The PLA’s Conventional Guided Missile and the Balance of Military Power Between Taiwan and China

by Kevin Lin

In the early 1950s, China, with the assistance of the former Soviet Union, established its military superiority over Taiwan. Because China moved toward the Soviet Union and joined in the Korean War, the United States sent its Seventh Naval Fleet into the Taiwan Straits, thus making it impossible for the People’s Liberation Army (PLA) to cross the straits to attack Taiwan. In the following 10 years, China lost the Soviet Union’s assistance, Taiwan continued to receive military support from the United States, and China’s weaponry gradually became outdated. As a result, the military balance between both sides underwent a considerable transformation. In terms of the quantity of military strength, the PLA still enjoyed military superiority. However, with respect to critical aspect of the navy and airforce’s ability to cross the straits to do battle, Taiwan definitely had superior military quality. This situation created a kind of balance between Taiwan and China. It maintained a military draw between both sides and thus preserved Taiwan. In the 1990s, however, both China’s growing military build-up and developing military thinking have once again caused the military situation between Taiwan and China to undergo a significant transformation.

China’s recent developments in both the areas of military strength build-up and military thinking have come about as a result of Gulf War in 1991. After a great deal of careful research regarding the Gulf War, China has concluded that the using ballistic and cruise missiles to accurately hit long-range targets can facilitate surprise raids on enemy military, political, economic and all other long-range targets within enemy territory.
Such use of long-range military force would enable a country to paralyze their enemy and even inflict potentially fatal blows. As a result of their research, China’s military considers this type of weaponry to be the high technology, wartime “sudden fatal blow.” In recent years, China has dedicated a considerable amount of resources and manpower in order to accelerate the development and deployment of conventional ballistic and cruise missiles. Moreover, China has been actively building up air and naval intelligence as well as position and navigation systems. After several years of vigorous military build-up, the present PLA has already established and is now in possession of a fairly powerful conventional missile attack force. This recent build-up greatly effects the balance of military strength between Taiwan and China, thus causing Taiwan to be confronted with a military threat that it has never before encountered.

Section 1: PLA’s Conventional Missile Strength and Build-up

According to what China’s military data reflects, the PLA conventional missile units are mainly divided into two parts. The missiles that have a firing range below 300 km fall under the jurisdiction of the army’s Military Battalionaigns and Tactics Missile Brigade. The second brigade, the Second Artillery, oversees the missiles that have a firing range above 300 km. This conventional missile unit entails everything from short-range ballistic missiles to mid-range ballistic and cruise missiles. Currently, the PLA’s Second Artillery Conventional Missile Brigade is equipped with the Dong Feng 3 and Dong Feng 21 mid-range ballistic missile models, the DF-15 short-range ballistic missile model, and the cruise missile that probably bears the code name “Changfeng.” Because the DF-3 is already no longer being used, the missiles that will shoulder the leading roles
in future conventional long-range attacks are the DF-15 and DF-21 ballistic missiles and
the cruise missile. The PLA army is equipped with the DF-11 ballistic missile model, the
missile referred to by the Chinese military as the military battalionaign and tactics
missile. In recent years, the PLA has been vigorously enhancing the functions of the
above-mentioned missiles and has already begun to deploy them.

I. Conventional Missile Strength Build-up and Guiding Policies

China received a great deal of insight from the missile battles during the Gulf
War. China learned four important aspects from the use of surface-to-surface ballistic
missiles as the core long-range precision attacking force. In short, these four aspects are
as follows: 1) target-hitting accuracy, 2) survival capacity, 3) the capacity to break the
line of defense, and 4) concentrated attacks. Currently, these four aspects have already
become the PLA’s guiding principles in building up their long-range precision attack
force.

The first aspect is that surface-to-surface missiles must possess higher levels of
target-hitting accuracy (CEP). Chinese military specialists have pointed out that in the
Gulf War, although 85% of Iraq’s missiles either self-destructed or were cut off, 15% of
their missiles, nevertheless, were successfully launched. If these missiles accurately hit
their targets, it would definitely have influenced the course of the war. However, because
Iraq’s shoddy accuracy, most of these missiles missed their targets, and, therefore, Iraq
was not able to accomplish its intended results. The U. S. military’s cruise and tactical
missiles, on the other hand, had a considerably higher rate of target-hitting accuracy. As
a result, the U. S. obtained shocking battle results. Chinese military specialists, therefore,
believe that in order to have surface-to-surface tactical missiles directly impact the course of the war, then a country must enhance the ability of its missiles to accurately hit targets.

The second aspect that the PLA learned from the Gulf War is that surface-to-surface missiles need to have high levels of survivability. Chinese military experts have claimed that in the Gulf War, while airforces from several countries destroyed Iraq’s missile positions that were fixed and prepared in advance, the hidden and mobile missile launching systems were mostly preserved and, therefore, could be used throughout the course of the war to continuously launch attacks. These hidden and mobile missile launching systems caused the U. S. military to resort to all manner of reconnaissance efforts including space and aerial reconnaissance and even the sending of special forces units into Iraq. Regardless of their efforts, however, the U. S. was never able to destroy all of Iraq’s SCUD missile sights.” From this, Chinese military specialists concluded that the best scheme to enhance the survivability of missile sights is to keep missile launches hidden and mobile. If, the military experts concluded, China is able to utilize a high level of motorized launching methods, then the survivability of missile sights will increase considerably. Even if the enemy possesses definite military superiority, it will still be unable to effectively counter Chinese missile attacks. Therefore, China must make it a top priority to focus on enhancing missile-launching systems and increase the survivability of missile-launching sights.

The third point that the PLA learned from the Gulf War is that surface-to-surface missiles definitely need to possess the capacity to break through a line of defense. When Iraq’s SCUD missiles were intercepted by the U. S. Patriot missile, China realized that there is an increasing probability that countries involved in future military confrontations
will have to deal with enemy attempts to intercept their ballistic and cruise missiles. Hence, the Chinese military now believes that in order to maximize the usefulness of their “sudden fatal blow,” they must enhance the ability of surface-to-surface tactical missiles to break through enemy lines. Increasing this aspect of their military capability will decrease the possibility of having Chinese missiles intercepted by enemy forces, thus greatly strengthening the effectiveness of their own attacks.

The fourth point learned from the Gulf War is that one of the most significant aspects of power in convention warfare lies in the concentration of attacks. After researching the Gulf War, Chinese military specialists determined that Iraq lacked target-hitting accuracy and, while only having a limited supply of SCUD missiles, could not afford to spare any firepower. Iraq was thus compelled to wage war using strategic weapons and was not, therefore, able to get maximum use out of the tactical dimension of their military. Having determined this, the Chinese military concluded that if they want to attain the most substantial results from conventional war, then they must implement a concentrated method of attack. Concentrated attacks can accomplish the following two objectives: 1) compensate for unsatisfactory performance in target-hitting accuracy and thus increasing destructive power, and 2) by saturating the enemy’s defensive force and thereby increasing the difficulty of intercepting missiles, a portion of the missiles launched will survive interception, break the line of defense, and ultimately hit their targets.

II. Improvements and Deployment of the DF-21
The Dong Feng-21 missile, code named DF-21, is the PLA Second Artillery’s second-generation strategic ballistic missile. Produced successfully first in 1986, DF-21 is a solid-fueled missile that is launched from a mobile transporter launcher. Its original effective range was 1800 km, and its CEP was approximately 1800 meters, its missile head weighed 600 kg. In the 1990s, the PLA has been actively involved in advancing the quality of the DF-15. They have replaced it with a new solid-fuel propellant system, improved its mobility functions, and enhanced its CEP. The improved DF-21 model, code named DF-21a, now has a maximum range of 2400 km. If it maintained its original launching range, its standard weight would probably increase approximately 50%, thus increasing its original weight of 600 kg to 900 kg. Additionally, because the new fuel system is better able to adapt to the environment’s temperature, it is now unnecessary to air-cool vehicles. Improving the DF-21’s mobility both shortens its response time and increases its adaptability. According to American military specialists, the CEP of the improved DF-21 rivals with the United States’ own Pershing Missile. The improved CEP has been increased to within 30 meters; the DP-21a can now hit a target as small as an aircraft hangar from 2000 kilometers away.

On August 3, 1997, China’s Central Television Agency reported that before August 1st Army Day, the Second Artillery had already undergone a one-time missile trial. The report stated that missile CEP had “created a historical standard, indicating that missile force’s entire ability to wage war has realized historical strides.” From the use of terminology like “historical standard” and “historical strides,” it is evident that CEP levels are high indeed. Later, this DF-21a trial launch was verified to have achieved a CEP of 120 meters. Having obtained a 120-meter CEP indicates that the DF-21a is
already bearing the responsibility of attacking targets with precision. This is definitely a historical stride for the PLA’s in regard to its ability to wage war.

In the PLA’s Second Artillery, the DF-21a is the replacement for the first generation DF-3. The Second Artillery is the missile brigade that is the most basic tactical unit. Every brigade is organized into four launching battalions. Every battalion is organized into three companies. Every large-scale, liquid-fueled missile company is allocated one missile-launching vehicle. Each brigade has a total of 12 missile-launching vehicles. Each of the smaller solid-fueled missile companies is allocated three missile-launching vehicles. One missile brigade has a total of thirty launching vehicles. When using the launchers for conventional warfare missions, every launcher is equipped with three missiles. Currently, the PLA Second Artillery is organized into 15 missile brigades and one independent missile regiment. Of these brigades, seven are DF-21 brigades, and two are DF-21. Because it is the case that the DF-3 has now fallen into disuse, nine brigades can now be allocated to the DF-21. Three DF-21 brigades are sufficient to oversee all of China’s present military responsibilities. The remaining six brigades can, then, be exclusively dedicated to conventional attack missions. From the current standpoint, China can be completely finished with transshipment of the DF-21a by approximately the year 2005. Until that time, the PLA has six DF-21 missile brigades dedicated to carrying out conventional attack responsibilities. The PLA can equip these brigades with 226 missile-launching vehicles and an array of 648 missiles. This is an extremely formidable military force, completely enabling the PLA to wage a high-intensity local conventional war.
III. Improvements and Deployment of the DF-15

The Dong Feng 15, code named DF-15 and commonly known abroad as the M-9, is the PLA Second Artillery’s first short-range surface to surface ballistic missile. This missile was developed successfully in the latter part of the 1980s. Its maximum range is 600 km, and it can reach speeds six times the speed of sound. The DF-15’s missile head weighs 500 kg, its CEP is 600 meters, and its response time is 30 minutes. The missile’s most unique aspect consists in two parts of the structure of its composition: 1) its solid-fueled propellant system, and 2) its independent missile head system that breaks from the missile body during the final stage of its flight. Because the missile head itself has a relatively small radar section, therefore, it is difficult to detect. Because the missile body, on the other hand, is bigger than the missile head, it produces a greater radar signal when separated from the missile head. As a result, this separation function provides useful cover for the missile head during the final stage of its flight. During the PLA’s 1996 missile exercises in the Taiwan Straits, the U. S. Navy discovered that, even when using some of the most highly-sensitive radar equipment, the weak signal of the missile head was difficult to track.

In recent years, the capability of the DF-15 has been considerably improved. Its CEP has already been improved to within 300 meters. In March of 1996, the PLA Second Artillery Brigade practiced DF-15 missile launches just off of the coast of Taiwan’s northern and southern harbor cities, Geelong and Gaoxiong. The exercises revealed that the DF-15’s CEP had indeed reached a very high level. Some international military specialists claim that the DF-15 may perhaps be equipped with terminal guidance systems. U. S. military specialists have affirmed that if a Global Positioning System is
added to the DF-15, then it will be able to improve its CEP to within an astonishing 15 meters, enabling it able to hit accurately almost any target. This, according to U. S. military specialists, makes the DF-15 one of the world’s most precise tactical missiles.

Regarding the area of mobility, the DF-15 utilizes a complete all-terrain transporter system, equipped with superb mobility and speedy response capabilities. The DF-15’s response time has been reduced to approximately 15 minutes.

At the present time, the DF-15 has become the PLA’s primary conventional attack weapon. The first DF-15 brigade of the Second Artillery was established in 1994. The garrison is currently located in Jiangxi Province, and launching bases targeting Taiwan are spread all over Jiangxi and Fujian Provinces. The missile brigade is organized into four launch battalions, each of which is divided into three companies. Each company consists of three platoons, each of which is provided with four launching-vehicles and three missiles. The entire brigade uses thirty missile-launching vehicles and an array of 100 missiles. If each concentrated target attack consists of six to nine missiles, then the decision can at once strike 12 – 18 targets. This particular brigade is at this time completely fitted out as a formidable military force. The PLA is currently in the process of building up a second and third brigade. One brigade would be deployed to Guangjiu and would target both Taiwan and Vietnam, and the other brigade would be deployed to the Chengdu region and would target India. According to news reports, the PLA intends ultimately to deploy eight DF-15 brigades to main military regions. Seven of these brigades would bear conventional attacking responsibilities, and the last would be dedicated to nuclear attack missions.
IV. Improvement and Deployment of the DF-11

The PLA Ground Force is in the process of being outfitted with the Dong Feng 11, code named DF-11 and commonly known abroad as M-11. The DF-11 is the first type of short-range surface-to-surface ballistic missile to be used by the PLA Ground Force. By the late 1980s, this model had already been produced successfully as a single-stage, solid-fuel, mobile missile. Its effective range was 300 km, its missile head weighed 800 kg, and its CEP was pegged at approximately 600 meters. In the 1990s however, the PLA had decided that in order to build up the long-range effectiveness of its ground force, it must add a better-equipped dimension to its ground force. Now the ground force entails weaponry fitted for both the large armament regions and the group army.

The DF-11 underwent considerable improvements and in 1995 reached its final design. In March of 1996 Weaponry Knowledge magazine released a brief news article that stated: “A highly accurate and powerful tactical missile with a speedy response time and a variety of cluster munitions warheads has already gone through the final stages of design and is estimated to be in the final deployment stages of the ’95 plan. This model’s production was successful. Not only does it compensate for our military’s lack of long-range destructive capability, but on average each tactical objective reached the level of the late 1980s international standard.” The tactical missile referred to in this report is the improved DF-11. Its main improvements include greatly enhanced response time, mobility, and survivability. Additionally, the improved DF-11’s CEP has been increased to within 300 meters.
Since the finalization of the DF-11 missile design, the PLA has been equipping its ground forces at a steady pace. The first group army units were equipped with the DF-11 in 1996. These included 30 group army units of the Beijing military region and 50 group army units from the Jinan region. In August of 1996, 38 group army units joined together to engage in attack drills. These drills initiated the primary stage of the PLA’s design for ground forces to use ballistic missiles to carry out long-range strikes. In November of the same year, 54 group army units combined to launch a tactical missile exercise in a mountainous region, a trial that included the test of the DF-11 missile. The *People’s Liberation Army News* reported: “During the exercise, airmen and artillery units combined to conduct a complete surprise attack, the intent of which was to focus tactical missile power directly on ‘the enemy’s vulnerable areas.’” In October of 1997, the PLA Fifteenth Airborne used actual troops, actual aircraft, and actual missiles to perform battle drills. The DF-11 was used in this exercise to carry out the initial stages of a destructive surprise attack. This indicates that the PLA’s airborne forces are also being equipped with the DF-11. In order to increase the speed of the army’s military missile build-up, and in order to develop specialized core of highly qualified individuals in the army’s missile units, the PLA offers a tactical missile technology command specialty in the Army Lang-fang Missile Academy. The Academy also offers rotation commander training and technical training. In recent years, the Academy has played a significant role in developing surface to surface tactical missile weaponry for both hot regions and cold regions. To this end, the PLA has compiled missile unit training outlines, examination standards, and teaching materials for ground force units.
According to news reports, the PLA’s plan for deploying the DF-11 includes assigning a missile brigade to each of the major military regions. Every group army will be assigned to a battalion, and every battalion will be organized into three launch companies, which will each be further divided into three launch platoons. Each platoon will be allocated one missile-launching vehicle, which will carry three missiles apiece. Every battalion will have a total of nine launch vehicles and 27 missiles. Because every missile brigade that is subordinate to a major military region will generally be organized into four battalions, every brigade will, therefore, have a total of 36 launch vehicles and an array of 108 missiles. Once the DF-11 deployment plan is complete, the PLA Ground Force intends to carry out two more steps of DF-11 deployment: 1) increase the military force in the major military regions to contain seven missile brigades and a total of 28 missile battalions, and 2) develop group army units until each group army unit consists of 24 missile battalions. The accomplishment of these two steps would yield a total of 52 missile battalions, which would together possess 468 launching vehicles and an array of 1404 missiles.

V. Research, Development, and Deployment of Cruise Missiles

The PLA first began focusing its efforts on cruise missiles during the 1991 Gulf War. In the Gulf War, the U. S. military’s astonishing use of cruise missiles caused the PLA to expand its range of vision. From this point forward, the PLA has been determined to place the cruise missile as the focal point of the development of their “sudden fatal blow” strategy. For this reason, they have dedicated considerable amounts of manpower and materials to its development. Since the collapse of the former Soviet
Union, a large quantity of those employed in the science and technology field of the war industry has been left unused. China has taken advantage of this situation by raising salaries for positions such as these. Higher salaries have attracted an abundance of talent, including personnel qualified to work with cruise missile technology. In recent years, foreign reports have speculated a great deal about the research and development of China’s cruise missiles. However, until just recently, there has not been a clear understanding about the actual status of China’s progress of cruise missile research, development, and deployment.

Current foreign conceptions of China’s cruise missile research and development are outlined below. Towards the end of 1998, the U.S. Department of Defense submitted a report and strategic forecast to Congress regarding the development of China’s military power. This report indicated that in the past 10 years, China had expended enormous amounts of manpower and resources in the research and development of ground-attack cruise missiles. During this time, the report continued, China had been actively searching for foreign technological assistance. Moreover, China had already obtained technology in areas like cruise missile mobility and navigation. The report concluded that the first type of ground-attack cruise missile that the PLA could put into use would be a short-range air-launch model, which is estimated to be a formidable force in the early years of the 21st century. The second type of ground-attack cruise missile that the PLA intends to use is a long-range strategic model. The report estimates that this missile will also be put into use within the next several years.

On February 28, 1998, the Asian Wall Street Journal published a special article by Fisher, the director of the American Heritage Foundation, the Asian Research Center.
The article stated that China was in the process of researching and developing two types of surface-to-surface attack cruise missiles. One type is a short-range tactical cruise model with an effective range of 400 km. The other model is like the Tomahawk long-range strategic cruise missile model. Earlier in December of 1996, England’s *Jane’s Defense Intelligence* publication reported that China was currently using the C802 as the foundation for researching and developing its ground-attack cruise missile models. The report maintained that missiles could launch from the ground, sea, or air. Moreover, the missiles were reported to have been equipped with satellite Global Positioning and Navigation systems and Landform Matching Guidance Systems. These systems would give the missile the ability to precisely strike fixed targets.

Three conclusions can be derived from the foregoing determinations: 1) China has committed a considerable amount of manpower and resources in an effort to research and develop ground-attack cruise missile models, 2) China has mainly focused its research and development on short-range tactical models and long-range strategic models, and 3) until at least the latter part of 1998, China had still not successfully developed, and therefore, had not deployed, any cruise missiles. These authoritative determinations all warrant consideration. Inasmuch as the U.S. Department of Defense possesses the world’s most precise reconnaissance technology, its information regarding China’s cruise missile status should be given especial consideration. Nevertheless, Taiwan’s determinations are considerably different.

In September of 1998, Taiwan’s mass media reported that the PLA had already tested a type of cruise missile known the “Chang Feng.” Additionally, the Second Artillery was reported to have organized a cruise missile unit. In recent years, Chinese
reports regarding this same question have made it clear that the actual status of the PLA’s cruise missile research, development, and deployment most nearly approximates the assessments issued by Taiwan. Thus, China’s own reports about the research, development, and deployment of cruise missiles in China differ greatly from the U. S. Department of Defense account.

Not too long after the 1991 crisis in the Taiwan Straits, China convened three consecutive large-scale but secret deliberative meetings. In these meetings, the participants, including active high-ranking and active middle-ranking officers, discussed questions about high-technology war methods. Among the papers presented at the conference, a significant amount of information pertaining to the development and deployment of the PLA’s cruise missiles came available. For example, People’s Liberation Army National Defense Academy instructors Colonel Cui Chang-qi, Colonel Hong yu-cai, and Captain Hu Si-yuan stated that the Second Artillery Conventional Missile Unit included “short-range ballistic missiles, mid-range ballistic missiles, and cruise missiles.” The PLA Second Artillery Missile Brigade commander Colonel Wang Jiu-rong and People’s Liberation Army National Defense Academy instructor Major Sun Yue-ji more specifically discussed the question of using cruise missiles in war. It is evident from the messages of these active officers that the PLA has already successfully developed cruise missiles and that a limited amount of deployment has already taken place.

On January 15, 1998, when China’s mass media was reporting the united military drills in the Beijing military region, there was also a leak that these drills involved the deployment of ground-attack cruise missiles. On January 4, 1999, the headlines of the
"People’s Liberation Army News" reported that the build-up of the PLA’s weapon installations had already obtained considerable progress; especial break-through progress had been attained in the areas of nuclear and missile technology. Later it was revealed that while increasing nuclear technology involved only small-scale advances in nuclear warheads, it was confirmed that ballistic missile CEP had made significant improvements and cruise missiles had been successfully developed. This report goes even a step further to declare that not only had cruise missile been successfully developed, but they had also been deployed. There are serious discrepancies between this report and the U. S. military’s assessment. The first major inconsistency is that the report maintains that China had already developed and deployed, to a certain degree, cruise missiles. The second disparity is that the developed cruise missiles are reported to be long-range, ground-based models, not short-range models that are, according to the U. S. military, carried by aircraft. What seems to mostly accord with reality is that the PLA’s Second Artillery Strategic Units, which are responsible for all warfare over 300 km, are not equipped with any fighter planes at all.

Currently, foreigners are still unclear about the specific circumstances surrounding the PLA’s successful development of its first types of cruise missiles. However, according to the PLA’s tradition of developing weapons – which is to “first acquire, then improve” – and since the PLA’s most pressing demand is that Taiwan be considered their chief target, it is likely, therefore, that the ground-attack missiles successfully developed by China are based on the C201 or C802 anti-ship missiles. There are two reasons why these missiles might be used by China as starting points for the development of their cruise missiles: 1) anti-ship missiles van furnish a variety of
different aspects of mature technology from which ground-attack cruise missiles can be
developed, and 2) because cruise missiles target Taiwan and, therefore, must fly across a
large expanse of seawater, anti-ship missiles are useful because they possess a superb
ability to fly at altitudes just above the water’s surface. However, the PLA’s present anti-
ship missiles do not have flight-ranges that surpass 150 km. This is obviously too short
of a range for a cruise missile. From the PLA’s Second Artillery Cruise Missile
Development Unit’s point of view, the effective range of a cruise missile must at least be
600 km.

What is currently most difficult to determine is the accuracy of this ground-attack
cruise missile. Because China to this day maintains an attitude of strict secrecy, it seems
that there is a distinct possibility that this missile’s capabilities are not yet entirely
satisfying. Perhaps the cruise missiles CEP is not as advanced as the ballistic missile. It
seems probable to suspect that the cruise missiles are not yet sufficiently precise to meet
the accuracy demands of the targeted areas. However, China has already developed a
ground-attack cruise missile that, in the days to come, will, with relative ease, be
continually improved in the areas of CEP and range. Moreover, in light of the fact that
China has recently been stepping up its development and deployment of satellite
reconnaissance and navigation satellite, within the next 5 to 10 years, the PLA will be
able to deploy ground-attack cruise missiles with extraordinarily high levels of accuracy.

Section II: The Application of the PLA’s Conventional Missile Force

China’s PLA, which believes that the use of missiles might be crucial in future
military confrontations, is extremely focused upon building-up conventional surface to
surface missile power. As PLA Second Artillery Major-General Zhang Er-wang pointed out the following: Conventional missiles possess high speeds, considerable depth, precision, great destructive ability, and the strong capability to break through the enemy’s line. Moreover, while conventional missiles do not overstep the nuclear threshold, they can significantly influence the course of the war and can even become the crucial factor that decides the final outcome. Already, the PLA has bestowed four main responsibilities upon the conventional missile units: implement attacks that will deter the enemy force; contend for command of the air and seas; develop amphibious campaign capabilities; and inhibit foreign interference.

*The Implementation of Deterrence Military Strikes.* The Chinese military believes that if one has a powerful, long-range surface-to-surface missile force, then, even if other related effects are small and even if troops do not invade the enemy’s country, the attack method will still have an effective deterrence result. People’s Liberation Army National Defense Academy instructor Lieutenant-Colonel Jia Jun-ming said that missile deterrent warfare is “a safe strategy for deterring countries from threatening China economically, politically, and militarily.” He further mentioned that deterrence warfare enables the “military to take action and carry out particular acts of containment or retaliation.” Deterrent attacks also “utilize missile units at specified times to establish superiority.” These attacks enable forces “to carry out especially intense destructive missile strikes against enemy targets, and they show forth the resolute will and the actual strength of the attacking force while also revealing the frightened mentality of the enemy.” Deterrent military actions “attempt to deter and strategically contain the enemy.”
Capture Command of the Air and Seas. The PLA bestowed upon the missile units a very important responsibility – the charge to capture command of air and naval authority. China’s military experts claim that ballistic missiles and cruise missiles have high speeds, far ranges, and are difficult to defend against. Ballistic missiles and cruise missiles are able to carry out attacks. They have the ability to achieve surprise, long-range air raids. During the Gulf War, the U. S. military used cruise missiles and army tactical ballistic missiles in coordination with the airforce to bring about effective surprise strikes on Iraq’s airstrips and defense systems. This caused Iraq to suffer severely devastating attacks in a short amount of time.

Amphibious Campaign. The heart of the PLA’s present military strategy is to prepare to possess the ability to attack Taiwan. On October 25, 1996, People’s Liberation Army Defense Academy assistant instructor Lieutenant Hu Chang-fa in China’s military large-scale secret deliberative meeting declared the following: “The most pressing task facing us today is the need to effectively direct our main strategic focus on preparing on the foremost military struggle. In regards to our main strategic focus, it is the most fundamental task of the military structure is to be able to unite and land all variety of troops. From Chinese military data, it is abundantly clear that the PLA has bestowed upon the missile units the critical future responsibility of attacking Taiwan.

Inhibit Foreign Interference. The PLA has also bestowed upon the missile unit the responsibility of inhibiting foreign interference in a local war. This is especially pertinent in the case of a potential attack on Taiwan; U. S. and Japanese interference needs to be constrained. During the 1996 crisis in the Taiwan Straits, the U. S. sent a naval carrier group into the Taiwan Straits, and, shortly thereafter, the U. S. and Japan
revised their peace treaty, thus causing the PLA to adopt the belief that it is critical to have the ability to inhibit U. S. As a result, China considers the ability to inhibit U. S. or Japanese intervention to be an essential prerequisite to their being able to attack Taiwan in the future.

How does China, however, go about constraining U. S. and Japanese intervention? China has given this question a great deal of consideration. The first resolution, they decided, is to build up their military to be able to effective pose a deterring threat to these two countries. Chinese military specialists have come to hold a unanimous belief about how to accomplish this objective. In the event that China is confronted with the possibility that they are engaged in a local confrontation and are confronted with the possibility that they must either face the U. S. in a direct military confrontation or even just face U. S. technological assistance, China is well-aware of their inability to contend with the U. S. militarily, technologically, and financially. Therefore, China must build-up their “fatal blow weapon” and thus be able to deter and counter the U. S. The core of this “sudden fatal blow weapon” consists of a precise, long-range ballistic missile attack force. Chinese military specialists have indicated that countries with inferior military strength learned from the Gulf War that ballistic missiles and weapons of mass-destruction can be used to deal with developed countries with superior military strength. This is the way to compensate for U. S. technology gap, and it is the way to compete with, resist, and deter U. S. forces. It does not matter how advanced the U. S. military’s interception abilities are, for there is no conceivable way that every ballistic missile in a raid can be intercepted. It is, after all, difficult to bear the deterrence and retaliation of large-scale destructive weapons.
Relative to the foregoing accounts of extreme strategic deterrence, China has another, less extreme deterrence strategy. This strategy is to use conventional missiles to directly strike U. S. troops that have been sent to interfere in the Taiwan Straits and directly engage with the U. S. in an intense local war. The PLA’s Second Artillery Colonel Yu Ji-xun and Major Fu De-quan pointed out that in considering the prospect of committing to a ground war, they could not summarily dismiss the possibility that a superpower country may interfere. Thus the missile units needs to increase means and methods by which aircraft carrier fleets can work cooperatively with the naval airforce to prevent the possibility that U. S. carrier groups can intervene. Colonel Wang Jiu-rong and Major Sun also claimed that an important issue facing the missile unit is the ability “to drive away and strike possible interfering carrier groups.” “In order to undertake the responsibility to combat foreigners,” they continue, “they must be able to directly coordinate with the country’s political head.” The PLA is currently making moves to use missiles to prevent the U. S. and Japanese military forces from interfering in any conflicts in the Taiwan Straits. According to a January 11, 1999 Washington Times report, from the last ten days in November of 1998 to the first 10 days of December, the PLA performed ballistic missile targeting tests with mach-targets including U. S. military bases stationed in Japan and Korea. The missiles tested during these exercises were the DF-3 and the DF-21. Once the PLA has deployed enough ballistic missiles, then I am afraid that the U. S. military will have to think twice before sending aircraft carrier fleets to interfere for a second time.

Section 3: The Strength and Impact of the PLA’s Conventional Missiles
Because the PLA is vigorously building up conventional ballistic missiles as the core of its long-range, precise attack force, it is, therefore, evident that in the future this build-up will affect the military balance currently enjoyed in the Asian-Pacific region. This build-up especially engenders a significant imbalance in military power between the two sides of the Taiwan Straits. In order to understand the essence and scope of the impact that this build up will have on the Asian-Pacific region and on Taiwan and China in particular, we must analyze four different aspects of the PLA’s conventional missile unit: missile range, CEP, scale of deployment, and missile defense.

**Missile Range.** In recent years, the PLA has been vigorously building up conventional missile units. These units include the mid-range DF-21, the short-range DF-15, and the short-range DF-11. And now that the PLA is equipped with the refitted DF-3 conventional warhead, they now also possess precise, long-range attack capability. For example, the DF-3 with an effective range of over 3000 km is capable of hitting the U. S. military base in Guam. The DF-21, with its effective range of over 2400 km, can reach all of the territory covering South Korea, Japan, and the South China Sea. The DF-15 has a range of 600 km and can, therefore, reach most of South Korea. The DF-11, with a range of 300 km, can cover most of Taiwan. Because this is the first time in China’s history that it has possessed the ability to undertake long-range attacks into foreign territory, the research, development, and installation of these long-range, precise attack weapons reflects a revolution for the PLA’s advanced military power.

The first to feel the effects of China’s conventional missile build-up will be Taiwan. Both the DF-15 and the DF-11 provide China with the means to launch a fierce attack against Taiwan at any time. This is the first time in half a century that China has
had this type of attacking ability. From Taiwan’s point of view, it is also the first time in half a century that they are left without the ability to escape the direct attack of the PLA. Needless to say, this situation creates a considerable change in the previous balance between Taiwan and China. Moreover, now that China is equipped with the DF-21, which possesses the capability of hitting U. S. bases throughout the Asian-Pacific region, the PLA has a strong force which can either confront the U. S. directly or deter the U. S. and Japanese from interfering in a conflict in the Taiwan Straits.

*CEP.* From researching all previous missile wars, China clearly understands that without high CEP levels, conventional missiles can in reality, only be used to incite fear. Without precision, usefulness of these missiles as strategic weapons is limited and they cannot bring about any substantial impact on the course of the war. Hence, in order to bring in to play surface-to-surface convention missiles that can impact the outcome of a war, one must enhance the missile’s CEP. Once the CEP has been improved to a certain level, and if missiles are launched in concentrated attacks, then the missiles will impact the course of the war considerably. In recent years, one of the PLA’s particular focal points has been the improvement of missile CEP. In March of 1996, just after the crisis in the Taiwan Straits, the Military Commission of the Central Committee of the Communist Party of China held a large meeting in which the plan for China’s military was discussed. One of the most focused upon points of discussion was the improvement of the CEP of the DF-21 and the DF-15.

*Deployment Scale.* From the Gulf War, the PLA learned that no matter how precise the U.S. Tomahawk Missiles were or no matter how imprecise Iraq’s SCUD missiles were, every missile needed to be launched in an attack with at least a set number
of missiles in order to obtain effective results. In order to achieve an attack force that contains the necessary number of missiles to sustain an effective attack, then it naturally follows that a set number of missile units needs to be deployed. In recent years, the PLA has already begun to define its deployment scale for conventional missile units. The plan calls for each DF-21 unit to be organized into six brigades, which together will utilize 226 missile-launching vehicles. If each target is allocated nine missiles, then, assuming each battalion attacks only one target, they will be able to completely cover 24 targets at once. The DF-15 is intended to be distributed across seven brigades, each of which will use 252 missile-launching vehicles. In a one-time attack, the DF-15 can be used to cover a total of 28 targets. The DF-11, which will be divided into 7 brigades plus another 24 battalions, will use 468 missile-launching vehicles. In one concentrated attack, the DF-11 will be able to strike 12 targets. This stage of the deployment does not even include the plan for building up the cruise missile force.

From the foregoing depiction of the PLA’s plan, the scale of the PLA’s build-up is enormous indeed. Once all of the build-up is complete, then the PLA’s long-range attack and assault capability will have obtained a significant military breakthrough. This type of large-scale build-up of the long-range attack missile force obviously will engender profound impacts on the military balance in the Asian-Pacific region.

In terms of waging war with Taiwan, the PLA does not need to bring into play its entire conventional missile force. The missile units located in the Nanjing military region and the Guangjiu military region are sufficient to pose a severe threat to Taiwan and to cause the military balance between Taiwan and China to undergo a substantial change. According to the PLA’s conventional missile build-up plan, two DF-15 brigades and two
DF-11 brigades will be deployed to both the Nanjing military region and the Guangjiu military region. Additionally, each will receive five DF-11 missile battalions. Altogether, these two regions will have 21 battalions and 189 missile-launching vehicles. At one time, the two regions will be able to launch 189 missiles. If each battalion strikes only one target, then in a simultaneous attack by these two regions can together cover 21 targets. With such a massive scale of long-range attack strength and with Taiwan not being constituted of a lot of land area, the PLA could bring about the demise of all Taiwan’s major targets with only a few coordinated launches. Based upon this, it is clear that the PLA needs to deploy only a limited portion of their intended conventional missile force to drastically alter the military balance in the Taiwan Straits.

*Missile Defense.* The military balance is two-sided. If the military force facing the enemy is formidable and if the enemy is then able to respond by enhancing its own military force, then the military balance between the two sides can be maintained at a new level. If, however, one side enhances military measures or if the measures adopted are not comparable to those utilized by the other side, then, much like France’s response to Germany prior to WWII, the military balance between both sides will unavoidably be tilted toward the side with the military advantage.

In regards to the military balance between Taiwan and China, Taiwan, inasmuch as it is the target of China’s conventional missile force, occupies the position of the less-advantaged side. Taiwan, therefore, is susceptible to any imbalance caused by improvements of the PLA’s military strength. In reality, in order to match the PLA, Taiwan, since the late 1980s, has been expending a great deal of resources and manpower to build-up its second-generation military force. Taiwan’s second-generation build-up
includes purchasing of U.S F-16 fighter planes, French Mirage fighter planes, U.S. E-2T, and self-produced Taiwanese fighters. The navy has purchased French La Fayette Frigate. Additionally, the Navy has introduced U.S.-made Knox frigates and has produced their own frigate. The army has purchased U.S. attack helicopters and Patriot missiles. Recently, in spite of the PLA’s acquisition of Russian SU27 fighter planes, Kilo submarines, modern destroyers, and other advanced weapon installations, nevertheless, Taiwan’s second-generation military force is clearly still the obvious military superior in the airforce and navy categories. The Taiwan Airforce controls both air and sea superiority.

However, Taiwan’s plan for the build-up of second-generation forces proceeded as though it was not giving full consideration to the PLA’s development of conventional missile forces. This problem has an objective reason. Taiwan’s second-generation plan came early on, and the development of the PLA’s conventional missile force came later. However, regardless of the divergence in development timeframes, Taiwan cannot ignore the threat posed by the PLA missile force. In some respects, it is the case that the PLA’s military build-up has caused Taiwan’s second-generation forces to be incompatible with China’s conventional missile force. Once war broke out in the Taiwan Straits, Taiwan expended a great deal of resources building up its second-generation military force, which is unable to counter the PLA’s concentrated missile attacks. Both sides have invested in different types of military forces. In many respects the situation mirrors WWII’s French fixed line of defense and the German mobile armored tank units. The result from such a situation is easy to imagine. From the situation with Taiwan and China, the conclusion can be easily and clearly deduced: In light of the PLA’s possession
of precise, long-range conventional missile forces, the military balance between Taiwan and China is undergoing a transformation that is not beneficial to Taiwan. In recent years, Taiwan has begun to realize the gravity of the threat posed to them by the PLA’s conventional missile force. Moreover, they have already begun to adopt counter-measures like the U. S. Patriot Missile.

However, it still remains to be seen whether or not the Patriot Missile can counter a concentrated missile attack. In view of the abilities of the DF-15 and DF-11 and in light of the scale of the PLA’s deployment, Taiwan’s Patriot Missiles, and perhaps even the U. S. Theatre Missile Defense System, may not be able to ward off a saturated attack of the PLA’s conventional missiles. If indeed Taiwan is unable to effectively counter PLA missile strikes, then what measure must Taiwan adopt to enable them to counter the PLA? What must Taiwan do to restore the military balance in the Taiwan Straits? Taiwan has no choice but to urgently resolve these questions.