



**The
Economist**

A special report on China's place in the world

The fourth modernisation

China is becoming a military force to reckon with in the western Pacific. How should America respond?

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THIRTY-FIVE years ago Deng Xiaoping accused the People's Liberation Army (PLA) of "bloating, laxity, conceit, extravagance and inertia". Even so, three years later, when he set about modernising China, he put the PLA last in the queue, behind farming, industry and science. And when the commander of the navy in 1982 laid out his plans for China to become a world sea power, he did not expect his goal to be realised before 2040.

Later military modernisation became more of a priority, thanks to two demonstrations of American firepower. First, America's use of precision weapons in Operation Desert Storm during the first Gulf war convinced China that it could no longer base its defence on the weight of numbers. Second, when the PLA was hectoring Taiwan with missile tests in 1996, President Bill Clinton ordered two aircraft-carrier strike groups into the region, one of them headed by the provocatively named *USS Independence*. China had to back down.

The collapse of the Soviet Union had persuaded China's leaders that an arms race with the world's only superpower could squander enough money to pose a threat to the party's grip. To challenge America head on made no sense. Instead China put its efforts into affordable "asymmetric" weapons.

This unorthodox strategy has made the PLA's progress harder to measure. Western opinion is deeply divided. Military analysts are alarmed at what they see as a growing threat to American maritime supremacy in the western Pacific. China security specialists tend to scoff at all the scaremongering. Who is right?

Three areas of the PLA's modernisation stand out. First, China has created what the Pentagon calls "the most active land-based ballistic- and cruise-missile programme in the world". The Second Artillery has about 1,100 short-range ballistic missiles facing Taiwan and has been extending their range and improving their accuracy and payload. The Second Artillery is also improving its medium-range ballistic missiles, able to carry either conventional or nuclear warheads. The PLA has deployed several hundred air- and land-launched long-range cruise missiles. And it is developing the world's first anti-ship ballistic missile, fitted with a manoeuvrable re-entry vehicle for added menace.

Second, China has transformed and enlarged its submarine fleet, which can now berth in the newly completed base on Hainan Island, just off China's southern coast. In the eight years to 2002 China bought 12 Russian Kilo-class submarines, a big improvement on its own noisy Ming- and Romeo-class boats. Since then the PLA navy has been introducing longer-range and stealthier Chinese designs, including the nuclear-powered Jin class, which carries ballistic missiles, and the Shang class, a nuclear-powered attack submarine. China has about 66 submarines against America's 71, though the American boats are superior. By 2030, according to the Kokoda Foundation, an Australian think-tank, China could have 85-100 submarines.

And third, China has concentrated on what it calls "informatisation", a tongue-twister that Jiang Zemin coined in 2002 to describe how the PLA needs to function as one force, using sensors,

communications and electronic and cyber-warfare. China now has a good idea of what is going on far into the Pacific, thanks to a combination of satellites, over-the-horizon radar, medium-range surface-wave radars, reconnaissance drones and underwater-sensor arrays.

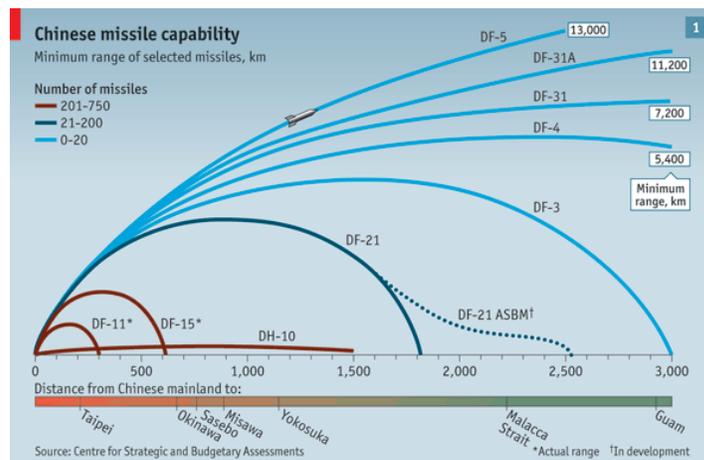
China has also been working on anti-satellite weapons. American satellites have been “dazzled” by lasers fired from the ground. And in 2007 a ballistic missile launched from Xichang space centre in Sichuan blew up a broken weather satellite—no mean feat, though other countries were furious because it produced more than 35,000 new pieces of space debris.

Chinese hackers have been busy, too. In March last year Canadian researchers discovered a spy network containing more than 1,300 computers, many of them in China, that had got into governments’ systems. Taiwanese and Western targets suffered from severe Chinese cyber-attacks at least 35 times in the decade to 2009, according to Northrop Grumman, an American defence contractor. The Pentagon concedes that it is not sure the PLA was behind such attacks, but argues that “authoritative” analysts in the PLA see cyber-warfare as important.

The new arsenal

What does this amount to? Military experts in America, Australia and Japan think China’s new arsenals are a greater threat than its higher-profile plans to launch aircraft-carriers in the next decade or so. Alan Dupont, of the University of Sydney in Australia, says that “missiles and cyber-equivalents are becoming the weapons of choice for the conventionally outgunned.”

According to the Centre for Strategic and Budgetary Assessments (CSBA), an American research institute, Chinese firepower threatens America’s Asian bases, which until now have been safe from all but nuclear attack. The Second Artillery’s missiles could swamp the bases’ defences and destroy runways as well as large numbers of fighters and ships. Japan is already within range of Chinese missiles, many of them currently pointing at Taiwan. Guam soon will be (see chart 1).



China’s submarines, missiles and anti-ship cruise missiles threaten America’s aircraft-carrier strike groups within 1,000 to 1,600 nautical miles of the Chinese coast. According to Ross Babbage, an Australian defence analyst and founder of the Kokoda Foundation, if China had an anti-ship ballistic missile, coming in fast and without much warning, it would be even harder to defend against. And China’s space and cyber-weapons could serve as what Chinese planners label an “assassin’s mace” in a surprise attack designed to smash America’s elaborate but fragile electronic networks. That would leave American forces half-blind and mute, and its bases and carriers more vulnerable still.

In sum, China’s abilities to strike have soared far beyond seeking to deter American intervention in any future mainland dispute with Taiwan. Today China can project power out from its coastline well beyond the 12-mile (19km) limit that the Americans once approached without a second thought. Mr Okamoto, the Japanese security expert, believes China’s strategy is to have

"complete control" of what planners call the First Island Chain. Ultimately, China seems to want to stop the American fleet from being able to secure its interests in the western Pacific.

America's most senior officials have taken note. Last year Robert Gates, the defence secretary, gave warning that "investments [of countries like China] in cyber- and anti-satellite warfare, anti-air and anti-ship weaponry and ballistic missiles could threaten America's primary way to project power and help allies in the Pacific—in particular our forward air bases and carrier strike groups."

Mr Babbage is blunter: "Current defence planning is invalid," he says. He and the analysts at CSBA argue that America needs to rethink its strategy in the Pacific. It should strengthen its bases and be able to disrupt Chinese attacks with decoys and by spreading aircraft and ships around the region. American forces must have better logistics and be able to fight even when their information networks are impaired. Crucially, they must be in a position to disable China's electronic reconnaissance, surveillance and battle-damage assessment, some of which is protected by a system of tunnels beyond easy reach of American weapons.

Pacific in name only

Critics say the cold warriors are suffering from a bad case of "enemy-deprivation syndrome". For a start, the impression that China's defence spending has soared is misleading. The PLA's budget has broadly kept pace with GDP in the past decade, after two decades in which its share of GDP fell (see chart 2). Experts differ about the size of China's defence budget, which is only partly disclosed. Sam Perlo-Freeman, of the Stockholm International Peace Research Institute, puts overall spending in 2009 at \$99 billion in 2008 dollars, though some estimates are higher and the official total is only \$70 billion. The United States is planning to spend \$663 billion. As a share of GDP, China spends less than half the American figure and less than it did at the start of the 1990s. "There is not much evidence of an arms race," says Mr Perlo-Freeman.



Some doubt the quality of China's equipment. One retired American admiral says that much of the Russian equipment it bought was "junk". Despite China's progress, it lags in guidance and control, turbine engines, machine tools, diagnostic and forensic equipment and computer-aided design and manufacturing. "China has come a long way fast," says Professor Dupont, "but military modernisation gets harder from here."

Some have doubts about China's manpower, too. The PLA is much more professional now than when it was a peasant army, but it lacks experience. Nigel Inkster, of the International Institute for Strategic Studies (IISS), recalls one of the founders of the Chinese navy once telling him: "It's not that I didn't know much about sailing, but I hadn't ever seen the sea."

Complex subjects like submarine warfare take years to master. "If you fight, there are holes," says the IISS's Christian Le Mière. "And until you do, you don't know where they are." The retired admiral thinks Chinese forces suffer from a lack of trust, which could slow them up in battle. "We give our people responsibility and initiative," he says. "That's anathema to them."

Robert Ross, a professor at Harvard, argues that the pessimists overestimate China's threat and underestimate America's powers. The United States is better able to track the other side's

submarines; it is superior in cyber-warfare and less vulnerable than China in space—if only because it has built-in redundancy. China would struggle to penetrate the countermeasures and electronic camouflage that protect American ships. Carlyle Thayer, of the Australian Defence Force Academy, notes that it has already deployed 31 of its 53 fast-attack submarines and three Ohio class nuclear submarines to the Pacific.

For all the uncertainties in this debate, three things are beyond dispute. First, China has already forced American ships to think about how and when they approach the Chinese coast. The closer American vessels come, the more missiles and submarines they face and the less time they would have to react to a strike. Anyone sailing a carrier worth \$15 billion-20 billion with a crew of 6,000 would think twice about taking on that extra risk. To deny America possession of seas it has dominated for decades, China does not need to control its own coastal waters; it just has to be able to threaten American ships there. Hugh White, a former Australian security and defence official, foresees the western Pacific becoming a “naval no-go zone”.

Second, China’s ability to project power is improving. Its submarines, fighter aircraft, missiles, and cyber- and electronic warfare, once poor, now pose a threat. China’s weapons will continue to improve, and its forces will gather experience. Provided that the economy does not fall over, budgets will grow, too, absolutely and possibly as a share of GDP. Other things being equal, China can project power into its backyard more easily than America can project power across the Pacific Ocean. At risk is what Mr Gates has called “the operational sanctuary our navy has enjoyed in the western Pacific for the better part of six decades”.

Third, although the United States is able to respond to China, it will have to overcome some obstacles first. America’s military spending in Asia is overshadowed by the need to cut overall government spending and by other military priorities, such as Afghanistan. Jonathan Pollack, of the Brookings Institution, points out that some ideas, such as replacing aircraft-carriers with more submarines, would inevitably run into opposition from the navy and from politicians whose constituencies would suffer. “For many officers the navy’s core institutional identity is indelibly tied to carriers and the power-projection mission they perform,” he says. “Reducing their numbers is going to be a very painful process.” Above all, big shifts in military planning take decades: America needs to think now about China in 2025.

All this points to an important principle. Military planning is framed differently from diplomacy. Diplomats are interested in what they think states intend to do, but military planners have to work with what they think states can do. Intentions change and states can mislead. If you are charged with defending your country, you need to be able to meet even improbable threats.

That logic works in China, too. America has not been shy of going to war in recent years. Not long ago a retired Chinese admiral likened the American navy to a man with a criminal record “wandering just outside the gate of a family home”. American strength in the 1990s made China feel insecure, so it transformed the PLA to shore up its policy on Taiwan and protect its economically vital coastline. Yet by adding to its own security, China has taken away from that of its neighbours and of the United States. Perhaps China does not mean ever to use its weapons aggressively. But American defence planners cannot rely on that, so they must respond.

In this way two states that never intend harm can begin to perceive each other as growing threats. If you do not arm, you leave yourself open to attack. If you do, you threaten the other country. A British historian, Herbert Butterfield, called this the “absolute predicament and irreducible dilemma”. It is one reason why relations between China and America will probably sour.

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