military units. Soldiers sharing similar experiences can provide each other with invaluable emotional support. Fostering a culture of open communication and shared experiences among

soldiers is encouraged to create a supportive environment conducive to discussing and addressing psychological challenges.

Professional Psychological Support: Access to professional psychological support is fundamental in the PLA's approach. Military psychologists and counselors are available to provide guidance, conduct regular mental health assessments, and offer therapeutic interventions. This professional support is particularly vital for soldiers returning from missions, assisting them in processing their experiences and reintegrating into their roles effectively.

In summary, the PLA's approach to building psychological resilience in modern warfare is a comprehensive and multifaceted one, encompassing extensive training, simulations, advanced recovery tools, mindfulness practices, peer support, and professional psychological services. By implementing these strategies, the PLA ensures that its personnel are not only physically ready for combat but are also mentally equipped to handle the complexities and psychological demands of modern warfare.

PLA Research on Future Warfare Implications: NeuroStrike and Psychological Warfare Integration

The PLA integration of NeuroStrike capabilities with psychological warfare strategies marks a significant evolution in military conflict, emphasizing the strategic importance of cognitive and psychological domains alongside traditional physical combat. This integration bears critical implications for the nature of future warfare and the shaping of military strategies.

Transforming the Nature of Conflict: Future conflicts as envisioned by the PLA are likely to be a complex blend of conventional kinetic operations and sophisticated psychological and cognitive warfare. The NeuroStrike program, with its emphasis on targeting cognitive functions, signifies a departure from traditional weaponry, focusing instead on methods that directly impact the human mind. This evolution suggests that future military engagements will increasingly revolve around psychological resilience and mental dominance, extending beyond the mere physical control of territories.

Ethical and Legal Considerations: The PLA's use of technologies like NeuroStrike in warfare introduces intricate ethical and legal challenges. Questions of autonomy, consent, and moral boundaries in military conflict arise with the ability to target and manipulate cognitive functions. As these technologies evolve, there will be an urgent need for the PLA to develop new legal frameworks and ethical guidelines to govern their use, ensuring adherence to international law and moral standards.

Adapting Military Training and Preparation: To meet the challenges of both technological and psychological warfare, the PLA is focusing on adapting its training and preparation strategies. This involves equipping soldiers with the skills to operate advanced technologies while also preparing them to resist psychological manipulation and cognitive attacks. Training programs are being developed to integrate physical, technical, and psychological elements, enhancing overall preparedness.

Information and Perception Management: In the future warfare landscape, the PLA recognizes the critical role of information and perception management. With technologies capable of influencing cognitive functions, the PLA can shape perceptions, control narratives, and manipulate information extensively. Enhanced capabilities in information operations, cyber warfare, and strategic communication are required to effectively manage information flow and counteract enemy propaganda.

Prioritizing Cognitive Resilience: As cognitive warfare becomes more prevalent, the PLA is placing increased emphasis on developing cognitive resilience within its ranks. This involves psychological training and support, along with research into innovative methods and technologies to enhance and protect cognitive functions of military personnel.

Impact on Civil-Military Relations: The integration of advanced psychological warfare capabilities, such as those in the NeuroStrike program, may significantly impact civil-military relations. The potential application of these technologies against civilian populations could raise public concerns about the military's role and responsibilities. The PLA recognizes the necessity of transparent communication and strict adherence to ethical standards to maintain public trust and support.

In conclusion, the PLA's integration of NeuroStrike capabilities with psychological warfare strategies is a transformative development in military operations, set to shape the future of conflicts. This shift necessitates revisions in legal and ethical frameworks, military training, information management, and cognitive resilience development. As the PLA adapts to these emerging challenges, it faces the crucial task of balancing technological advancement with moral and ethical responsibilities.

U.S. Policy Recommendations in Response to CCP and PLA NeuroStrike and Psychological Warfare

Policy Recommendations Today:

The development and integration of NeuroStrike and psychological warfare capabilities by the CCP and the PLA pose a range of strategic challenges and threats to the United States. In response, U.S. military and government policymakers must adopt a multifaceted approach that addresses strategic, ethical, and legal concerns. The following policy recommendations are aimed at safeguarding U.S. interests and maintaining military effectiveness in the face of these emerging threats:

1. Establishing Comprehensive Legal Frameworks:

- Develop clear international and domestic legal frameworks to govern the response to CCP and PLA's use of NeuroStrike technologies and psychological warfare tactics. These frameworks should ensure compliance with international humanitarian law and protect against human rights infringements.

- Periodically review and update these legal frameworks to adapt to technological advancements and evolving warfare strategies of the CCP and PLA.

2. Upholding Ethical Standards:

- Implement stringent ethical guidelines for responding to NeuroStrike capabilities and psychological warfare strategies deployed by the CCP and PLA. This includes maintaining transparency, accountability, and upholding human dignity and autonomy.
- Create ethical review boards, consisting of military leaders, legal experts, ethicists, and psychologists, to supervise the U.S. response to these emerging technologies and strategies.

3. Enhancing Military Training and Preparedness:

- Develop training programs for U.S. military personnel that integrate physical, technical, and psychological preparedness, particularly focusing on resilience against cognitive and psychological warfare tactics used by the CCP and PLA.
- Incorporate training on ethical decision-making and understanding the legal implications of engaging with advanced warfare technologies.

Policy Recommendations for Tomorrow:

4. Strategic Wargaming for Planning the U.S. Response:

- Conduct regular wargaming exercises to simulate NeuroStrike and psychological warfare scenarios, aiding in scenario development, testing defensive technologies, and evaluating psychological support systems.
- Based on wargaming insights, create a response plan that includes rapid deployment of specialized units, sustained R&D efforts, enhanced psychological support, and readiness for information warfare.
- Maintain transparency with the public and engage in international dialogues to regulate advanced military technologies globally.

5. Investing in Research and Development:

- Allocate substantial resources towards R&D in defensive technologies specifically designed to counteract CCP and PLA's NeuroStrike and psychological warfare threats.
- Promote interdisciplinary research in neuroscience, psychology, AI, and cybersecurity to understand and mitigate the potential impacts of these technologies on modern warfare.

6. Strengthening Psychological Support Systems:

- Establish robust psychological support systems within the U.S. military, including regular mental health screenings, counseling services, and comprehensive stress management programs.
- Develop and implement post-deployment programs to assist military personnel in managing the psychological effects of exposure to advanced warfare technologies and tactics.

7. Advancing Information and Perception Management:

- Enhance U.S. capabilities in information operations and strategic communications to effectively manage perceptions and counteract CCP and PLA misinformation and propaganda.
- Foster interagency collaboration, involving military, intelligence, and civilian sectors, to ensure a cohesive and effective information strategy.

8. Maintaining Public Transparency and Communication:

- Ensure open and transparent communication with the public regarding the development and use of advanced military technologies and strategies to counter CCP and PLA advancements.
- Engage in public dialogue to clarify the ethical, legal, and operational considerations involved, thus building public trust and comprehension.

9. Promoting International Collaboration and Dialogue:

- Engage in international dialogues and collaborations to address the global implications of CCP and PLA's NeuroStrike and psychological warfare capabilities.
- Pursue international agreements and cooperative efforts for the oversight and regulation of such technologies to prevent escalation and potential arms races.

By adopting these policy recommendations, the U.S. can effectively prepare for the complexities of modern warfare influenced by CCP and PLA advancements. These strategies will ensure that U.S. military operations remain effective, ethical, and compliant with legal standards in an era characterized by rapid technological evolution and shifting dynamics of warfare.

Conclusion

This report has comprehensively examined the strategic implications of the integration of NeuroStrike capabilities and advanced psychological warfare techniques, primarily developed by the CCP and the PLA. The key findings underscore the transformative nature of these developments in the realm of modern warfare, highlighting the shift towards a more complex battlefield where psychological and cognitive domains are as crucial as physical combat.

The emergence of NeuroStrike capabilities signifies a fundamental change in military strategy, pivoting from conventional kinetic warfare to sophisticated methods that target the human mind. This transition to cognitive and psychological warfare brings forth new challenges and necessitates a paradigm shift in how military conflicts are approached and managed.

Ethical and legal considerations have been identified as paramount in the face of these emerging technologies. The ability to manipulate cognitive functions raises serious questions about autonomy and the ethical boundaries of military engagement. This necessitates the development of robust legal frameworks and ethical guidelines to govern the use of such advanced technologies, ensuring adherence to international law and moral standards.

The importance of adapting military training and preparedness has been emphasized, recognizing the need for armed forces to be equipped not only with the technical skills to operate advanced technologies but also with the psychological resilience to withstand new forms of cognitive and psychological warfare. This adaptation extends to enhancing information and perception management capabilities, critical in an era where information is a powerful weapon.

Moreover, the findings highlight the significance of strengthening psychological support systems within military organizations to safeguard the mental well-being of personnel engaged in modern warfare. This includes establishing robust mental health programs and developing comprehensive strategies for post-deployment support.

The integration of NeuroStrike capabilities with psychological warfare strategies by the CCP and PLA is not merely an incremental change but a fundamental evolution in the conduct of military operations. It demands a comprehensive and proactive response, encompassing legal, ethical, strategic, and psychological dimensions. As military organizations, particularly those of the United States, adapt to these emerging challenges, they face the critical task of balancing technological advancement with ethical responsibility and strategic effectiveness.

In conclusion, the evolving nature of modern warfare, characterized by the integration of advanced technologies and psychological warfare strategies, requires a multifaceted and dynamic approach. The ability to adapt to these changes, while upholding ethical standards and ensuring operational effectiveness, will be crucial in shaping the future of military conflicts and maintaining global security and stability.

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