

**The People's Liberation Army  
in the Land of Elusive Sheen**

**by**

**Edward B. Atkeson**

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### **LAND WARFARE PAPER NO. 38, SEPTEMBER 2001**

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**by Edward B. Atkeson**

Major General Edward B. Atkeson, USA Ret., is a senior fellow with AUSA's Institute of Land Warfare and a senior associate at the Center for Strategic and International Studies. During his military service he was appointed Deputy Chief of Staff for Intelligence, U.S. Army Europe, and was later a member of the National Intelligence Council under the Director of Central Intelligence. He also served with the Bureau of Politico-Military Affairs, Department of State. He holds a BS degree from the U.S. Military Academy, an MBA from Syracuse University, and a PhD from the University of Luton, England. He is a graduate of the U.S. Army Command and General Staff College and the U.S. Army War College. He was a fellow at the Center for International Affairs, Harvard University, from 1973 to 1974. General Atkeson is a frequent writer and speaker on military affairs and has contributed more than 100 articles to military journals and other publications. He is the author of four books: *The Final Argument of Kings: Reflections on the Art of War* (HERO Books, 1988); *A Military Assessment of the Middle East 1991-1996* (Strategic Studies Institute, U.S. Army War College, 1992); *The Powder Keg: An Intelligence Officer's Guide to Military Forces in the Middle East 1996-2000* (NOVA Publications, 1996); and *A Tale of Three Wars* (Army War College Foundation Press, 1997).

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## **Foreword**

Many analysts on both sides of the Pacific Ocean believe that U.S. relations with China are likely to emerge as the most important set of global foreign policy issues over the next quarter or half century. The United States and China have evolved as highly interdependent trade partners and potentially competitors of some yet-to-be-determined economic or strategic nature.

The People's Liberation Army, or PLA (which includes China's land, sea and air contingents), is a principal tool of the Beijing leadership for both defense of the country and internal control. This essay examines the dimensions of that instrument, its organization, orientation and capabilities, and some of the challenges it faces in fulfilling its mission. The paper also examines the political-economic context of those challenges, especially with respect to Taiwan, the United States and other neighboring countries.

Of special note in the paper are the judgments of American writers, both "hawks," who favor hard-line policies with Beijing, and "panda huggers," who take a more relaxed view of the relationship. The author cautions against premature judgment of how the relationship should be shaped, lest we misread important indications and miss opportunities for creation of desirable outcomes.

GORDON R. SULLIVAN  
General, U.S. Army Retired  
President

September 2001

## **The People's Liberation Army in the Land of Elusive Sheen**

*The more time one spends in China, the more the country takes on an elusive sheen. [It] has more paradoxes than it does dialects. To visit China now is to witness a country revolutionizing itself in the cities and struggling to stay alive in the countryside. Wracked with ambiguity as it transforms from a socialist to a market economy, China is perched, it seems, at the edge of the world at the turn of the millennium.<sup>1</sup>*

These matters might not loom quite so large if China had not come to assume the importance it has in the last decade. It is today the third largest country in the world, with the largest population (albeit including 100 million illiterates).<sup>2</sup> Despite massive reductions, China's armed forces exceed the total of the next two largest national forces combined. Its economy in recent years has been growing at a rate close to 9 percent, and its international trade has more than quadrupled since 1989. China's economy now exceeds the total of the three Benelux countries (Belgium, The Netherlands and Luxembourg) in Europe, or of all five of the Scandinavian states combined, and no other country in the world, other than the United States, receives more foreign investment. From 1996 to 1999 China received investment money from abroad at a rate exceeding six times that of Japan.<sup>3</sup> Some recent estimates have China attaining a gross domestic product (GDP) of half of that of the United States over the next two decades, a level of economic might that no other power has reached for almost a century.<sup>4</sup>

China's physical girth spans five time zones—from Shenyang province in the east to Xinjian in the west—but its political system remains locked in a tight, self-focused, totalitarian dictatorship in which the entire land runs on Beijing time. Too bad for workers on the periphery who may not like rising in the dark or retiring in broad daylight.

China is the single country which in the new century has been widely identified as a potential peer competitor with the United States, presumably in both economic and military fields.<sup>5</sup> There is little expectation that in the next half-century China will come to pose the sort of broad, global politico-military threat previously identified with the Soviet Union, but a number of analysts have suggested that a more narrow, but nevertheless potent, threat might evolve in the next decade or two.

### **The Incredible Shrinking PLA and Its New Mission**

In 2001, the People's Liberation Army (PLA), composed of land, sea and air contingents, appears to be continuing on an extended downward glide path from a mass organization of almost five million troops under Premier Deng Xiaoping twenty years ago, toward a much smaller, more professional and better equipped force,

perhaps a quarter of the size. Whereby in 1981 it was concerned primarily with countering potential ground and air threats from the Soviet Union on its northern border, it has since been reorienting itself to deal with potential conflicts to the east and south, some at considerable distances.

A fresh treaty with Russia in mid-summer 2001 reconfirmed earlier understandings that the parties should share a peaceful frontier in order that each might turn its attention elsewhere.<sup>6</sup> These efforts have permitted China to focus on territories, either *de facto* independents, under foreign administration, or of indeterminate ownership, but which the Chinese perceive as properly integral parts of the homeland. Beijing is proud of having recovered Tibet, Hong Kong and Macao, and looks forward, especially to Taiwan, to completing its “restitution” efforts. But it also looks to the Spratley Islands (in the South China Sea, between Vietnam and the Philippines) and to the Japanese-administered islands of Senkaku Shoto (110 miles northeast of Taiwan).

The recovery of Taiwan, of course, is the most immediate and cogent matter. Not only is it the largest prize, but the Chinese probably do not see much feasibility to recovery of the other territories without a firm base in Taiwan. While no date has been officially announced for the achievement of any specific objective, observers believe that Beijing is looking for development of military forces capable of dominating the South and East China Seas by 2010.<sup>7</sup> Whether control of those waters is viewed as a firm prerequisite to any operation designed to take Taiwan by force is not clear. However, in July 2001 the Chinese defense minister, General Chi Haotian, stated unequivocally that China should prepare now for that mission.<sup>8</sup>

It is quite likely that Taiwan’s importance is not limited to the island’s economic or strategic value in the eyes of the Beijing regime, but that it also has strong symbolic importance within an empire stressed by other potentially separatist elements. While apparently not a matter of critical proportions at this point, the central government’s grasp of Tibet and certain areas in western Xinjiang Province, inhabited by some eight million non-Chinese Muslims, is substantially less conclusive than the leadership would desire. The latter peoples are currently believed to be receiving training and arms from kindred groups in Central Asia. Such developments are an embarrassment to the Beijing government, and reliable information in this area is scant at best. International observers estimate that some 210 people were apprehended and sentenced to death in China for separatist activities between 1997 and 1999.<sup>9</sup> Taiwan is the principal prize, but the government probably expects that its subjugation would have a quieting impact on other troublesome areas as well.

### **The Elusive Sheen**

In his landmark study *China Debates the Future Security Environment*, Michael Pillsbury provided four examples of obstacles to understanding Chinese views:

- Interpreters translating Chinese terms from ideographic symbols have a wide range of choices—semantic content has developed peculiar cultural frameworks over thousands of years.

- The rules of the Chinese Communist Party regarding debate are constantly in flux—foreign readers, even when they know the language, often get lost in the words if they are not familiar with Party context.
- Chinese analysts entertain particular premises about statecraft—for example, Chinese references to the “warring states era” of 2,500 years ago remind Chinese readers of the verities of geopolitics and worst-case scenarios, which a foreign reader may miss entirely.
- Open discussion of future Chinese security is taboo—sensitive subjects (including the existence of the taboo itself) can be dealt with only in secret Party documents.<sup>10</sup>

These points, and the probable existence of others of which Western analysts are simply unaware, must be borne in mind when examining Chinese writings in attempts to penetrate the sheen. “We know that we don’t know how much we don’t know,” but that cannot be a bar to the attempt to see through the opium smoke. The prose may be turgid and the meaning heavily veiled, or seemingly contradictory, but we must keep working the problem.

Oddly enough, Taiwan is one of the prime contributors to China’s legend of “elusive sheen.” Inherent in its posture are many contradictions. As successful as the island’s economy has become, living costs are high, and the mainland offers an ever more attractive style of life for ambitious Taiwanese youth than they can afford at home—as long as they keep their politics to themselves. With high-tech skills, many of them are crossing the strait to seek their fortunes, especially in Shanghai. An estimated 300,000 such expatriates have found jobs there while half a million others live and work elsewhere on the mainland. For all the heated cross-strait rhetoric, Taiwanese investment in China is believed to approach \$100 billion, and to account for as many as three million jobs.

And that is not all. Even Hong Kongers are beginning to realize the advantages of cheap real estate on the mainland. So many have taken to purchasing housing in nearby Shenzhen and commuting to work in the former British colony that the border police are no longer surprised at having to clear almost a quarter of a million persons through the gates each day. The commuters may have to watch what they say to others on the mainland, but they keep the advantages of high labor rewards in Hong Kong.<sup>11</sup>

While some observers worry that Beijing could be tempted to exploit these “guests” in some manner (such as propaganda or espionage), Mr. Yang Ta-cheng, former president of the Taiwan Business Association in Shanghai, does not. “Eight or nine years ago,” he told a visitor, “it was definitely a concern. Now it is almost a nonissue.” A survey of young professionals on Taiwan in April 2001 revealed that 64 percent of those questioned ventured that they would be willing to move to the mainland for work if the opportunity arose. That figure is eight times greater than in a similar survey just one year earlier.<sup>12</sup>

And this is in spite of the mainland’s rigid totalitarianism. If the respondents to the survey had any difficulty in seeing through the elusive sheen, President Jiang Zemin should have cleared the air with his comment four months later: “Should China apply the parliamentary democracy of the Western world, the only result will

be that 1.2 billion Chinese people will not have enough food to eat. The result will be great chaos, and should that happen it will not be conducive to world peace and stability.”<sup>13</sup> It would seem safe to assume from this that as welcome as the technical skills from Taiwan might be, Beijing was not about to give an inch on the political side to ensure their availability where they were needed.

On the other hand, traveling through Beijing recently, columnist Thomas Friedman noted quite a changed atmosphere. Rather than an “elusive sheen,” he described it somewhat more bluntly, as “the mother of all Chinese contradictions.” What he was talking about was the leadership’s acceptance of capitalists into the Communist Party as of 1 July 2001. He quoted President Jiang as saying,

Marx and Engels lived more than 150 years ago. The Communist Manifesto was published 153 years ago. It is impossible to apply every single word they wrote at that time to today’s reality. One thing we should always applaud Marx and Engels for is that they improved their views and thinking in light of changing conditions.”<sup>14</sup>

He might have added, “The flag is red, but ancient Han nationalism and practical party politics are the stronger forces.” This is the puzzle. China is ambitious for unity while it is attempting to harness the dynamic forces of 21st century capitalism in a totalitarian state better attuned to 1918. But we are well cautioned to keep in mind that while this may be a police state, it is far more adaptive than the more familiar Stalinist model.

### **The PLA Budget**

In the late 1990s the official Chinese defense budget amounted to about \$40 billion.<sup>15</sup> In March 2001 the Chinese government announced that it would boost military spending by almost 18 percent.<sup>16</sup> As disturbing as that was to many observers, it should not have come as a great surprise. In past years, most military contingents were involved in economic enterprises (everything from pig farms to tourist attractions) designed to reduce their financial burden on the Defense Ministry, and even to turn small profits. The professionalization of the armed forces and new requirements for modern arms and equipment have necessitated the redirection of responsibility for development and maintenance of the forces from the units themselves back to the central authority.

China’s Finance Minister, Xiang Huaicheng, explained the budget increase as driven primarily by pay increases for both officers and enlisted soldiers, but also said that it would be necessary “to meet the drastic changes in the military situation around the world and to prepare for defense and combat given the conditions of modern technology, especially high technology.”<sup>17</sup> However, even with this large increase in the budget, total PLA expenditures are probably not much larger than those for the maintenance of Japan’s Self Defense Force. Unfortunately, experts note, it comes at a point when China is experiencing a record budget deficit.

### **PLA Nuclear Forces**

China is a nuclear power of long standing. It presently has about two dozen intercontinental ballistic missiles (ICBMs) credited with a range up to 11,000 kilometers—potentially reaching the west coast of the United States. Indeed, in 2000

the official newspaper of the PLA bluntly stated that China would use these weapons to attack the United States if we ever interfered with Beijing's efforts to recover Taiwan.<sup>18</sup> Designated DF5A (or NATO CSS-4) and emplaced in hardened silos, the missiles began to come into service in the early 1980s.<sup>19</sup> A U.S. intelligence report prepared in 1999 for Congress mentioned a buildup of new weapons which was likely to provide "a few tens of missiles with smaller nuclear weapons" that could reach the United States by 2015. One of these, the DF31, may be able to reach the northwest corner of the United States, while another, the DF41 (still under development) would have a longer reach.<sup>20</sup>

In addition, it appears that the force has been augmented with a mobile launch, two-stage weapon, DF21X (NATO CSS-5), which may carry either a conventional warhead or one with a 90kt nuclear yield. It is identical in many respects to DF21 (the older intermediate range ballistic missile, or IRBM), but has a greater range capability (3,000 km), and is said to have some sort of "radio-frequency" or electromagnetic pulse warhead.<sup>21</sup> The total Chinese strategic nuclear stockpile has been estimated at about 284 warheads.<sup>22</sup>

A series of revelations of Chinese clandestine efforts to gain access to U.S. nuclear weapons secrets in recent years would indicate that Beijing continues to rely upon its nuclear forces as a deterrent to attack or strategic blackmail by a foreign power. Most recently, in July 2001, U.S. intelligence agencies uncovered evidence that China had carried out three nuclear weapons-related experiments at its test site at Lop Nor, in western Xinjiang Province. No seismic shock or air pollution was noted in this case. But U.S. officials tend to take a relaxed view of this sort of development. For the most part they recognize that China needs to do some testing to maintain confidence in their nuclear force capabilities—as does the United States. Neither party has ratified the Comprehensive Nuclear Test Ban Treaty, but both would probably prefer to discourage testing worldwide as a matter of policy.

In any event, some American analysts believe that the Chinese are unlikely to follow the U.S. path with respect to strategic weapons at all. There are indications that the Chinese believe that for a cost of about two percent of their defense budget they can develop counters to U.S. systems, which they note cost us about two percent of ours. Considering the enormous difference in budgets, such a scheme could be highly cost-effective for them. This they refer to as the "Andropov solution," because of its similarity to the course advocated by Yuri Andropov, former premier of the Soviet Union, who favored asymmetric responses to U.S. strategic developments.<sup>23</sup>

Nevertheless, Western observers remain especially alert for indications of Chinese experiments with nuclear devices related to the U.S. W-88 warhead, the design of which is believed to have come into Beijing's hands through espionage operations.<sup>24</sup> In addition to the ICBM force, China maintains a single (rather trouble-prone) nuclear-powered ballistic missile submarine carrying up to 12 shorter-range missiles.<sup>25</sup>

## **The Ground Forces**

Clearly, the transformation of the PLA away from its historical concepts of mass formations, geared to fight a "people's war" in response to foreign invasion, and its shift of posture in favor of smaller forces with more mobile, longer-range operational

capabilities, is a matter of high national priority. Since the early 1980s, manpower in the combined branches of the PLA has fallen by 50 percent, including a decrease of some 18 percent in the last ten years. The greatest reduction (26 percent) has been made in the ground forces.<sup>26</sup> These now number about 1.7 million, most of whom are conscripts. Reportedly, China has continued the restructuring of six of its 21 group armies, roughly the equivalent of Western corps. Another three of these are currently scheduled to disband. Most of those remaining in the active category are expected to change from a division-based system to a more flexible brigade-based design.<sup>27</sup> Dr. Ivan Eland, director of defense policy studies at the Cato Institute, expects that the PLA will continue to diminish its manpower by about 100,000 per year through the end of the decade.<sup>28</sup>

Of special note, the PLA has a small corps of three airborne divisions, comprised of about 35,000 troops. Contrary to U.S. practice, however, these units are part of the air arm rather than the ground forces. Conceivably, these units would be early participants in any major PLA amphibious operation against Taiwan. Lightly equipped, they would be heavily dependent upon close air support against Nationalist armored or mechanized counterattack.

### **The Sea and Air Forces**

China's air (PLAF) and sea forces (PLAN) have also been reduced in physical dimensions over the last two decades. Fighter aircraft have been cut by a third, from about 5,300 to around 3,500, and naval coastal patrol and combatant vessels by about 40 percent, from 760 to 430. But certain elements have undergone substantial modernization and reinforcement. The PLAN has received from Russia two 8,000-ton *Sovremenny*-class destroyers equipped with supersonic SS-N-24 surface-to-surface missiles. These are quite capable ships with complex radar and weapon suites for antisubmarine, antiaircraft and surface-to-surface operations. Top speed is 32 knots.<sup>29</sup> An additional two ships of the same class are expected in the near future. They will join a number of 6,000-ton *Luhai*-class destroyers, also with surface-to-surface missiles, now in service and under construction in indigenous shipyards. When completed, the vessels are expected to employ unit- and force-linking and integrating devices, such as the Thales TAVITAC common link data system. In the view of some analysts, such provisions will enhance the PLAN's initiatives for matching certain critical U.S. naval capabilities.<sup>30</sup>

The PLAN has also been pursuing a very active conventional diesel-electric submarine force development program. While the number of boats in service over the past ten years has actually decreased, the quality of the craft has been substantially enhanced. From a total of 87 conventional attack submarines in 1991, the count has fallen to 58. Some 50 old *Romeo*-class boats have been removed from service in the last decade and replaced with five Russian *Kilo*-class and some 17 *Ming* and improved *Ming* attack vessels.

The latest in the *Ming* class has been noted to feature an extended hull of 78 meters. Analysts speculate that the additional space may accommodate an air-independent propulsion system. If so, this boat would have greatly increased deep submergence endurance.<sup>31</sup>

China has a new design of nuclear-powered attack submarine (SSN Type 093, similar to the Russian *Victor III* class) under construction at the Huludao Shipyard in Liaoning Province, and a ballistic missile boat (SSBN Type 094) on the ways. Western observers believe that the latter is behind schedule and may not see service before 2005.<sup>32</sup> The Type 093 will be China's sixth nuclear long-range attack boat, and has already prompted a number of Southeast Asian countries to reexamine their antisubmarine warfare capabilities.<sup>33</sup> The Type 094 will likely replace China's sole existing *Xia*-class SSBN, dating from the mid-1980s. There has been a report of the simultaneous firing of 5,000km-range "Julang-21" missiles from submarines at three different locations during an exercise in August 2001, but the reliability of the information is highly questionable.<sup>34</sup>

China has been reliant upon Russia for some time for equipping the PLAF with modern fighters. So far the force may have received as many as 100 Su-27 (NATO Flanker) fighter aircraft, about a dozen of them manufactured in the Shenyang aeronautics factory under a coproduction agreement. The Chinese had hoped, with Russian assistance, to develop the Su-27 as a multirole fighter, but the effort was unsuccessful, and they were obliged to seek another aircraft for the surface attack mission. The Russians obliged, offering the high-performance Su-30MKK (NATO Flanker B) two-seat fighter. This aircraft will provide the PLAF with a longer-range capability (1,865 miles unrefueled) than it would have had with the Su-27 for both air superiority and ground attack roles. The PLAF may have received as many as 40 of the Su-30s, and more are expected, with some possibly going to the PLAN naval air arm.<sup>35</sup> Thus far, Russia has refused to transfer certain technical data dealing with the engines of the aircraft. Beijing, however, has found a ready supplier of such information in Ukraine.<sup>36</sup>

The PLA has also been negotiating for the purchase of Russian-designed KH-35 long-range (130–140 km) antiship missiles. The weapons are believed to be intended for mounting on the new Su-30 aircraft. Clearly the two planes will complement one another, with the Su-27s designed to clear the path for Su-30 attacks on distant terrestrial targets or ships at sea, employing significant stand-off tactics. China has become Russia's largest arms buyer, annually receiving 30 to 50 percent of Russia's foreign military sales. Other contracts are under discussion between the two countries which would provide Beijing with airborne early warning aircraft and advanced in-flight refueling technology.<sup>37</sup>

In June 2001 U.S. intelligence announced that China had flight-tested its first ground-hugging, air-launched, land-attack missile, similar to the U.S. Tomahawk. The weapon was launched with apparent success from a B-6 bomber. It is believed to be equipped with video precision guidance and to be capable of carrying a 1,100-lb. warhead.<sup>38</sup>

Finally, the Chinese have announced advances in the prolonged development of their domestically built FC-1 multirole fighter. With a prototype in production, the first flight test may take place in 2003, but some observers are skeptical, given the many target dates the aircraft has missed in the past. Present plans call for 100 FC-1s to be equipped with advanced Israeli-supplied fire-control radar.<sup>39</sup>

## **The IRBM Force**

Highly pertinent to PLA operational and tactical planning, across the Taiwan Strait and beyond, is a large force of intermediate range surface-to-surface ballistic missiles, organized as the “Second Artillery Corps (SAC).” In 1995 and 1996 the SAC fired a series of missile “test flights” into waters close to Taiwan in politically transparent efforts to intimidate the Taipei government. Since then, the PLA has been steadily reinforcing the deployments of missiles in Fujian Province opposite Taiwan in apparent preparation for possible hostilities. At the pace of current deployments, U.S. intelligence officials estimate that Beijing may be planning on fielding as many as 600 such missiles over time. If so, the force would be capable of attacking virtually all important Taiwanese bases with little or no warning.<sup>40</sup> China’s nonstrategic nuclear stockpile is believed to contain about 150 weapons.<sup>41</sup> In July 2001 U.S. Secretary of Defense Donald H. Rumsfeld commented that it was “not surprising” that China was building up its missile forces. In his opinion, China has decided that the SAC is “important for their view of themselves to be a factor in the region.”<sup>42</sup>

## **High-Tech Warfare**

In 1999 the *Liberation Army Daily* reported that the PLA intended to make forces for computer attacks (information warfare, or IW) a separate service on a par with its air, land and sea forces.<sup>43</sup> This was followed the next year by publication of a White Paper by the State Council to the effect that Beijing was drafting a space development strategy, and plans to spur the growth of the space industry. The leadership, it said, wants particularly to upgrade the capabilities of launch vehicles and introduce manned space flight.<sup>44</sup>

Embarrassingly enough, the Central Intelligence Agency had briefed the U.S. Senate in 1998 that much of the technology needed by China to achieve these objectives may have been inadvertently provided by the United States. In 1996 the United States resolved to loosen its controls over the export of satellite technology, and two years later the material was showing up in improved Chinese boosters and missiles. There was—and undoubtedly still is—plentiful opportunity for the transfer of advanced space-related knowledge from peaceful scientific bases to military and intelligence applications.<sup>45</sup>

For the longer term (20 years +) China has declared its intent to industrialize and commercialize space technology, and to establish a multifaceted space-based infrastructure. Some U.S. observers speculate that a parallel intent is to develop space-based weapons capable of countering U.S. systems. They characterize such an effort as intended to develop a “magic bullet,” especially in the field of information warfare, to counter the currently overwhelming technological advantage enjoyed by U.S. forces. The U.S. Department of Defense reports that China is developing minisatellites (100kg–1000kg) with applications in various fields, including electro-optical and radar networks. Beyond that, the effort will include experimentation with micro- and nanosatellites, especially a 10kg nanosatellite for imaging missions.<sup>46</sup>

Significantly, U.S. Deputy Defense Secretary Paul D. Wolfowitz commented in late August 2001 that China is “almost certain to become a superpower in the next half-century, and maybe in the next quarter-century, and that’s pretty fast by historical standards.” He went on to say that he didn’t think China had to be

considered a threat,<sup>47</sup> but shortly thereafter a U.S. Army spokesman reported that the Army planned to move weapons currently stored in Europe to the island of Diego Garcia in the Indian Ocean, where they might be more accessible for use in Asia.<sup>48</sup>

Whether or not the United States is seriously concerned with any potential threat from China's conventional forces, it has evidenced considerable disquiet over the possible emergence of what are often referred to as "asymmetrical threats." Some observers believe that an early form of information warfare actually broke out between Beijing and Taipei in the summer of 1999 when "hackers" on each side attempted to attack the other's high-level computer systems. A PLA spokesman denied that the attacks from the mainland were either government-sponsored or -controlled, but many observers surmised that they probably were.<sup>49</sup> However, in that case the Taiwanese counterattacks apparently scored some successes. In July 2001 Beijing's National Computer Virus Emergency Response Center and the Ministry of Public Safety said that only 27 percent of China's computers were free of viruses. In any event, the IW effort stemming from the mainland (if that is what it was in 1999) hardly seems worthy of elevation to separate service status, as suggested by the contemporaneous *Liberation Army Daily* article noted above.

Nevertheless, American concern over the advance of some form of extraordinary Chinese war-waging technique sparked a five-day wargame by the U.S. Air Force at the Space Warfare Center at Schriever Air Force Base, Colorado, in January 2001, positing a conflict between the United States and a "Red" country suspiciously similar to China in the year 2017. The game featured a space environment "full of weapons," with microsattellites on both sides maneuvering against other satellites, blocking their view, jamming transmissions, and even "frying" one another's electronics with radiation. In addition, both sides were assumed to possess ground-based lasers capable of dazzling or blinding satellite optics and "offensive information warfare capabilities" which could attack the opponent's computers.<sup>50</sup>

Thus, much of our concern with China stems less from its changing strategy or growing military capabilities than from fear of the development of some sort of strategic surprise. The ghost of Pearl Harbor still stalks the American psyche, vastly reinforced now by the 11 September 2001 terrorist attacks on New York and Washington, D.C. Most especially, the United States focuses on as yet inexactly defined brands of revolutionary tactics and arms, particularly those employing mass destruction or information warfare, which might enable the eastern colossus to achieve a "great leap forward" to a position of plausible challenge. The country's totalitarian form of government, its territorial ambitions, its minimal concern for human rights matters and its tendency to overreact to international incidents exacerbate the problem.

For the most part, Chinese military theorists and strategists seem to recognize the substantial lead enjoyed by American and other sophisticated forces in these fields. Like Hong Kong tailors, many Beijing military writers appear most interested in studying and copying U.S. techniques, particularly those noted in the 1991 Gulf War, and they call for development of advanced equipment of similar capabilities for their own forces. One notable author, Zhang Qinsheng, has urged his countrymen to "adapt to the changes of military adjustment," pointing out that "U.S. armed forces have undertaken bold conceptualization and reform of their military thinking, campaign theory, operational action and military strength." Zhang has also advocated Chinese

thinking which would “gradually emerge from the time zone of the industrial society [and learn new warfare techniques from those militaries that have mastered them].” As Dr. Ehsan Ahrari of the U.S. Armed Forces Staff College at Norfolk has written, “The decisive lead of the U.S. armed forces in information warfare, and the influential writings of futurists like Heidi and Alvin Toffler on Chinese thinking . . . is apparent to any serious student of China’s interests in contemporary trends in warfare.”<sup>51</sup>

But, according to some analysts, there is another school of strategic thinkers in China who believe that they can blaze a new path around their competitors rather than simply imitating them. “Recognizing that they cannot match the West in either conventional or nuclear fields,” the analysts write, PLA leaders “look for new opportunities in IW and cyber-warfare to neutralize, or at least to erode an enemy’s political, economic and military information, and command and control infrastructures.” They argue that the Chinese see these techniques as a form of “unrestricted warfare” in which they can outmaneuver Western high-tech sensors, electronic countermeasures and weaponry. They go on to cite the leaders as saying that China could “cause [an] enemy nation to fall into social panic” and political crisis through properly managed IW attacks.<sup>52</sup>

### **What Are the Problems of the PLA?**

The People’s Liberation Army has problems. Not the least of these is its long-standing weakness in the area of amphibious operations. For all its loud talk about war in the event of a declaration of independence by Taipei, the PLA lacks a credible invasion capability. It could impose punishing missile and air strikes, and threaten the economic lifeblood of the island through interdiction of its air- and seaports, but it is far less certain that its forces are adequately structured or equipped to actually seize the country.

The topography of Taiwan is not conducive to seaborne invasion. The eastern shore rises abruptly from the sea, with few facilitating beaches. Low tides on the western shore expose mud flats ranging three to eight miles seaward. These would make the unloading of tanks and heavy equipment extremely difficult except for very short periods of time. Even infantry would have difficulty in finding a footing. The two monsoon seasons, in the summer and winter, generate high winds, often exceeding 45 knots, causing waves 20 to 30 feet high and, in the summer, torrential rainfall. The prevailing southeast (summer) or north (winter) wind would likely expose the sides of landing craft to broadside pressures, potentially swamping many boats.<sup>53</sup>

Writing in *Jane’s Intelligence Review* in 2000, Ian Bostock credited Beijing with the political will to “successfully project significant and overwhelming combat power early in a conflict,” but assessed its capabilities as insufficient to launch and sustain a major invasion of Taiwan.<sup>54</sup> The PLAN has some 60 amphibious ships, mostly LSTs and LSMs,<sup>55</sup> and about 500 smaller landing craft. These elements are capable of lifting no more than 8,000 assault troops and 500 tanks, and would probably have to be substantially reinforced by converted merchant vessels even to seize an important offshore island (e.g., Matsu, Quemoy or Penghu), much less Taiwan itself. While the PLA has about 30,000 amphibious assault troops (army and marines combined),

hundreds of thousands of troops, both airborne and seaborne, would likely be required for the greater task.<sup>56</sup>

Taiwanese forces are not inconsiderable. The army of 200,000 is organized in ten infantry and two mechanized divisions, plus two independent airborne and six armored brigades. It has some 550 main battle tanks (M-48s and M-60s) and about 110 helicopters of various designs. It also has about 1,300 pieces of artillery, although most of it is towed. Army reservists number about 1.5 million. At sea Taiwan can deploy four attack submarines, 33 destroyers and frigates, and about 60 other surface patrol and coastal combatants. In addition, the navy has 50 combat aircraft, including 21 armed helicopters. There is also a marine contingent of about 30,000 men. The main striking force in the air is composed of 570 combat aircraft, including Mirage 2000 and F-16 fighter-bombers, which are probably superior to most of the comparable aircraft on the mainland due both to better avionics and better pilot training. The island's air-to-surface weapons are largely AGM-65A Mavericks.<sup>57</sup>

In recent years the government of Taiwan has turned to the United States for the acquisition of new materiel to modernize its forces. It would particularly like to acquire *Arleigh Burke*-class destroyers, with Aegis phased-array radar for anti-aircraft and anti-missile defense at sea and the advanced PAC-3 version of the Patriot air defense missile system for comparable protection on land. The United States has thus far demurred on these items, but after completion of a classified study by the U.S. Navy in April 2001, the U.S. government agreed to sell some important types of equipment. Included in the most recent offer were four *Kidd*-class vessels, which mount other types of air defense systems, less capable than the Aegis but still quite modern; twelve P-3C maritime surveillance aircraft; and as many as eight modern, diesel-electric attack submarines.<sup>58</sup>

A similar study of Taiwan's ground forces was undertaken in mid-summer 2001. Surprisingly, a number of Taiwanese military leaders appear more anxious about modernization of the army than about the other forces oriented more toward the threat of conflict at sea or in the air. Very clearly, they are seriously concerned about the possibility of hostile airborne assault from the mainland on the western, less mountainous areas of the island. This would indicate needs especially for improved armored forces, artillery and attack helicopters. The U.S. government deferred permitting Taiwan to purchase advanced U.S. AH-64 Apache attack helicopters or M1A2 Abrams tanks in 2001, but it may reconsider the matter in 2002.<sup>59</sup>

One insightful analyst argues that a full-blown attack on Taiwan by Beijing would likely impose an unacceptable level of casualties on the assaulting troops. Instead, he suggests that the PLA leadership might first seek to blockade the island's ports with mines and submarines to erode the Taiwanese logistical system and to contain the navy. The PLA would also deliver selective missile strikes, perhaps focusing on air defense installations. Information warfare attacks, of course, would be important to interrupt the opponent's command and control system. If these steps were not successful in bringing Taipei into compliance with Beijing's wishes, Phase 2 would be initiated.<sup>60</sup>

The second phase would probably entail amphibious operations against one or more of the offshore islands. This would likely see heavy air and naval gunfire

preparations before the troops went ashore. Whether or not this were successful, but if the Taiwan government showed no inclination to capitulate, then Beijing might proceed with an all-out attack, using virtually all forces at its disposal. The price might be excessive for the gain, but China is a large country, and, in the author's view, it could take the island if no third party intervened.<sup>61</sup>

If, however, Taiwan were able to take advantage of its armored forces and artillery on the ground and to contain or suppress most amphibious and airborne attacks from the mainland, Beijing could find itself, like the United States in the Vietnam War, forced to fall back upon a strategy of bombing its opponent into submission. However—like the United States—it might discover that calculations of how much destruction is required to press another party into capitulation seldom prove reliable, much less precise. Any miscalculation in this area could be disastrous. The longer Taiwan was able to hold out, the greater the likelihood that other parties might come to its aid. Intervention by the United States or Japan, or a combination of the two, might so reverse the balance that the Beijing government would find itself fighting for its life—not necessarily against foreign invasion, but possibly worse—against a dissatisfied populace. The leadership has evidenced considerable self-doubt about its behavior in the wake of the Tiananmen Square episode of 1989. An aggressive foreign war against one or more major trade partners might prove to be more than the domestic political traffic could bear.

Robert Manning, director of Asian Studies at the Council on Foreign Relations, illustrates the internal problems currently undermining the Beijing regime with citations from one of the regime's own reports. Coming from a group supporting the Communist Party Central Committee, the report describes current collective protests and incidents as "mounting and increasingly confrontational." Further, the report identifies corruption as "the main fuse exacerbating conflicts between officials and the masses" and warns that the problems "are expanding from farmers and retired workers to include workers still on the job, individual business owners, decommissioned soldiers and even teachers and students." Elsewhere, Manning reports, "thousands of miners and their families recently blocked a main railway line to demand paychecks, owed in some cases for two years or more." And this is only the latest of "hundreds of incidents of popular outrage across the country . . . a result of massive corruption and the dislocation resulting from rapid economic and social change."<sup>62</sup> While there is a chance that a foreign war might bind the people and align them behind the leadership, there is also the risk that it could have the opposite effect, collapsing the country from within.

In any event, the PLA may find itself having to deal with domestic turmoil, with or without a threat from abroad. The rapid economic shifts in recent years have substantially destabilized the country. Only about half of the workers now belong to any form of labor union, and most of them are in the large, inefficient state-owned industries where the union leaders are state employees. Wages are low, and seventy-hour workweeks are not unusual. A former clandestine labor organizer recently warned, "If the government doesn't do a better job of promoting worker rights, we could see a real explosion of worker protests."<sup>63</sup>

## Big War Issues

However important Taiwan is to the political leadership, the focus of the Chinese force structure is not exclusively in that direction. Clearly, deterrence of nuclear attack on the homeland is in first place. At that level, Beijing's position is not strong, but neither is it critical. While Russia and India are factors that must be watched, the only real player China has to deal with is the United States. And there they probably understand that the United States is a reasonably stable player. We have had a half century of experience in deterrence and nuclear conflict avoidance. And as Chinese analysts must be aware, twice in that time, in both Korea and Vietnam, the United States has accepted conditions considerably short of victory rather than employ its ample nuclear arsenal, even against countries which had no such weapons of their own. While some cynics may read an overly simplex message in that to the effect that the United States would likely shrink from a nuclear challenge, a more accurate reading would probably be a recognition that the United States understands the responsibilities it bears as the leader of the Western world and would be loath to solve nonexistential challenges with a cataclysmic response to a conventional threat.

The point to be made is that the Chinese have ample reason to assess that the United States would be an unlikely instigator of nuclear warfare in the defense of a state like Taiwan—a country with which it does not even have full diplomatic relations. While it has often displayed a readiness to come to the aid of friendly states under attack by a communist or other totalitarian power, the United States has invariably sought to contain the conflict geographically, and in most cases also with respect to scale. However useful it may be for analysts in either the United States or China to speak in terms of nuclear balance, it is reasonable for Beijing planners to assume that they hold the real initiative insofar as actual employment of weapons of mass destruction is concerned, particularly nuclear weapons. However stressed the Chinese leadership may become in the face of U.S. policy statements, force deployments or maneuvers, it is highly unlikely that China would come to feel genuinely pressed to strike first for fear that it might lose its nuclear deterrent to an American preemptive attack. In the vernacular, the United States does not “do” nukes—1945 notwithstanding.

Nevertheless, in light of current interest in the United States regarding development of a limited antiballistic missile (ABM) system, China's confidence in American behavior may soon be put to the test. It is possible that the Chinese may come to believe that even the marginal nuclear retaliatory capability they currently enjoy is approaching a degree of jeopardy. While the American behavioral record, together with appropriate policy rhetoric, should be strong factors suggesting that Beijing's risk is not likely to increase by any great margin, it is not possible to foresee how the matter will be interpreted in Beijing. Unfortunately, the record in that capital is not good. Beijing has reacted to a visit by the previous Taiwanese chief of state to his alma mater in the United States by firing IRBMs into international waters north and south of the island. It charged murder in 1999 when an errant U.S. missile accidentally struck the Chinese embassy in Belgrade during a NATO attack on that city. It vastly overplayed its hand in early 2001 when one of its aircraft collided with a U.S. reconnaissance plane in international airspace. As a rule, we may conclude, Chinese policymakers tend to revert to a rather simple, antagonistic style when confronted with unpleasant news.

With respect to an American ABM system, China can increase its own offensive capability in an attempt to maintain its deterrent force, but, however tempting that may be for political purposes, it is not likely to work very strongly in China's favor. The Beijing leadership must be well aware of what happened to the Soviet Union as it got deeper into competition with the United States in the strategic weapons field; they cannot contemplate a course down that road with much enthusiasm. Barring the emergence of other important factors—such as the resurgence of Japanese military power—it does not seem likely that China's nuclear forces will grow out of proportion to the country's overall military modernization and improvement.

After that, there is the matter of conventional deterrence of foreign (read U.S.) interference in state security matters in which Beijing recognizes no other legitimate party. This brings PLA planners face to face with the problem of dealing with Taiwan and other neighboring states in an environment in which the United States might choose to play a role at any time. That is not to say that the United States is considered an enemy—any more than the United States views China in that light. Secretary of State Colin Powell specifically stated during his visit to Beijing on 28 July 2001, “We view China as a friend, not as an adversary.”<sup>64</sup> But he might have added that each party is obliged to factor the other into its security planning the way a farmer protects his barn with lightning rods. Nature is not the enemy, but the farmer is wise to take precautions even in the best of weather.

### **The Larger Balance**

In 1998 in a similar paper, this author described a conceptual triangle dominating the strategic balance in the western Pacific.<sup>65</sup> The triangle was based upon the major players in the region—China, Japan and the United States. In that analysis it was noted that the Chinese leadership, while unsupported by any major ally, tended to take a relaxed view of the close association between the other two. Although Sino-Japanese history makes for little happy reading, Beijing generally recognized that throughout the post-World War II period the United States–Japan alliance, coupled with the MacArthur-imposed Japanese constitution, tended to suppress any tendencies in Japan to significantly rebuild its armed forces, or to revive domestic public interest in military power. Beijing also enjoyed substantial financial aid from Japan. These measures were interpreted as stabilizing factors in the region, and reassuring to China. Now, however, that strategic balance may be undergoing a change.

Under new leadership, voices are being raised in Japan that its financial aid serves to underwrite increases in the expanding Chinese military budget, that Chinese naval vessels on reconnaissance voyages are violating Japanese waters, that Chinese missiles are pointed at Japan, and that Japan has offered more than sufficient apologies for its invasion of China in the 1930s.<sup>66</sup> As if to underline the new attitude in Tokyo, on 13 August 2001, Prime Minister Junichiro Koizumi disregarded Chinese objections and paid an official visit to the controversial Yasukuni Shrine commemorating 2.47 million Japanese war dead. The Chinese government promptly issued a condemnation of the gesture.<sup>67</sup>

In recent months, both American and Australian spokesmen have publicly raised the question as to whether there is a need for a new multilateral security scheme in the region. Recognizing the rising tensions between Japan and China, and the

community of interests among the United States, Australia, Japan and the Republic of Korea, they have suggested convening a quadrupartite meeting to begin a new dialogue to deal with the issues. While it is too early to evaluate the urgency of the initiative, it would appear that the former triangle might soon undergo some sort of enlargement. The result could be the creation of at least consultative machinery for the coordination of four-power policy toward China and such other areas of interest as may arise.<sup>68</sup>

However, it should be borne in mind that there are significant differences among the potential parties to such a dialogue. For example, Australia has special interests in the Indonesia-Papua New Guinea area not generally shared by the others. Further, in 1999 there were indications that Australia was seeking closer military ties with China that one or more of the others found troubling.<sup>69</sup> Much will depend upon the agenda developed for the group.

### **So, What Is the Threat Behind the Elusive Sheen?**

Upon departure from the General Electric Company in early September 2001, after two decades as chief executive officer, Jack Welch remarked that he had only one real concern about the future: China. “I think we are going to see in the next 20 years,” he said, “a Chinese threat that’s going to dwarf what the Japanese threat looked like when I took over the company.”<sup>70</sup>

Clearly Mr. Welch was not talking about Tokyo’s military forces, which in the early 1980s existed on a budget of less than 5 percent of that of comparable U.S. forces, but it is not for naught that the matters discussed above—which do include the strategic dimension—impose demands upon American policymakers and disturb many analysts. Concern for the rise of new forms of warfare, especially sophisticated, computer-based processes, and the vulnerabilities of U.S. reliance upon such features as satellite communications linked to fixed ground stations, and linked to an increasingly powerful economic engine, weigh heavily upon the estimates and calculations of decisionmakers and their staffs.<sup>71</sup>

According to a recent article in *U.S. News & World Report*, the U.S. National Intelligence Council in June 2001 canceled a study undertaken by the RAND Corporation because the council did not believe the study participants were taking the threat dimensions seriously enough. Reportedly, one analyst familiar with the project said, “They want China to be 10 feet tall.”<sup>72</sup>

In this regard, one cannot be absolutely sure who “they” might be. If RAND is a haven for “panda huggers” (analysts who seem to regularly play down the Chinese threat) the same may be said for a number of Washington-based intelligence offices as well. The press, always alert for indications of policy bias, reported in mid-summer 2001 that the new national intelligence officer for East Asia (the senior U.S. intelligence community analyst for coordinating national estimates) was viewed by critics as coming from the “China-is-not-a-threat school.” At the same time, the Pentagon’s top military analyst for China, who had served in U.S. diplomatic missions in Hong Kong and Beijing, was reported to have resigned under pressure. He was known to have expressed the view that the Chinese military modernization efforts were part of a normal professionalization process rather than some sort of offensive buildup.<sup>73</sup>

In July 2001, during PLA military exercises involving some 20,000 troops and dozens of ships and aircraft in the Taiwan Straits area, it was reported that the highly classified CIA *Senior Executive Intelligence Brief* carried an article by the leading China analyst of the Defense Intelligence Agency. Reportedly, the article took a relaxed view of the affair, even though the exercise was probably oriented directly at Taiwan (and possibly even at intervening U.S. forces).<sup>74</sup>

Of course, the United States was not the principal political target of the maneuvers. A Beijing newspaper asserted that the exercises were intended to convey a warning to President Chen Shui-bian of Taiwan to desist from any thought of declaring the island an independent state.<sup>75</sup> Recent announcements of proposed sales of American military equipment to Taiwan have clearly disturbed the mainland government, and if it cannot prevent the sales, it can at least demonstrate its displeasure to all parties concerned and underscore its interest in keeping Taiwan legally within the fold.

Beijing may be successful in registering its grievances, but it is not clear that it can cover all the bases. In July 2001 the Pentagon admitted that U.S. officials had been meeting with Taiwanese officers—reportedly seven times over the past four years—to discuss “the defense of Taiwan.” While the Chinese leadership may have been aware of the meetings, the Pentagon’s disclosure could be interpreted in Beijing as a new American policy expressing a lack of concern for Chinese sensitivities. The United States is the most powerful country in the world, with clearly stated interests in the region, and the admission is bound to affect the manner in which both Taiwan and the mainland assess the balance.<sup>76</sup> The effects may have been amplified in late August 2001 by the deployment of two U.S. aircraft carrier battle groups to the disputed South China Sea for exercises<sup>77</sup> and the announcement of a visit by the Taiwanese chief of the General Staff, General Tang Yao-ming, to Washington later that month.<sup>78</sup>

All of these developments have been taking place in a political-military environment in which Taiwan, in particular, has come to play a new and vexing role from Beijing’s perspective. Whereas, under the former leadership of President Chiang Kai-shek’s Kuomintang Party, the government in Taipei shared the universal view of mainland China and Taiwan as two parts of a single country, the new, indigenous Taiwanese leadership takes the position that the two are distinct and equivalent entities and that each should be entitled to pursue its interests as it sees fit. Obviously, the new formula suggests that the present conditions may be the prelude to a permanent divorce of the entities rather than simply an unfortunate phase in the nation’s history when two different groups are vying for control of the whole, or, less militantly, simply coequal status in a larger Chinese confederacy. As we have noted, Beijing has clearly stated and demonstrated its intolerance for the current Taipei argument by asserting that a declaration of independence from Taiwan would be tantamount to a declaration of war, punctuating its objections with missile and amphibious assault exercises whenever it feels that the point needs further emphasis. And while the PLA does not appear capable of seizing the island, it does seem to be working to attain such a capability.

It is important to note that there is no clear urgency to Beijing’s plan for the recovery of Taiwan. And, as long as the island’s leadership takes no irretrievable step toward full independence, the *status quo* has every chance of remaining peaceful. The

problem for both Beijing and Taipei is that the current observable social trends yield little indication of their likely destination. While there is a natural yearning among Taiwan's populace for full recognition of the existence of their land and people in the international community and a determination to follow a democratic path, there are countercurrents, steering the new generation toward a closer relationship with the mainland, however that territory may be governed.

A peaceful resolution of these competing pressures, of course, would seem to lie in the direction of a continuing normalization of the economy of China, joined by a similar initiative in the political realm. The trend in this matter is opaque—or translucent, at best. The Beijing leadership shows a promising tendency to liberalize the economy while attempting to provide for the welfare of the great mass of the population. Where it is depressingly intransigent is in the area of regard for domestic human rights and an apparent inability to react with cool moderation to adverse international incidents.

But there are promising indications of improvement. China today is not the land of Mao—of the mindless waving of little red books in mass gatherings of cultural revolution, or of the stoking of backyard iron foundries in another disastrous “great leap forward.” The PLA is no longer looking for foes in Russia, Korea, India or Vietnam. Hong Kong, while reattached to the motherland after a century of colonialism, is still a bright, energetic star on the world stage, and still a host to U.S. aircraft carrier battle groups.

Notably, for its part, the United States has followed a temperate course with China—certain incidents notwithstanding. U.S. leaders have emphasized a clear preference for friendly political and economic policies while maintaining a forward military presence in the region. They have exercised moderation in the selection of military equipment offered to Taiwan, and have made no effort to highlight a “China contingency” to justify plans for military transformation in the next decade. (Clearly, the U.S. Army's concept for developing a capability for deployment of a five-division corps to a distant theater in 30 days could have relevance to Taiwan.)

The United States has also attempted to allay Chinese apprehensions regarding its limited ABM initiative. As long as the program is visibly circumscribed in scale and intent, and sincere assurances are provided that no anti-Chinese aspect will be developed, there is a reasonable chance that it need not discolor Sino-U.S. relations. The cost of a Chinese physical rejoinder to the U.S. system would be extremely high, and if triggered by distrust of U.S. intent, could have very serious consequences, perhaps the reversal of virtually all practical Sino-U.S. cooperation. If the program were extended to provide protection to Japan or to Taiwan, the Chinese might react with great alarm, fearful that they were losing control of their destiny.

As pointed out by Angela Yuan at the beginning of this monograph, China is a country undergoing a new form of revolution while simultaneously struggling to stay alive. It is rife with internal contradictions while it strives to bring itself into closer touch with the modern world. The People's Liberation Army is one—perhaps the most important—element of the country's power, and bears close monitorship from abroad for indications of the likely future course of the nation, the giant of the Orient with the elusive sheen.

## Endnotes

1. Angela Yuan, "China's Dance," *Fodor's China* (New York: Random House), 1998.
2. Erik Eckholm, "Chinese President Expresses Optimism on Relations With U.S.," *The New York Times*, 10 August 2001, p. A1.
3. George Gilboy and Eric Heginbotham, "China's Coming Transformation," *Foreign Affairs*, July–August 2001, p. 29. Gilboy and Heginbotham report average real GDP growth between 1989 and 2000 at 9.7 percent. U.S. State Department "Background Notes" on China, 12 March 2001, indicate 7.1 percent in 1999. In August 2001 President Jiang Zemin predicted that China's GDP would continue to grow at an annual rate of 7 percent throughout the tenth five-year plan. See: "In Jiang's Words: 'I Hope the Western World Can Understand China Better'," *The New York Times*, 10 August 2001.
4. Steven Kosiak, Andrew Krepinevich and Michael Vickers, "A Strategy for a Long Peace," Center for Strategic and Budgetary Assessments, 2001, p. 3.
5. Gilboy and Heginbotham, "China's Coming Transformation," p. 38. They believe that this designation is premature and pernicious. They recommend that the United States exercise greater rhetorical moderation.
6. Bruce A. Elleman and Sarah C. M. Paine, "Security Pact With Russia Bolsters China's Power," *International Herald Tribune*, 6 August 2001.
7. John Downing, "China Equips Itself for Power Projection," *Jane's Intelligence Review*, February 2000, p. 42.
8. "Official: China Should Prepare Taiwan Attack," *USA Today*, 1 August 2001, p. 6.
9. Gilboy and Heginbotham, "China's Coming Transformation," p. 34. A death sentence in China is not an unusual event. China executes more of its citizens each year than all other countries in the world combined.
10. Michael Pillsbury, *China Debates the Future Security Environment* (Washington, D.C.: The National Defense University Press), 2000.
11. Mark Landler, "China's New Charm for Hong Kong," *The New York Times*, 19 August 2001, p. A4.
12. Ching-Ching Ni and Tyler Marshall, "Taiwanese Just Adore the Enemy," *The Los Angeles Times*, 2 August 2001, p. 1.
13. Eckholm, "Chinese President Expresses Optimism," p. 1A.
14. Thomas L. Friedman, "Introducing the China Ruling Party," *The New York Times*, 11 August 2001, p. A25.
15. *The Military Balance 2000-2001* (London: International Institute of Strategic Studies), p. 194.
16. Jonathan Wright, "U.S. to Watch for Chinese Threat to Taiwan," Reuters Ltd., by Internet, 15 March 2001.
17. John Pomfret, "China Plans Major Boost in Spending for Military," *The Washington Post*, 6 March 2001, p. A1.

18. Bill Gertz, "Flash Point Taiwan," *Air Force* magazine, March 2001, p. 37.
19. Duncan Lennox, "China's Development of Ballistic Missiles," *Jane's Intelligence Review*, August 1991, p. 374.
20. David E. Sanger, "U.S. Will Drop Objections to China's Missile Buildup," *The New York Times*, 2 September 2001, p. 1. Another report projects China's strategic nuclear force increasing tenfold over the next decade. See: Mike Allen, "U.S. to Give Details of Shield Tests to China," *The Washington Post*, 2 September 2001, p. 1A.
21. Paul Beaver, "China Prepares to Field New Missile," *Jane's Defence Weekly*, 24 February 1999, p. 3.
22. Ehsan Ahrari, "China Eyes NATO's Nuclear Doctrine," *Jane's Intelligence Review*, April 1999, p. 38.
23. Rose Gottemoeller, "If China Builds More Warheads," *The Washington Post*, 6 September 2001, p. A23.
24. Bill Gertz and Rowan Scarborough, "Inside the Ring," *The Washington Times*, 20 July 2001, p. 11.
25. David J. Smith, "Sun Tzu and the Modern Art of Countering Missile Defense," *Jane's Intelligence Review*, January 2000, p. 35.
26. *The Military Balance 1980–81, 1990–91 and 2000–2001* (London: The International Institute of Strategic Studies).
27. *The Military Balance 2000–2001*, p. 179.
28. Ivan Eland, "Tilting at Windmills: Post-Cold War Military Threats to U.S. Security," *Policy Analysis* #332, Cato Institute, 8 February 1999, p. 19.
29. Keith Faulkner, *Jane's Warship Recognition Guide* (Glasgow: Harper Collins Publishers, 1996), p. 124.
30. *The Military Balance, 1985–86 and 2000–01*; and Malcolm R. Davis, "Back on Course," *Jane's Defence Weekly*, 24 January 2001, p. 22. Other sources indicate the *Sovremenny* class carries SS-N-22 "Sunburn" surface-to-surface missiles that are considered very difficult to shoot down. See: *Jane's Intelligence Review*, February 2000, p. 42. IISS assesses *Sovremenny*-class ships to lag equivalent U.S. ships by one generation. See IISS Internet report, "China's Naval Expansion," 21 March 2001.
31. Robert Sae-Liu, "China 'Stretches' Latest *Ming* Submarine," *Jane's Defence Weekly*, 3 January 2001, p. 15.
32. "Long March to Modernization," *Jane's Defence Weekly*, 11 July 2001, p. 26.
33. IISS, "China's Naval Expansion."
34. "Chinese Subs Score 3 Missile Hits in War Games," *Singapore Straits Times*, 29 August 2001, p. 29.
35. Yihong Zhang, "China to Acquire Anti-Ship Missiles," *Jane's Defence Review*, 28 February 2001, p. 29.
36. Robert Sae-Liu, "Beijing Beats Ban on Aircraft Technology," *Jane's Defence Review*, 10 January 2001, p. 17.

37. John Pomfret, "China Signs \$2 Billion Deal for Russian Fighter Jets," *The Washington Post*, 20 July 2001, p. 27.
38. Gertz and Scarborough, "Inside the Ring," *The Washington Times*, 8 June 2001.
39. Yihong Chang, "China Advances FC-1 Development," *Jane's Defence Weekly*, 4 July 2001, p. 5.
40. Bill Gertz, "Chinese Missile Moves Near Taiwan Worry US," *The Washington Times*, 7 June 2001, p.1.
41. Ahrari, "China Eyes NATO's Nuclear Doctrine."
42. Roy Jonkers, *Weekly Intelligence Notes* #30-01, Association of Former Intelligence Officers online news.
43. Bill Gertz, "CIA: Russia, China Working on Information Warfare," *The Washington Times*, 22 June 2001, by Internet.
44. Robert Sae-Liu, "Beijing Aims High," *Jane's Defence Weekly*, 17 January 2001, p. 21.
45. Bill Gertz, "Technology Transfers Detailed for Senate," *The Washington Times*, 22 May 1998, p. A13.
46. Sae-Liu, "Beijing Aims High."
47. Bill Gertz, "China Future Superpower, May be a Threat," *The Washington Times*, 29 August 2001, p. A4.
48. James Dao, "Army to Move Some Weapons Out of Europe," *The New York Times*, 31 August 2001.
49. Damon Bristow, "Cyber-warfare Rages Across Taiwan Strait," *Jane's Intelligence Review*, February 2000, p. 40.
50. Thomas E. Ricks, "Space is Playing Field for Newest War Game" *The Washington Post*, 29 January 2001, p. A1.
51. Ehsan Ahrari, "China Changes Its Strategic Mindset," *Jane's Intelligence Review*, November 1999, p. 43.
52. Kevin A. O'Brien and Joseph Nusbaum, "Intelligence Gathering on Asymmetric Threats," *Jane's Intelligence Review*, October 2000, p. 52.
53. *Encyclopaedia Britannica*, 1974, Macropaedia Vol. 4, p. 406.
54. Ian Bostock, "Asia's Amphibious Capability Assessed," *Jane's Intelligence Review*, October 2000, p. 44.
55. Landing Ship Tank (4,000 tons loaded) and Landing Ship Medium (1,000 tons loaded).
56. John Downing, "China's Military Threat to Taiwan: The Reality Behind Hidden Agendas," *Jane's Intelligence Review*, May 2000, p. 36.
57. *The Military Balance 2000-01*.
58. Gertz and Scarborough, "Inside the Ring," *The Washington Times*, 12 July 2001, p. 8; and Michael R. Gordon, "Secret U.S. Study Concludes Taiwan Needs New Arms," *The New York Times*, 1 April 2001, p. A1.
59. Gertz and Scarborough, "Inside the Ring," 12 July 2001.

60. Downing, "China's Military Threat."
61. Downing, "China's Military Threat." A more recent analysis by Richard L. Russell of the National Defense University suggests that China could launch a missile and airborne assault on Taiwan with only secondary reliance on seaborne forces, which could seize the island in a short period of time. (See: Richard L. Russell, "What If China Attacks Taiwan!" *Parameters*, Autumn 2001).
62. Robert A Manning, "Beijing Rules. But It's Got a Host of Problems," *The Washington Post*, 15 July 2001, p. B1.
63. Erik Eckholm, "Workers' Rights Suffering as China Goes Capitalist," *The New York Times*, 22 August 2001, p. A1.
64. Steven Mufson and Philip P. Pan, "U.S., China Set for More Talks," *The Washington Post*, 29 July 2001, p. A24.
65. Edward B. Atkeson, *The People's Republic of China in Transition: An Assessment of the People's Liberation Army*, Land Warfare Paper No. 29, Association of the United States Army, February 1998, p. 12.
66. Mohan Malik, "Japan Wary of Assertive China," *Jane's Intelligence Review*, December 2000, p. 22.
67. Stephanie Strom, "Japan's Premier Visits War Shrine, Pleasing Few," *The New York Times*, 14 August 2001, p. A1.
68. Robyn Lim, "Toward a New Security Architecture for East Asia," *International Herald Tribune*, 15 August 2001.
69. Dr. Garry Klintworth, "Australia Prompts a Pacific Realignment," *Jane's Intelligence Review*, October 1999, p. 46.
70. Frank Swoboda, "Farewell to Arms for GE's General," *The Washington Post*, 6 September 2001, p. E1.
71. James Adams, "Virtual Defense," *Foreign Affairs*, May/June 2001, pp. 102–103.
72. Richard J. Newman and Kevin Whitelaw, "China: How Big a Threat?" *U.S. News & World Report*, 23 July 2001.
73. Gertz and Scarborough, "Inside the Ring," *The Washington Times*, 3 August 2001; and "Pentagon's China Expert Resigns," *Far Eastern Economic Review*, 16 August 2001.
74. Gertz and Scarborough, "Inside the Ring," 20 July 2001, p. 11.
75. Erik Eckholm, "China Prepares Big Exercise Near Island Facing Taiwan," *The New York Times*, 2 June 2001, p. A6.
76. Bill Gertz, "Pentagon Confirms Defense Talks Between Taiwan, U.S.," *The Washington Times*, 20 July 2001, p. 1.
77. Associated Press, "U.S. Carriers in the South China Sea," 18 August 2001.
78. "Taiwanese General to Visit USA" Asia Pacific–In Brief, *Jane's Defence Weekly*, 15 August 2001, p. 12.