

Liu Zhiqing

(World Armies Department, Military Science Academy)

CHINESE MILITARY DEVELOPMENTS IN THE 1990S

April 2007

*[During Mao's day, especially during the Cultural Revolution, "declaratory" Chinese military doctrine was based on the principle of "people's war." This held that a properly motivated population, with right on its side and moving with the tides of history, could defeat a technologically superior enemy. The communist war against Japan was adduced as an example (overlooking the technicality that this was not really the cause of Japan's defeat), as was the Vietnamese communist war against the United States. The Gulf War of 2001 came as a shock to the Chinese military. Whereas Vietnam could plausibly be construed as showing that "man" could defeat "weapons," showing the bankruptcy of an American military doctrine overly dependent upon technology, the Gulf War showed the American ability to adapt their technology, so that American technical advantages could become decisive over "man." Elements of the people's war doctrine survived into the 1990s, particularly in theories about "asymmetric warfare." But this went along as well with a desire by the Chinese military establishment to develop a technologically sophisticated force. There was no idea of trying to match America (the most dangerous potential enemy) weapon for weapon; rather, the focus was on developing ways to counter American superiority, with great emphasis on "information" warfare. The constant citations of statements by Jiang Zemin in this document probably mainly reflect its subject matter: military development during the period of Jiang's supremacy. But they may also indicate a residual attachment to Jiang's leadership among elements of the military.]*

Following the Second World War the American and Soviet militaries completed the process of mechanization and began exploring informationalized warfare. They made great efforts toward innovation in military theory, military technology, and military organization. At the same time, the Chinese People's Liberation Army had undergone a long period of testing in war and was gradually completing the integration of its military system to achieve a modern military force capable of fighting war under a unified command. Following the founding of New China, our national defense became more consolidated day by day. The people's armed force developed in flying leaps, and we were able to establish an independent modern defense industry and a defense science and technology system with a capacity even for nuclear technology and space technology. However, because of limitations in defense investment, the basis of army building remained weak. Military technology remained in the stage of mechanization and half-mechanization. How the people's armed force would respond to conditions of informationalized warfare remained to be determined. When China's level of military modernization is compared with that of technologically advanced countries, there remained not

a few disparities. Therefore, grasping the opportunity to advance in information warfare will not only resolve several major contradictions in China's national defense and military development, since it is the only way out of our backward conditions—it will also promote the mission of fully developing an effective and integrated military system. This is the only way to victory in future limited wars fought under conditions of informationalization. During the 1990s, under the guiding thought of reform and opening, China made full use of new world military developments and the relatively peaceful environment following the end of the Cold War fully to promote military development. It had huge successes and these have had a profound influence.

### **1. A Timely Adjustment in the Strategic Direction Brings About a Reform of the Overall System and Dispositions**

With the end of the cold war, the world trend was toward multipolarity. Peace and development became the irresistible themes of the times. The danger of a world war and of an attack on China diminished. The rapid development of science and technology, particularly the broadening of the function of information in military matters, caused great changes in the aspects of the modern military, profoundly influencing the forms and conditions of war. Modern warfare is evolving toward the confrontation of system against system, each characterized by the concentrated use of new high technology. The focal point of military competition is in obtaining an advantage in information and the development of quality. All of the major military powers have adjusted their military strategy and modes of military development. They have cut military manpower, improved system and structure, and speeded up research in advanced weaponry.

In September 1992 the 14<sup>th</sup> CPC Congress proposed that the economic structure of the state change from one based on planning toward a socialist market economy. The method of economic growth should change from one of crude liberalization to one of coordinated changes. The deepening of China's reform and opening increasingly demanded that military strategy be able effectively to guarantee peace. The direction of our current military development was required by the need for a peaceful and stable internal and external environment. This led to a systematic consideration of issues of military development and deployment. In January 1993, in response to the tremendous changes in modern warfare, the Central Military Commission, acting on the basis of the principle of the theory of "active defense," pointed a new direction in military strategy: "Guided by the Thought of Mao Zedong and Comrade Deng Xiaoping's thinking concerning new developments in military matters, and in obedience and service to the state's developmental strategy, we must be prepared to fight and win localized wars under conditions of high technology. We must speed up our military development, put effort into raising our ability to respond militarily. We must develop our strong points and correct shortcomings so that we can respond in a lively manner, deter war, win war, protect the sovereign territory of the state and its rights at sea, maintain the unity and stability of the fatherland. We must be a strong guarantee of the peace

necessary to achieve the objectives of reform and opening.” The development of information technology was taken as the basis for the overall development of high technology... This represented a major change. Its essence was a change from preparation for mechanized warfare to information warfare... The new military strategy stands at the high point of current world military developments, reflecting the military trends in the world today and the rules of troop deployment under informationalized conditions. This is the special character of a brand new age.

In December 1995 the CMC set out specific orders for the new military posture, effectively promoting the structural transformations required for modern military development. It formulated the “Outline Plan for Armed Forces Development from 1995” (Outline). It proposed “two basic transformations” in military thinking. “In military preparation, there must be a transformation from preparation for fighting a local war under ordinary conditions to fighting and winning a local war under conditions of modern technology, especially high technology. In armed forces development, there must be a change from a concentration on quantity to one on quality, and from a focus on manpower to one on technology.” The core idea is to walk along the road of an elite force with Chinese characteristics, to achieve quality in military development and a powerful technological force. The Outline stipulated that the crux of raising the quality of the armed forces lay in improvements in technology. The main factor was to strengthen research in defense science and technology, improve weaponry, elevate the technical quality of the troops, establish a scientific-technological system, elevate the ability to manage science and technology, and strengthen the scientific and technological level. On these bases it stipulated the need to give prominence to rapid response troop development and the development of weapons preparedness, to bring about a rapid deployment force and an “assassin’s mace”<sup>[1]</sup> in weaponry. These stipulations point to a major development in the thinking concerning military modernization.

In September 1997 the CPC 15<sup>th</sup> Congress decided on the long-term development strategy for China’s socialist modernization. It pointed to the realization of modernization over a period of 50 years, this divided into three stages. Defense and military modernization would be a major component of the modernization of the country. It must develop in coordination with the country’s economic development. It is important that it be in step with the country’s domestic development, that it not cost too much, and that it be responsive to the overall conditions of the country’s economic development. This means there must be a structure to coordinate military and defense development with the country’s overall economic development. Defense and military development must be grasped in terms of their function in the whole process. The process must be forceful, thorough, and gradual. Acting on the basis of the international situation and domestic development needs, in December the CMC brought out a three-step trans-century program for military and defense development. “Step number one: in the dozen or so years until 2010 work hard to meet the demands of the plan for military development, establishing a base for a modern defense and military force. The main concerns were to

resolve the question of military scale, force structure, and policy system. Troop numbers had to be reduced to an appropriate level; we had to set up a relatively scientific structure of forces; and we had to develop a policy system appropriate for a socialist market economy. We had to adjust and improve the structure of defense forces. The quality of our personnel had to be elevated to a new level. We had to set up a system of advanced weaponry appropriate for war-fighting so as to be able to meet threats and struggles in the new era of military affairs. The second stage would be in the second decade of the 21<sup>st</sup> century. We would speed up our qualitative development in step with the growth of the national economy and proper increases in the military budget, making appropriate developments in advanced weaponry, improving the structure of forces, and making a relatively big development in the modernization of the armed forces. The second stage would come after another 30 years of effort, coming to fruition toward the middle of the 21<sup>st</sup> century, when we would achieve a modernized defense and military force.” This three-step process would be coordinated with the overall development of the entire country. It is a far-sighted plan for the development of military modernization.

The sprouts of China’s two military transformations and the three-step plan grow from the general environment of world society and of technological change. They arise amid the flood of new military developments in the world and is a response to these developments. They point a clear direction toward military modernization with Chinese characteristics.

## **2. Developing with Bold Creativity the Function of Theoretical Guidance**

After the 1970s, in response to the growing role of information in military affairs, the major countries of the world cast their eyes on developing informationalized militaries with the capacity to fight and win informational warfare. There was a continuous development of theory. China’s military changes also followed in accord with this creative process.

After the Gulf War, our understanding of the new developments in informational warfare and theory reached a new height. In January 1995, *China’s Military Science*, a journal published by the China Military Science Commission and the Academy of Military Science, convened a discussion on “Armies and Warfare in the 21<sup>st</sup> Century.” The essays submitted for discussion analyzed the conditions, traits, and influence of informational warfare. They pointed out, “Informational warfare is a necessary consequence of the information age.” They urged welcoming the intellectual challenge of informational warfare. Some essays analyzed the changes that would result in land, sea, and air warfare as a consequence of information and the ways in which the armed forces should be changed to adapt to this. They explored future trends in the development of informational warfare. In January 1996 *China’s Military Science* convened a conference on “The Challenge of Responding to the Revolution in Military Affairs.” In the introduction Zhu Guangya, President of the National Defense Engineering College and Director of the National Defense Scientific and Engineering

Commission, pointed out: “The world has already entered an era of a new revolution in military affairs. . . . Information is the basis of this revolution.” Information and knowledge are what accompany and intensify the force of modern weaponry. “Technology guided by information and organized into a coherent system forms a wholly new military strength.” “Lavish warfare” is transformed into “economizing warfare.” War in the future will be a war without front lines, and fighting will be fighting without contact. Future command will be network command, along both horizontal and vertical lines.

Because the cold war posed a threat to all countries, China has advocated abandoning cold war thinking in order to build a harmonious new international security system. On 23 April 1997 Jiang Zemin gave a speech to the Russian Duma on “Joint Efforts Toward Establishing a Fair and Reasonable New International Order.” His proposal was formalized in a joint declaration by China and Russia on a multipolar world and building a new world order. In a speech to the arms control conference in Geneva on 26 March 1999 Jiang Zemin gave a thorough systematic explanation of his proposal for a new security concept. The core of this concept was mutual trust, mutual benefit, equality, cooperation. According to Jiang Zemin, mutual trust is the intellectual basis for maintaining peace. This demands that there be no mutual suspicions and no mutual enmity. It is necessary to discard ideological biases and the cold war mentality. Mutual benefit is the material basis for maintaining peace. The world is increasingly becoming an integrated interdependent system. The security of a particular state or region increasingly depends on the condition of the entire international system. Mutual benefit demands that in addition to considering one’s own security one must also consider the security of others, bringing about a situation in which all sides benefit and win. The political basis of maintaining peace is equality. All countries, large and small, rich and poor, strong and weak, are equally members of international society. They all have an equal right to enjoy peace and security and to defend their own security. We oppose any single country or combination of countries acting as an overlord dictating the conditions of security. The path to maintaining peace is cooperation. Cooperation is not the forming of alliances. It is establishing an open new system for the collective maintaining of peace on the basis of mutual trust, mutual benefit, and equality. It means eliminating obstacles to peace by means of peaceful dialogue, preventing military conflicts, and resolving historical conflicts and conflicts of interests by means of equal negotiations rather than by means of military threats. All of the above measures must work together; they are not mutually exclusive. Jiang Zemin’s summons to a new security concept reflects the age of peace and development; it reflects the general trend of historical development; it is in accord with the well-being of the entire human race. It is a new way of thinking about security. It reflects the most advanced contemporary strategic cultural and security concepts. It inherits and develops China’s five principles of peaceful coexistence applied to a new era. It is also an extension and continuation, in a new mode, of China’s policies of loving peace and fostering development. It is a

new embodiment of China's excellent cultural tradition, in which "harmony is the most valuable function," and being a good neighbor full of kindness is highly valued. Jiang Zemin's new security concept marks the complete end of the Cold War mentality and points a new direction for the construction of a security environment for the 21<sup>st</sup> century. It points a clear way to an environment conducive to China's economic development and the building of a new national defense and military policies conducive to peace.

With the continued broadening of opening to the outside and the increasing maturity of the socialist market economic China's overall national strength has grown at a steady pace, creating beneficial conditions for national defense and military building. At an enlarged meeting of the CMC on 25 December 1998 Jiang Zemin pointed out that the history of national defense and military building shows the need to handle well seven general relationships: 1) the relationship between war and peace; 2) the relationship between national defense and economic development; 3) the relationship between revolutionization, modernization, and regularization; 4) the relationship between quantity and quality in building military strength; 5) the relationship between combat forces and rear support services; 6) the relationship between continuing excellent traditions and creative change; 7) the relationship between studying beneficial foreign experiences and preserving the special character of the PLA. These seven dialectical relationships affirm the importance of national defense and military building and point out the importance of responding to and coordinating with overall national development. . . .

### **3. Developing an Assassin's Mace Through Self-Reliance; Raising the Level of Informationalized Weaponry**

Weaponry is the material basis for combat strength. The improvement in military quality requires continuous elevation of the level of weaponry. "To do the job properly, one must first sharpen one's tools." Backward weaponry is necessarily an obstacle to raising fighting capacity. It can't be denied that the human factor remains the decisive factor for victory or defeat in war, but under contemporary conditions, with the rapid development of information technology and its applications in the military sphere, the role of weaponry in deciding who will win and lose in battle is becoming increasingly important. After the Gulf War China paid a high degree of attention to the role of weaponry and to the progress in information technology, space technology, and precision weapons. There was work toward research on an "assassin's mace," making use of information systems, stealth weapons systems, and precision guidance systems. At the same time there was effort to update and improve the technology of existing weaponry.

By the end of 1998 research on and production of weaponry had achieved results up to a certain level. There was a major development in defense high-technology research, some programs attaining world-quality. Air navigation technology had moved from the experimental stage to being put into practice; we had developed full systems in research, production, testing, and control over satellites and mobile missiles. We were in the forefront of the world in

the field of recoverable satellites. There were major breakthroughs in nuclear technology and guided missile technology, consolidating China's international position. We put effort into the development of missile launchers and aeronautic weaponry, small satellites, and manned and unmanned aerial weapons. There was continuous development in research into lasers and their military applications. Research into electronic weaponry grew into an autonomous research program and was on the verge of being organized into a system, forming a base for the informationalized warfare of the future. Electronic informational weaponry was in the process of being quantified, integrated, and systematized. Informational weaponry has developed rapidly in a manner compatible with the special characteristics of the PLA command and control system. The level of air raid warning capacity has been elevated to a relatively good degree and research is under way to bring it up to world levels. There has been development research in electronic weaponry and high capacity computers, shrinking the distance to achieving world levels. There have appeared new weapons making use of micro electronics, photo-electronics, and microwave technology. The weaponry available to the guided missile troops has become both more solid and more fluid, and they have both nuclear and conventional guided missiles, with short-range, middle-range, long-range, and intercontinental capacity. Naval weaponry has taken the first steps toward a capacity to conduct mobile sea warfare and base defense. The mobile sea forces are preparing for anti-submarine warfare and over-the-horizon anti-ship operations. The air force has developed fighters, bombers, and transport air craft, and has developed a full system for aircraft maintenance and protection, with a coordinated ability to fight at short, middle, or long range, in addition to anti-aircraft fire power and an intelligence-warning network against air attacks. The ground forces have made advances in armor, fire power, field air defense, and mobile warfare, along with the appropriate support activities. It has basically achieved a coordinated system of weaponry, laying a base for the development of combined operations.

By the end of 2000 there were further bold breakthroughs in the development and production of weaponry. China relies on itself for the development and production of conventional weapons, with a concentration on electronics, lasers, and mechanics, shaped by advanced informational controls, precision guidance, night-fighting ability, and photo-electronics into a coordinated weapons system, one which covers all horizons, works automatically, is intelligent, and is informationalized. China's home-developed new tank with a double cannon first appeared at the military display on the occasion of the 50<sup>th</sup> anniversary of the founding of the state. This aroused a great deal of attention, and was styled an "assassin's mace" of the PLA. Not only do these new-style tanks have greater firepower, mobility, and maneuverability, but they have night-fighting capacity, electronic defenses, defenses against guided weaponry. The increased power of the PLA's cannons, missiles, and anti-aircraft weapons clearly show that the PLA has passed beyond the stage of simple artillery, but is an intelligent, informationalized integrated weapons system making use of radar vehicles, command

vehicles, and patrol vehicles. It can not only undertake precision attacks but, once engaged, can act as a “celestial network” allowing for focused, precise, automated, deadly application of force. China is an atomic and a nuclear power, and after a period of effort it also built a neutron bomb. China developed on its own the Shenzhou spacecraft. . . making the Chinese nation into a first-class space power.

With the development of the assassin’s mace by means of self-reliance, China has become a defense industry base on a relatively large scale and to a relatively great degree. It has developed a nuclear industry, and defense-related industries in the fields of flight, space flight, seafaring, weaponry, and electronics. The development of conventional weaponry into high tech weaponry has raised the level and effectiveness of the PLA’s weaponry to unprecedented levels. Research has been completed on a large number of new weapons and these have been issued to the troops, enhancing the PLA’s capacity for precision attack, mobility, long-range operations, air defense, night fighting, and other forms of combat.

#### **4. With Man as the Root, Giving Priority to Talent, Cultivate High Quality Human Resources**

Human talent is the root for building and governing the army; it is the key factor in military victory. Among all military resources, talent is the most precious and the one having the most decisive effect. The key to whether we can win future battles and whether or not the army will change its nature [to become a “bourgeois” instead of a popular force?] rests in the question of man. Combat in the world today is a matter of the combat of talents. On the informationalized battlefield of the future, the major issue will be which side, ourselves or the enemy, has the greater human talent. Now matter how well developed the weaponry, this will not change the decisive role of human talent. Thus, the ongoing revolution in military affairs demands that the PLA cultivate even greater human talent. In his speeches Jiang Zemin has repeatedly pointed out: we must “earnestly cultivate across the turn of the century persons with high levels of technical ability who also possess political qualifications.” We must “earnestly grasp the development of high and middle-level cadres and earnestly elevate their quality, earnestly cultivate a corps of qualified commanders fit for army that is revolutionary, modernized, and regularized, who are fit for modern warfare.” We must “grasp the cultivation of talent as a strategic task.” In accord with this construction, the state and the PLA have started up a project in the cultivation of talent for defense.

High and middle-level cadres are the organizers and directors of the program bring about the informationalization of the army and to enable it to win a local war under conditions of informationalization. They are the key in the development of human talent. In September 1991 the Party Center published a directive on the cultivation and education of young cadres. This proposed that young cadres penetrate to the basic levels, penetrate to the masses in a planned and organized way, penetrate into the construction of socialist modernization that they may undergo tempering and gain



experience. Toward this end, the CMC set up appropriate stipulations: In order to strengthen practice and tempering and to cultivate cadres who are militarily prepared and able to endure a harsh environment, every year outstanding young cadres from the interior must be sent for tempering to hardship posts in the distant borderlands for year-long tours of duty; and this must be set up as a system. At the same time, we must strictly enforce the system regarding the duty qualifications of cadres; the leadership of combat forces at all levels should, then, be tempered in a two-years training program or by comparable training while on active service. . . . Cadres who have not served in active duty among the troops should be transferred to equivalent duties for a period not less than a year. This system of “walking on two legs” in theory and practice fits in with a program to cultivate outstanding military talent.

In order to raise the level of training in order to develop informationalized troops capable of winning informationalized warfare we must 1) reform and adjust the theory guiding our training; 2) strengthen coordinated battle training; 3) put great effort into learning advanced technology.

Training in the academies must be geared toward military training with Chinese characteristics.

Rely on both the military itself and the national educational system for the cultivation of human talent.

By 1997 the proportion of cadres having at least an advanced specialized educational level was 58.8 percent, as opposed to 9 percent in 1979. The proportion for leading cadres at the regimental level or above is 90 percent. These include 90.2 percent of leading cadres at the corps level and 78.4 percent in the leading cohort at the group army level. In the entire army there are 20,000 persons with masters or doctors degrees, constituting 2.8 percent of all cadres. Technical cadres with advanced technical schooling constitute 10.9 percent of the total, 9.6 percent more than in 1980. Those with mid-level technical schooling constitute 34.3 percent, in tune with the overall international ratio of those with advanced, middle, and elementary training of 1:3:6. The distribution of talent is relatively ideal. There are 58 academicians of various Chinese academies in the armed forces and 315 young specialists who have received national recognition for their contributions. There are 6120 persons who have received special awards from the government.

## **5. Adjust System Structure, Reduce the Size of the Military, Improve the Quality of the Troops.**

Setting up an informationalized combat structure is a basic demand of informationalized warfare. It is also one of the basic goals of China’s military reform. Its essence was to adjust and reform the military structure, closely linking together all elements of combat, fully developing the effectiveness of all branches of the service and the state’s war-waging potential, preparing the way for a full-grown and systematic ability to conduct informationalized war. The present structure of the PLA has been constructed during the years of warfare and has been perfected in the context of major war; it has also been adjusted and reformed many times under the new historical situation. The changing forms of warfare and the development of high-technology weapons demand organizational responses in kind. If we do not

achieve proper coordination in this regard it will be hard to achieve any other kind of reform.

On 12 September 1997 Jiang Zemin declared at the 15<sup>th</sup> CPC National Congress: “On the basis of the reduction in military manpower by one million persons during the 1980s, over the next three years we will make a further reduction of 50 thousand.” According to the plans set up by Jiang Zemin and the CMC, the armed forces have been reduced in size and adjusted in organization. Certain kinds of troops have been eliminated as well as certain organizations at the corps level and above. Following the reduction of 50 thousand troops, personnel under military control amount to less than 2.5 million. With this troop reduction the leading organizations have become leaner and more adaptable, livelier, and more efficient. The quality of the troops has been raised. The organizational structure has been improved and the proportion of troops with technical training has been raised. . . .

On 5 April 1998 the CMC decided to set up a General Weapons Department, providing centralized and unified leadership over weaponry. The various armies and military regions have also accordingly set up their own weaponry bureaus, so there is no a unified system of weapons management running from top to bottom.

System and structure provide an organizational form for connecting man with weaponry. Whether it is reasonable or not has a direct bearing on the strength or weakness of the army’s fighting strength. The reform of system and structure are without a doubt the key to overall military reform. A breakthrough in the reform of system and structure will allow us to grab hold of our current problems and defects in the military and will meet the goals of military reform. This will not only be beneficial to the general goal of military reform but once conditions are ripe it will help promote all other kinds of reform. According to the arrangements made by the CMC, the PLA is using science to strengthen the army, improving the direction of army-building, upholding the Center’s policy of crack troops. We are making new strides toward the goals of high quality, good coordination, efficiency.

*Xin Hua Wenzhai*, October 10, 2007

---

[1] This traditional term came into use during the 1990s. It seems to be a generic way of referring to technologically advanced weaponry, or weaponry that can counter the advanced weaponry of the enemy, rather than one particular kind of secret weapon.