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### *Does Doctrine Drive Technology or Does Technology Drive Doctrine?*

Dennis Blasko

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### Summary

Within China's overall national strategy, priority goes to national economic development. How this fits with the PLA's needs to modernize and China's overall military strategy is driven by the concept of People's War that emphasizes strategy over technology and may hold some surprises for the United States.

#### **TECHONOLOGY VERSUS STRATEGY AND TACTICS**

For the U.S. military, with its advanced industrial and technological base and huge investment in defense R&D over the past several decades, doctrine has driven military technological developments to a large extent. U.S. conventional war-fighting doctrine, very simply described, seeks to "find, fix, and finish" the enemy using lethal or non-lethal means as far as possible from U.S. forces and the continental United States at minimal loss of American life while inflicting as little collateral damage as practicable. Cost has been a secondary or tertiary planning factor.

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For the PLA, most evidence from military sources indicates that “technology drives doctrine” or, as the Chinese say, “technology determines tactics” (技术决定战术), but this relationship is not all one way.

However, technology does not determine strategy. China seeks to implement a military strategy (or strategic guideline) of active defense that incorporates the strategic concept of People’s War to prepare for, deter, and fight, if necessary, a “Local War under Conditions of Informationization.” But the concept of People’s War is under constant adaptation and is not confined to low technology wars only.

After decades of debate, the PLA generally is guided by the concept that “Weapons are important factors in a war but men are decisive factors.” This view is demonstrated by Jiang Zemin’s instruction that, “We must train qualified personnel first for *we would rather let our qualified personnel wait for equipment than the other way round.*” This is also an underlying principle of Hu Jintao’s “people-centric” Scientific Development Concept.

Within China’s overall national strategy, priority goes to national economic development, perhaps most visibly in limited central government funding for both the Chinese armed forces and the civilian defense industrial sector in both equipment procurement and R&D. When the PLA began its military modernization some 30 years ago, it started from a much lower technological base than other militaries. Chinese strategists continue to recognize the wide gap in many important areas of modernization between the PLA and its expanding operational requirements as seen in the “Two Incompatibles” (两个不相适应) assessment:

*... the modernization level of our armed forces has yet to meet the requirements for winning local wars under informatized conditions, and that the military capabilities of our armed forces are yet to live up to the historical mission ...”*

The Chinese still perceive a significant technology gap with other advanced countries that will persist well into the future. The year 2049 has been set as the goal for completing modernization, with milestones in 2010 and 2020.

## **THE DUAL APPROACH: MECHANIZATION AND INFORMATIZATION**

The PLA is undertaking simultaneous “mechanization and informationization” to modernize its force structure, a process known as “Army Building,” which is underway in conjunction with a process for upgrading doctrine, training, and education known as “Preparation for Military Struggle.” The PLA understands that new equipment cannot be distributed to all units at the same time and, as a result, most units will continue to be composed of a mix of high, medium, and low-technology equipment. Leapfrogging may take place in some key areas, but, due to budget constraints and technology gaps, not every technological shortfall can be overcome at once.

Chinese military planners consider the PLA most likely to be the weaker force on most future battlefields and therefore stress finding ways of using existing equipment to overcome a technologically stronger enemy, along with employing traditional methods of speed, surprise, deception, and use of stratagem. They contrast Chinese and Western thinking as follows: “*The idea of winning victory by stratagem has always been the main idea of traditional Chinese strategic thinking ... The modern American strategy is a typical strategic thinking model of force type, with superior military strength as its basis ... U.S. strategic thinking has not shaken off its traditional model of attaching importance to strength and technology.*”

They continue to emphasize Mao’s dictum that “You fight in your way and we fight in ours.” And while “the target of both sides [is] to fight a quick battle and force a quick decision, [It] doesn’t remove the possibility to achieve the military object through enduring operations if it is necessary.” Doctrine also stresses to “Never fight at a time and in a place that the enemy expects; never fight in a way or style that the enemy anticipates.”

“Trump card” weapons will be employed with a wide range of other high and low technologies and within a vast array of military, paramilitary, and civilian forces and capabilities. “According to the needs of war, *we can possess some ‘trump cards’ against the enemy’s weaknesses to gain*

*the initiative in war.*” However, the term ‘trump card’ or ‘assassin’s mace’ has been applied to so many weapons, tactics, and personnel that much of its meaning has been lost.

In short, no matter where the Chinese armed forces fight, they will still be guided by the strategic concepts of Active Defense and People’s War, but tactics will vary according to the enemy, terrain, and technologies. They will also seek to maximize China’s natural advantages of a large population and strategic depth and leverage its economic and technological potential, while integrating all weapons and forces available.

Speaking of tactics, as good Marxists, the idea that “technology determines tactics” is traced back to Engels, although a two-way relationship has been acknowledged: “Technology determines tactics while tactics in turn promote technology.” Moreover, technology also pushes change in organization and command structures, management, and theory. Nonetheless, we still find Chinese military thinkers reverting to People’s War tactics to confront new situations, with recent examples stressing close combat tactics.

## **DOCTRINE DRIVING TECHNOLOGY**

There may be exceptions to the general rule, such as the development of the PLA surface-to-surface ballistic missile arsenal beginning in the 1960s and later some electronics, like anti-stealth and over-the-horizon radars, to cope with specific high-tech threats. A similar “doctrine driving technology” impetus may be behind the development of the anti-ship ballistic missiles (ASBM).

While there is no doubt that Chinese technicians are working on modifications to the DF-21 system, there may be information manipulation underway as well. If the Chinese indeed still perceive themselves as practitioners of “stratagem type thinking,” and believe Americans attach “importance to strength and technology,” from Beijing’s perspective, pursuit of an ASBM system reflects U.S., not Chinese, strategic thinking. Incorporating the technically complex ASBM into a strategic deception plan would, in the Chinese mind, better comport with their “stratagem type

thinking.” They may be seeking to exploit U.S. fears of missile attack leading to our development of missile defenses by “threatening” from above a symbol of our force projection powers, while perhaps diverting attention from advanced anti-ship cruise missiles in their arsenal.

Other strategic considerations argue against their use of the ASBM. If we know about the ASBM, then they are attacking “at a time and in a place that the enemy expects,” and striking a strong point, not a weakness as is preferred. Moreover, in their mind, they may not be “fighting no battle you are not sure of winning” nor “being prudent in fighting the initial battle.”

Nonetheless, all the discussion in the United States regarding the ASBM might result in operational changes in U.S. planning that benefit PLA objectives. In the end, the threat of an ASBM, real or imagined, may prove to be more militarily significant than its actual use.

## **CONCLUSION**

China’s long-term, multifaceted military modernization process emphasizes improvement of the technological quality of weapons and equipment as well as development of the human elements included in force structure, organization, command and control, training, and education. Yet the PLA literature is replete with articles about problems of commanders and staff, especially at the battalion level, not being trained or ready to plan and control operations that incorporate all the new equipment and capabilities available. The continuing repetition of many problems suggests systemic shortcomings at the level of the four General Departments, and in particular in the General Armament Department, in preparing the forces for new equipment.

Barring a major change in China’s strategic or domestic environment, we can expect that Beijing will continue to pursue the development of new weapons and technology in a manner that does not adversely affect the larger goal of national economic development. While a dynamic interaction exists between technology and tactics, Chinese strategists are putting more effort into incorporating existing advanced technolo-

gies into the force than they are into conjuring up new weapons to fight in ways that have never been proven on contemporary battlefields. Although they have made important progress in the past decade, Chinese military leaders are aware of the obstacles and challenges that remain ahead. If directed by the Party, senior military leaders will obey orders and use available forces and capabilities in order to achieve the objectives assigned.

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**Dennis J. BLASKO**, Lieutenant Colonel, U.S. Army (Retired), served 23 years as a military intelligence officer and foreign area officer specializing in China. He has written numerous articles and chapters on the Chinese military and defense industries and is the author of the book *The Chinese Army Today: Tradition and Transformation for the 21st Century* (Routledge, 2006).