

THE EVOLUTION OF CHINESE WARGAMING: FROM SUN-TZU TO AI

Constructing a Human-Machine Decision Architecture in the PLA

BRIEFING ORIGIN

Extracted from the research of Dr. Alessandro Arduino (CONNECTIONS UK 2026)

SOURCE: CONNECTIONS UK 2026 / ARDUINO, A. / STRATEGIC RESEARCH UNIT

AGENDA & STRATEGIC OUTLINE

I. FOUNDATION

The epistemological shift from wargaming as an art to reproducible, empirical science.

KEY SHIFT: ART → EMPIRICAL SCIENCE

II. SCALE

The integration of multi-agent architectures and the MiaoSuan evaluation platform.

INFRASTRUCTURE SATURATION: POST-2015

III. INTELLIGENCE

The post-2015 institutionalization and mass saturation of wargaming infrastructure across the PLA.

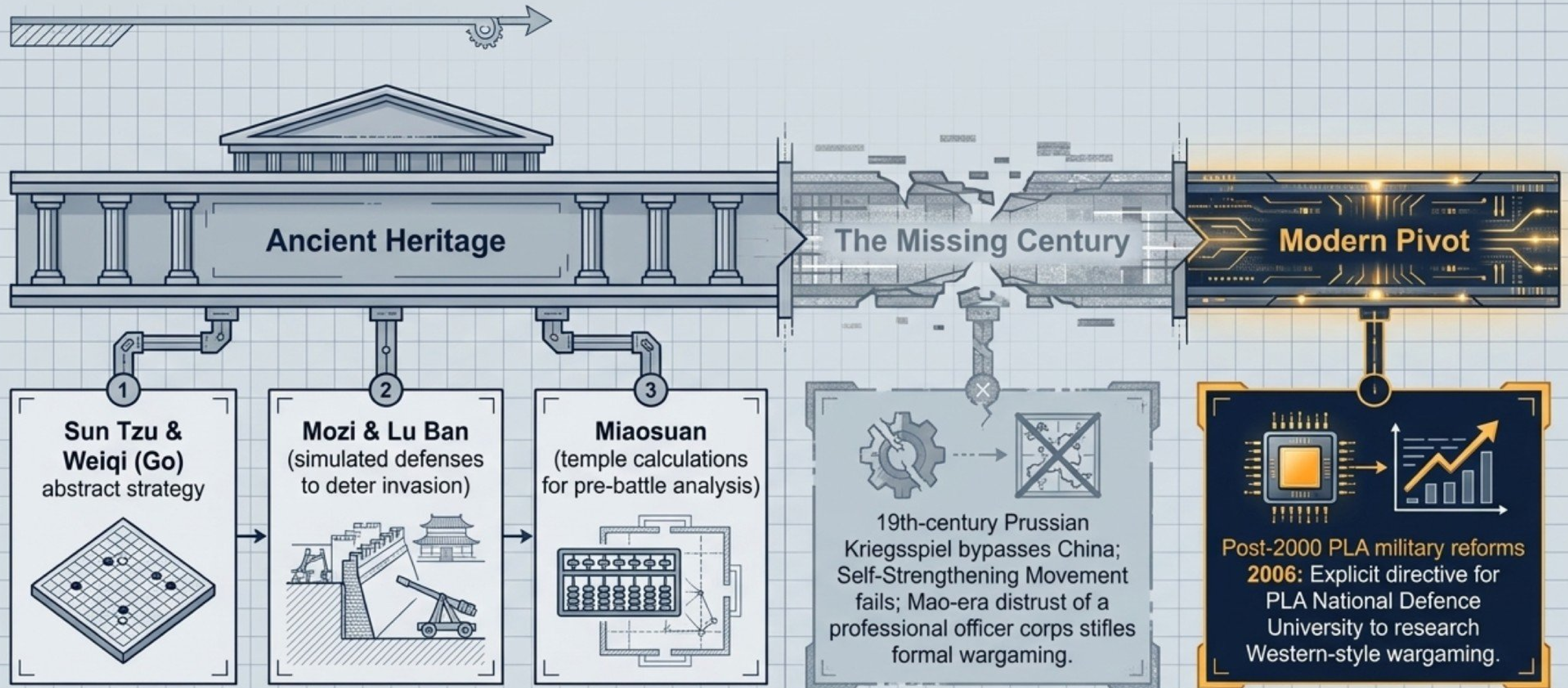
EVALUATION PLATFORM: MIAOSUAN MULTI-AGENT SYSTEM

IV. DIVERGENCE

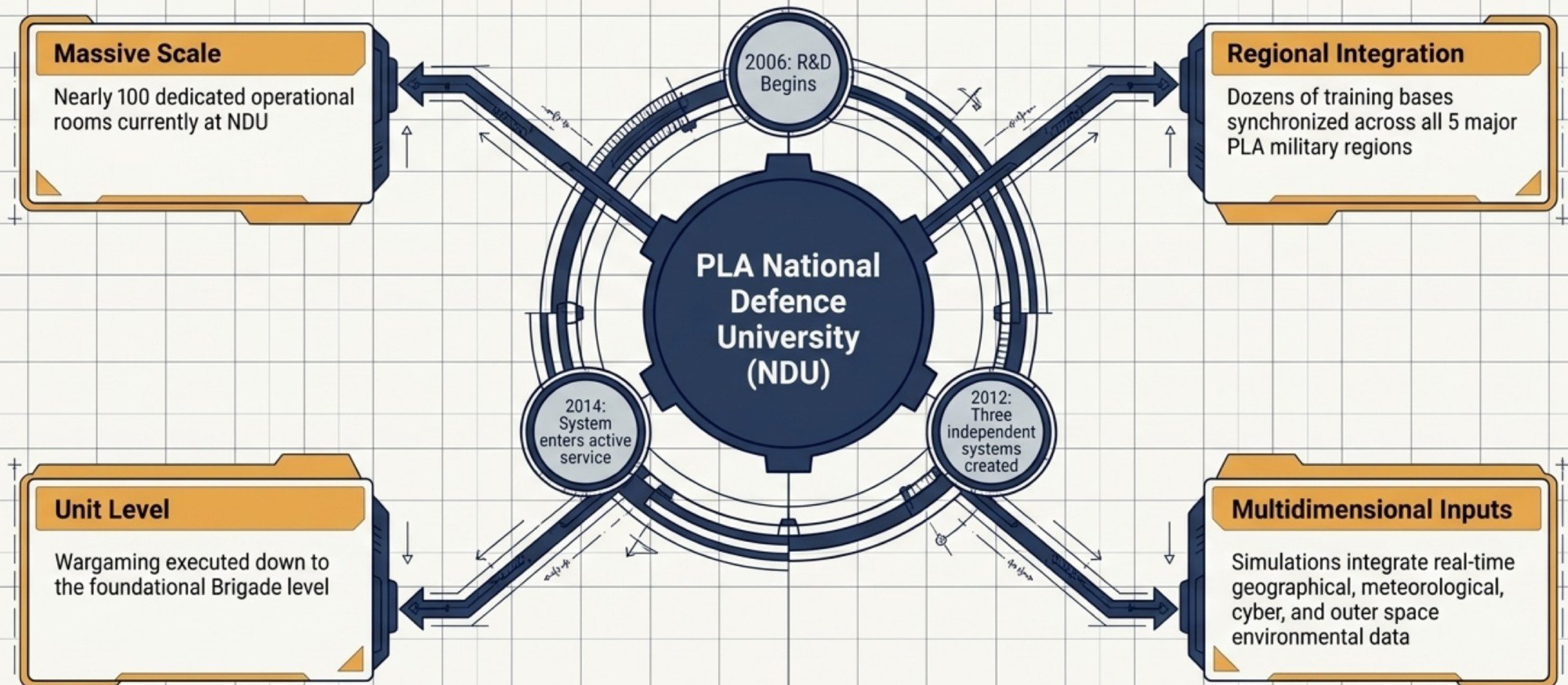
The fundamental divide between Western operational support and Chinese bidirectional human-machine symbiosis.

STRATEGIC CONTRAST: OPS SUPPORT vs. BIDIRECTIONAL SYMBIOSIS

Antecedents of Simulation: The Historical Continuum



The PLA Wargaming Renaissance: Scaling the Infrastructure



The Tripartite Planning Framework: Doctrinal Architecture

Zuozhan Jisuan
(Combat/Operation
Computing)

Bingqi Tuiyan
(Wargaming)

Data annotation >>
Used for interactive
evaluation and stress-
testing concepts.

Qiukuai (Speed)

- Faster action than the enemy

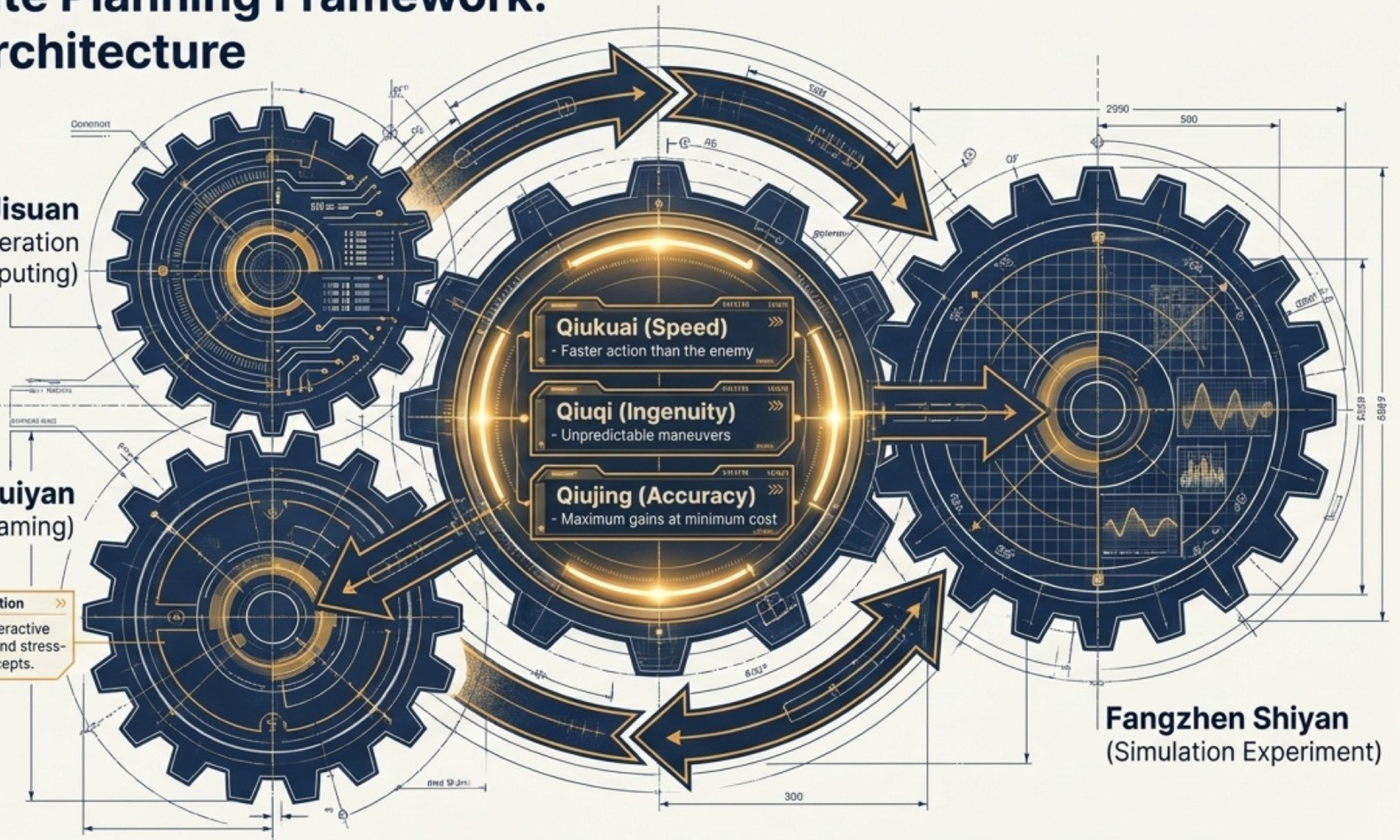
Qiuqi (Ingenuity)

- Unpredictable maneuvers

Qiujing (Accuracy)

- Maximum gains at minimum cost

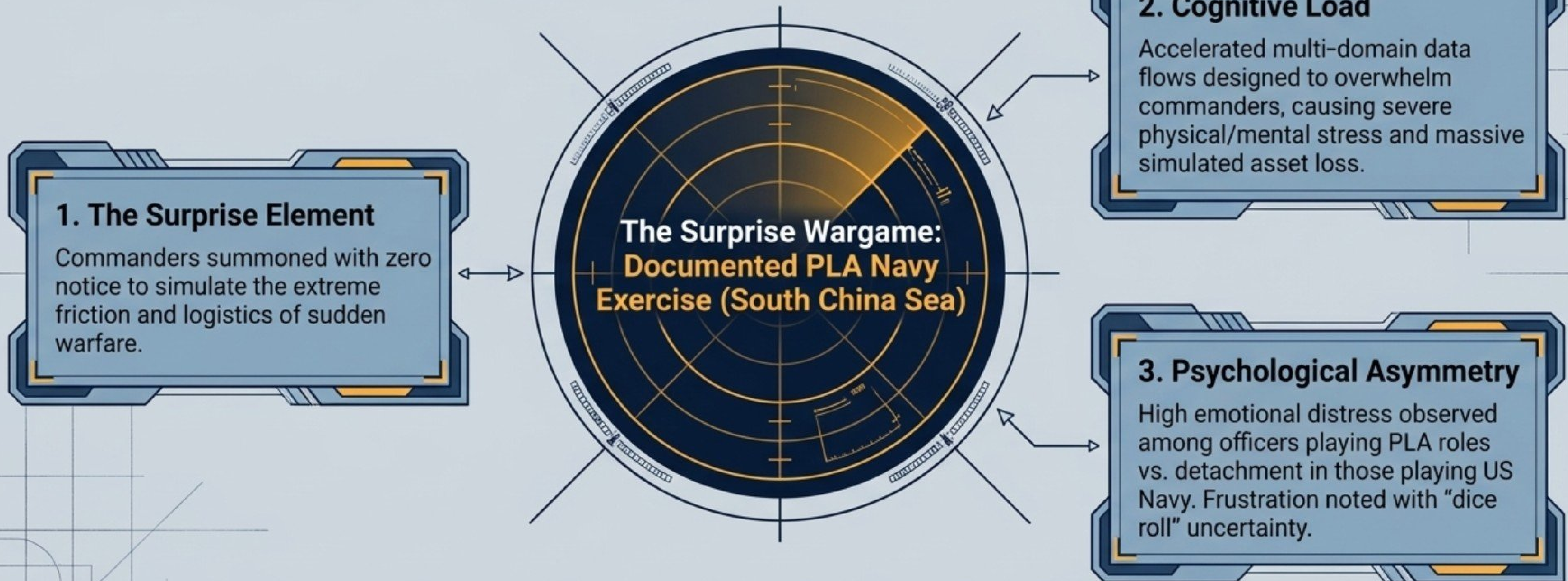
Fangzhen Shiyan
(Simulation Experiment)



The Epistemological Divide: Art vs. Science

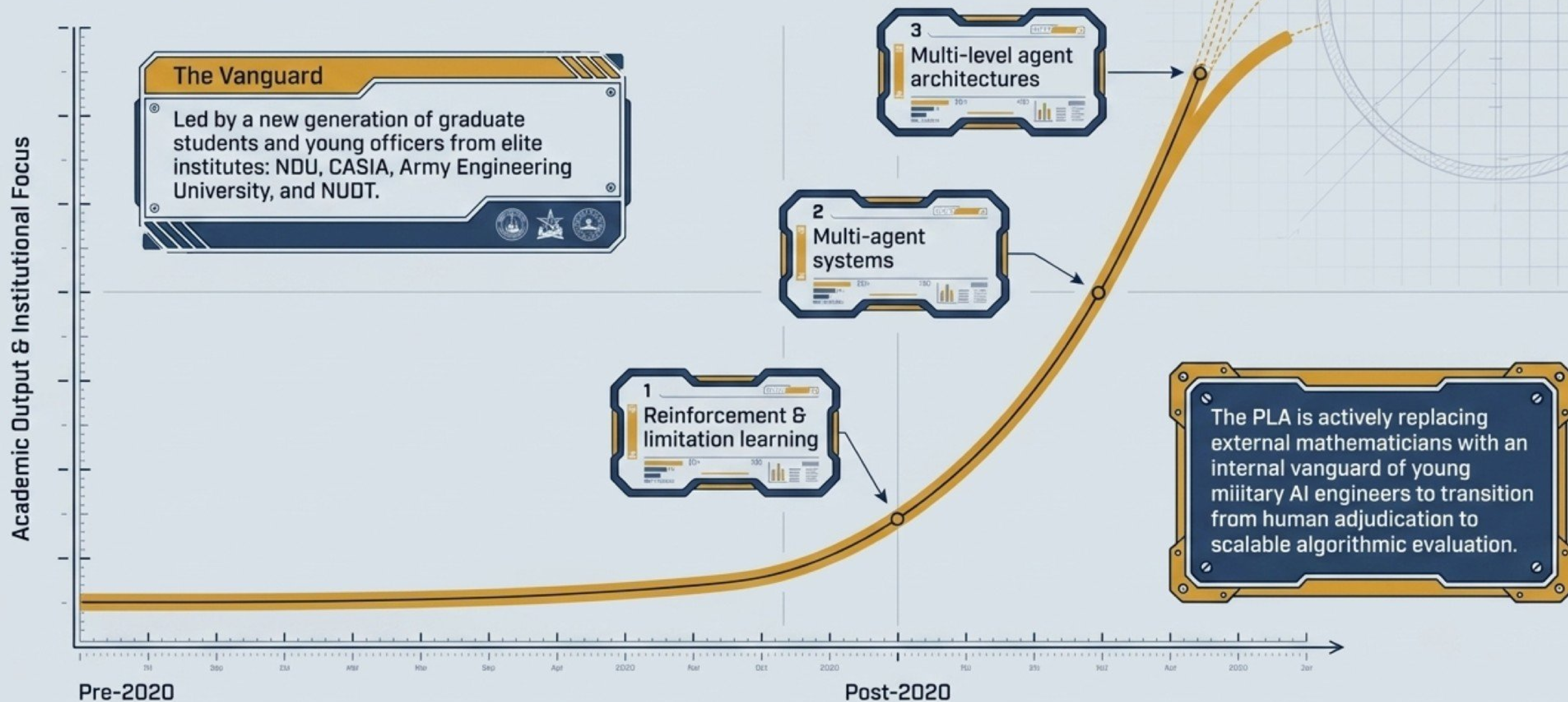
	The West	China (The PLA)
Core Philosophy	Wargaming is fundamentally an 'Art'; inherently resistant to systematic evaluation.	Wargaming is a reproducible 'Science' yielding objective, mathematically robust knowledge.
Purpose	Exploring uncertainty, exposing strategic assumptions, and fostering policy debate.	Operational optimization, validating strategies, and maximizing algorithmic efficiency.
Design	Loose structures, seminar play, and narrative-driven matrix games.	Rigid, heavily parameterized structures mirroring strict mathematical Kriegsspiel.
Assessment	Quality of human insight, professional reflection, and debate.	Empirical hit probabilities, damage ratios, and quantitative computational validation.

Reality of the Construct: Stress-Testing Command



Takeaway: These scientific exercises are engineered mechanisms to "change commanders' mentality" toward high-attrition, accelerated modern combat.

The AI Inflection Point: Shifting Demographics and Tech



Case Study: MiaoSuan Open Platform

Layer 3: Evaluation & Interfaces

Standard development APIs, built-in AI agents, and embedded benchmarking.

Layer 2: Interaction Modes

Massive flexibility supporting Human vs. Human, AI vs. AI, Human vs. AI, and Hybrid Human-AI Teams.

Layer 1: Environments

Handles imperfect information, multi-scenario dynamics, and diverse tactical tasks.



Turing Test Mode

An embedded diagnostic feature specifically designed to evaluate AI agents by rigorously observing their behavior in human-vs-computer scenarios, benchmarking them against human cognitive baselines.

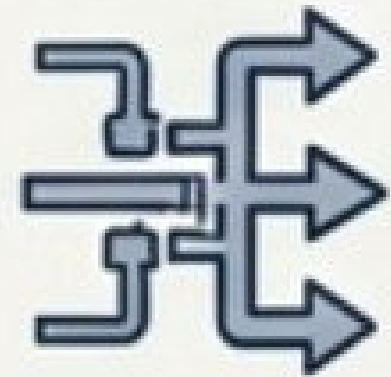
The End-State: Bidirectional Symbiosis



Source: Zhang Zhen, The People's Liberation Army Daily (May 2025)

Guardrails & Friction Points: Diagnostic Constraints

Data Infrastructure



Challenges with data quality and secure storage across highly contested multi-domain environments.

Interpretability



The inherent, unresolved danger of relying on the 'black box' of AI decision-making during high-stakes combat.

Trust & Ethics



Navigating human-machine trust boundaries and the strategic vulnerability of relying on commercial AI frameworks.

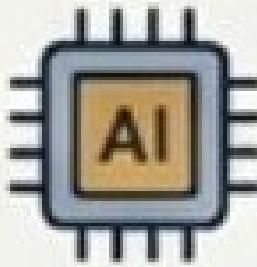


The Hard Limit: AI currently lacks the ability to execute contextual, intuitive interpretation of chaotic, real-world combat data.

Synthesis: AI is currently treated as a powerful operational enabler, not a full substitute for human judgment.

The Grand Synthesis: Divergent Operational Trajectories

16:9

Dimensions of Strategy	NATO / The West	The PLA (China)
 View of AI	Passive analytic tool & data manager.	Active operational partner & symbiont .
 Wargame Format	Seminar & Matrix formats (loose, debate-focused).	Rigid, data-heavy Kriegsspiel (computational).
 Goal of Simulation	Exploring political-military assumptions; "safe to fail".	Engineering cognitive advantage; statistical optimization.
Future Command Structure	Human judgment remains the irreducible, supreme core.	Human-AI hybrid architecture → (Renji Shuangxiang Gongsheng).

Conclusion: Strategic Implications for 2030 and Beyond

01

Doctrinal Engineering

The PLA views warfare fundamentally as a techno-scientific system to be **computationally optimized**, moving beyond the Western view of war as an unpredictable art.

02

The Speed Advantage

The primary weaponization of AI in Chinese wargaming is not just predictive accuracy, but the **radical compression of the operational** decision-making cycle.

03

The Evaluation Imperative

Western defense analysts must monitor PLA AI-wargaming platforms (like MiaoSuan) not just as technical experiments, but as **leading indicators of future joint operational doctrine**.