

March 26, 2012

Dr. Mark B. Schneider

Senior Analyst, National Institute for Public Policy

Testimony before the U.S.-China Economic and Security Review Commission

Hearing on “Developments in China’s Cyber and Nuclear Capabilities”

Mr. Chairman and Members of the Commission, thank you for inviting me to speak to you today on what I believe is a very important subject – the nuclear forces and policies of the People’s Republic of China.

The annual Pentagon report on Chinese military power has observed that, “From Beijing’s perspective, strategic ambiguity--including strategic denial and deception--is a mechanism to influence the policies of foreign governments and the opinions of the general public and elites in other countries.”¹ Yet we tend to ignore this when looking at China. China is still a dictatorship and, as such, it is hard to obtain information on official Chinese policy and doctrine. Having said this, I believe we understand the core elements of the PRC’s policy related to nuclear forces although we are far from understanding all the details.

We must remember that Chinese nuclear weapons policy is a subset of a broader national security policy. The Chinese seek to shift dramatically the balance of power in its favor, while reducing the prospect of an enhanced security response by those nations that are threatened by the Chinese military buildup which has seen double digit increases in its expenditures for all but one of the last twenty years.

Until recent (late 2010) announcements starting in December 2010 made by the Russian Federation concerning expanding its nuclear forces, China was the only member of the P-5 which was openly increasing its nuclear forces. Moreover, the Chinese nuclear buildup and modernization must be seen in the context of the more than 80% reduction in U.S. nuclear forces since the end of the Cold War and the end of significant U.S. nuclear force modernization programs in the 1990s. Had China done absolutely nothing during the past twenty years, its relative position vis-a-vis the U.S. would still have improved. Instead, it has been expanding and modernizing its nuclear forces.

I was asked to comment on the size of the Chinese nuclear arsenal. No one knows for sure other than the Chinese. We can only estimate its size. In testimony before the House Armed Services

Committee in November 2011, then-Principal Deputy Under Secretary of Defense James Miller stated that the Chinese nuclear arsenal is estimated to be a few hundred weapons.² The Government of Taiwan's estimate of the Chinese nuclear arsenal is higher. In 2011, the Taiwan's Defense Ministry estimated that China's Second Artillery had between 450 and 500 nuclear weapons.³ The total number of nuclear weapons would, of course, be higher because the Second Artillery does not control the nuclear weapons of the Naval or the Air Forces. (The 2008 Chinese defense White Paper says that the "Second Artillery Force will use nuclear missiles to launch a resolute counterattack against the enemy either independently or together with the nuclear forces of other services."⁴) A 1999 study by the Carnegie Endowment estimated that China had 450 nuclear weapons.⁵ In November 2007, Duncan Lennox, editor of Jane's Strategic Weapons Systems stated, "It would not surprise me to learn that the actual figure [for Chinese nuclear weapons] today is around 400 to 500 and that this will increase to around 700-800 over the next decade."⁶ Russian estimates of China's nuclear arsenal are generally much higher than those of the United States. I suspect that the Taiwan estimate is more accurate than our own and we are currently underestimating the likely scope of the Chinese nuclear program over the next two decades.

I was also asked to comment on the reasons why China would conceal the true size of its nuclear arsenal. Specifically the question read: "If a nation's objective is deterrence, why would that nation conceal the existence of a larger nuclear arsenal?" I believe it is necessary to keep in mind that Chinese objectives are more than simple deterrence. Warfighting plays a significant role in Chinese strategy and denial, deception, and surprise are a major part of warfighting. There are actually many reasons for concealing the size of China's nuclear arsenal: 1) China is not threatened by any attack, nuclear or otherwise, at this time and, hence, has no reason to declare fully its nuclear forces for deterrence purposes; 2) Covert nuclear forces are likely to be more survivable and have greater tactical surprise value if used; 3) Revealing the plans for the buildup of Chinese nuclear forces over the next decade would have no near-term benefit for China; 4) Hiding a large buildup of Chinese nuclear forces will likely reduce the prospects of either countervailing action on the part of the United States, and possibly even Japan, or at least reduce the probability that the U.S. will not make further unilateral reductions; and 5) Since China prefers to talk openly about arms control and reductions by others rather than engage in such negotiations involving its own forces. Chinese secrecy on the scope of its nuclear buildup reduces the prospect that China might be forced to participate in a multilateral version of the New START Treaty, as Russia has suggested.

If U.S.-China relations degenerate to the point of a major crisis where China would want to enhance its nuclear deterrent capability, China could reveal the extent of its nuclear capability at a time of its choosing. There is simply no need to do this today.

With regard to tactical nuclear weapons, concealing the existence of various weapons can have great tactical value. If the existence of a specific type of tactical nuclear capability is known, the scope of the threat can be mitigated by tactics, modes of deployment of military capabilities and nuclear hardening of military equipment. If the existence of these capabilities is successfully hidden, none of this is likely to happen.

I do not think the availability of fissile material will be a significant constraint on China. It is noteworthy that a declassified 1984 DIA report estimated that China had 150-160 nuclear weapons as far back as 1984 and concluded “the number of warheads is not restricted by Chinese materials production, but on what the Chinese perceive their needs to be.”⁷ With the massive Chinese nuclear energy program now underway, China should be able to produce as many nuclear weapons as needed.

Republican Senators on the Foreign Relations Committee in their report on the New START Treaty estimated that the Chinese nuclear force would grow to 600-1,000 weapons over the next decade. I believe we ought to take this assessment seriously. Even a thousand weapons may underestimate the scope of the Chinese nuclear force 10 or 20 years from now.

There is nothing unusual about hiding the full extent of one’s nuclear capability. The Soviet Union did this. After the end of the Cold War, we found out that the Soviet nuclear arsenal was much larger than what we believed it to be during that period.

The PRC is currently increasing its strategic nuclear forces, both qualitatively and quantitatively. The Director of National Intelligence, retired General James Clapper, has said that China’s nuclear forces are a “mortal threat” to the United States. Indeed, China is preparing for a war against Taiwan, which it believes may require it to fight the United States and possibly Japan. While China would certainly prefer “winning without fighting,” Chinese generals have repeatedly threatened nuclear war over Taiwan. Moreover, Chinese strategic objectives go well beyond Taiwan.

According to the Pentagon, China is deploying two new intercontinental ballistic missiles (ICBMs) the DF-31 and DF-31A, developing a new submarine-launched ballistic missile (SLBM) (the JL-2), building a new type of ballistic missile submarine, at least six of which will reportedly be deployed. Taiwan confirmed the reported successful launch of JL-2 SLBMs in December 2011; this development will probably result in the relatively early deployment of these missiles.

In 2011, the Pentagon report on Chinese military power said China has between 55-65 ICBMs. Taiwan’s Defense Ministry estimated that in 2011 China had over 180 “strategic missiles.”⁸ It did not define “strategic missile,” but there still appears to be a significant difference in the numbers estimated by the Pentagon and by Taiwan.

The Chinese deploy mobile ballistic missiles which are protected by hard and deeply buried tunnel facilities. There is no doubt about this. Such facilities are very difficult to destroy. A recent study by Georgetown Professor Philip Karber has concluded that there is an absolutely massive network of tunnels that could conceal a much larger strategic force than the Pentagon estimates to be the case.⁹

The extent of the deployment of multiple independently targetable warheads (MIRVs) on its new missiles will have an enormous impact on the size of the Chinese strategic force over the next 10-20 years. The Pentagon report has discussed Chinese development of MIRVs and China is

reportedly deploying them on modernized versions of its CS-5 ICBMs.¹⁰ According to the most recent Pentagon report on Chinese military power, the PRC may be developing a new road-mobile ICBM, “possibly” capable of carrying a multiple independently targetable warhead (MIRV). This is apparently the missile that is referred to as the DF-41 in the Asian press. *Jane’s* reports that it may carry up to 9-10 warheads. There are reports in the Asian press that China plans to MIRV its SLBMs heavily -- as many as 576 warheads on six submarines -- although no time frame is reported.¹¹ There are reports of a number of advanced versions of the JL-2 and the JL-3 SLBMs which may be references to the same missile or modifications of the same missile.¹²

The Pentagon report on Chinese military power has long said there were a wide variety of advanced strategic missile related research and development programs. The 2011 report reads:

China is also currently working on a range of technologies to attempt to counter U.S. and other countries’ ballistic missile defense systems, including maneuvering re-entry vehicles, MIRVs, decoys, chaff, jamming, thermal shielding, and anti-satellite (ASAT) weapons. PRC official media also cites numerous Second Artillery Corps training exercises featuring maneuver, camouflage, and launch operations under simulated combat conditions, which are intended to increase survivability. Together with the increased mobility and survivability of the new generation of missiles, these technologies and training enhancements strengthen China’s nuclear force and enhance its strategic strike capabilities.¹³

In addition to strategic systems, China has a variety of medium- and intermediate-range ballistic missiles. *Aviation Week* reports that China has announced that its new 4,000-km range ballistic missile will be nuclear capable.¹⁴ In general, China tends to deploy nuclear variants of many of its ballistic missiles that are generally thought of as conventional. An official at Taiwan’s Defense Ministry has said that the Chinese M-11 missile “can fire a variety of warheads ranging from nuclear and chemical warheads to electromagnetic pulse warheads.”¹⁵ According to the Japanese Defense Ministry, the DF-21 medium-range ballistic missile can carry a nuclear warhead.¹⁶ The 2011 Pentagon report on the Chinese military revealed that the DF-21D, China’s anti-ship ballistic missile, was part of China’s nuclear deterrent force.¹⁷ The Chinese DH-10 ground-launched cruise missile is assessed by the Air Force National Air and Intelligence Center as capable of delivering either a conventional or a nuclear warhead.¹⁸

Qing Tong, writing in 2002 in a Hong Kong journal which reportedly has close ties to the PRC military, stated, “China has achieved progress by leaps and bounds in its tactical nuclear weapons, making nuclear weapons practical and facilitating their use in future high-tech, local wars.”¹⁹ In 2002, Russian officers Lieutenant Colonel O. Moiseyenko and Captain 1st Rank A. Smolovskiy wrote that China had “tactical missile warheads and artillery rounds.”²⁰

According to Richard D. Fisher, Jr. and Bill Sweetman of *Aviation Week*, “Chinese sources have referred to future DF-25/26/27 missiles: One may be the new 4,000-km missile. Future PLA [People’s Liberation Army] medium- and short-range ballistic missiles and cruise missiles will be faster and more maneuverable to counter defenses.”²¹ The Hong Kong publication *Chien*

Shao, in an article about a newly promoted Political Commissar of the Second Artillery Corps, reported that he was involved with the “speeding up [of] the research and development of the new Dongfeng 51 (DF-51) missile.”²² Other than the designators, there is no publically available information on these missiles.

Retired Russian Colonel and Member of the Russian Academy of Military Sciences Yuriy Sumbatyan wrote that “as many as 500 or 600” of Chinese combat aircraft “are capable of carrying nuclear weapons.”²³ Until recently, most of these were relatively short-range aircraft. However, starting in the 1990s, the Chinese began the introduction of Su-27 and Su-30 Russian heavy fighters. Reportedly, China has a regiment of H-6 bombers devoted to the nuclear mission.²⁴ The large J-20 stealth fighter is an obvious candidate for a nuclear strike system. There are reports from China that it is developing a stealth bomber which is referred to either as the H-8 or the H-10.²⁵

Over the past two decades China has continued to develop nuclear weapons. China prepared for the cessation of high-yield nuclear testing by staging a series of underground nuclear tests in the 1990s. Yu Min, described in *Xinhua* as the “architect of the country’s first H-bomb,” claims that China’s key nuclear capabilities are “on a par with the United States and the former Soviet Union.”²⁶ This is clearly an exaggeration, but China appears to be working diligently to close the gap. Xue Bencheng, one of the most important scientists involved in the development of China’s neutron bomb, stated that the July 1996 Chinese nuclear test was “a great spanning leap” because it solved the problem of nuclear weapons miniaturization.²⁷ Critically China’s nuclear weapons technology has been augmented by large scale espionage against the United States. The Chinese nuclear arsenal reportedly includes fairly advanced thermonuclear warheads, enhanced radiation weapons, and other tactical nuclear weapons, including nuclear artillery and antiship weapons.²⁸

The House Intelligence Committee concluded that after the declared end of Chinese nuclear testing, “nuclear tests related to development of the PRC’s next generation of thermonuclear warheads may be continuing at the PRC test site at Lop Non Nor.”²⁹ In May 2006, *Chinese Defense Today* also reported possible “low yield nuclear tests” after the declared end of testing.

Chinese nuclear doctrine is hidden beneath significant quantities of what I believe is political propaganda, most notably a pledge of “no first use” of nuclear weapons. The two major elements of what they call their nuclear doctrine are: 1) supposed no first use of nuclear weapons and 2) the “self defense counter attack”.

With regard to “no first use,” a careful look at the Chinese wording of China’s “no first use” policy reveals that it commits them to nothing.³⁰ The Pentagon report on the Chinese military states, “there is some ambiguity” over the conditions under which China’s “no first use” policy would apply, “including whether strikes on what China considers its own territory, demonstration strikes, or high altitude bursts would constitute a first use.”³¹ The *Kyodo News Agency* revealed that it obtained classified Chinese documents which say that China “will adjust the nuclear threat policy if a nuclear missile-possessing country carries out a series of air strikes

against key strategic targets in our country with absolutely superior conventional weapons...³² Chinese generals also threaten nuclear attacks against the U.S. if it comes to the aid of Taiwan. Significantly, China's Arms Control Ambassador once said that "no first use" does not apply to a conflict over Taiwan. Indeed, Chinese nuclear doctrine has evolved toward "active defense," which implies a nuclear warfighting component.

An interview with Chinese Major General Cai Yuqiu, Vice Principal of Nanjing Army Command College, published in *Ta Kung Pao*, an internet version of a PRC-owned daily newspaper, reported "Cai Yuqiu said that he really appreciated the four sentence fight principle by Mao Zedong, i.e., we will not attack unless we are attacked; if we are attacked, we will certainly counter-attack. As to whether we will use nuclear weapons first, the above principle can also be followed. If we have been repeatedly 'attacked,' then there should not be a limit for our counter-attack."³³ Writing in January 2005, Colonel Wen Shang-hsien of the Taiwan military noted that after the year 2000 the PRC adopted a nuclear doctrine which allowed for 'a preemptive strike strategy' under which the PRC would use "its tactical nuclear weapons in regional wars if necessary."³⁴ As one Hong Kong newspaper put it, this means that the People's Liberation Army will "launch the first strike when the enemy starts a military buildup or prepares for a strike in order to destroy all possible military targets and war forces."³⁵

"Self defense counter attack" is a multipurpose formulation the Chinese use to describe most instances where China has initiated the use of force, which is almost always the case. It is worth noting that China described its 1962 invasion of India as "self defense counter attack".³⁶ China described its border war with the Soviet Union in 1969 as a "self defense counter attack."³⁷ It also described its 1979 invasion of Vietnam as a "self defense counter attack."³⁸

The Congressional Commission on the Threat to the United States from Electromagnetic Pulse (EMP) reported, "China and Russia have considered limited nuclear attack options that, unlike Cold War plans, employ EMP as the primary or sole means of attack."³⁹ The 2005 Pentagon report on Chinese military power observed, "Some PLA theorists are aware of the electromagnetic effect of using a high-altitude electromagnetic pulse (HEMP), and might consider using HEMP in an unconventional attack, believing that the United States and other nations would not consider it as a use of force and a crossing of the nuclear threshold."⁴⁰ A Congressional Research Service report by Ronald O'Rourke concluded that a U.S. naval force coming to the aid of Taiwan against a Chinese attack would have to be prepared for use of nuclear weapons and EMP because "China could also use a nuclear-armed ballistic missile to detonate a nuclear warhead in the atmosphere to create a high-altitude electromagnetic pulse (EMP) intended to temporarily or permanently disable the electronic circuits of U.S. or other civilian and military electronic systems."⁴¹

Based on my research, I believe China will use nuclear weapons first if they think it in their national interest to do so.

According to the 2004 White Paper of the Chinese Defense Ministry, the “Chinese people and armed forces will resolutely and thoroughly crush it [Taiwan’s independence] *at any cost*.”⁴² (Emphasis added). In the words of Yan Xuetong, Director of the Qinghua University Institute of International Affairs, “so long as China is ready to achieve reunification at all costs, the United States will consider whether it is necessary to support Taiwan at the price of a nuclear war.”⁴³

We should not mirror image Western views about nuclear weapons onto the Chinese. Indeed, in March 2012 China’s official news agency reported, “After being briefed by Liang Xiaojing, an officer from the PLA Second Artillery Corps, [President] Hu said the PLA Second Artillery Corps shoulders missions that are important for the country, and he expected officers like Liang to play an active role in ideological mobilization to prepare for military actions.”⁴⁴ Ideology is still a major element of Chinese nuclear weapons policy.

Mao’s extreme views about the acceptability of hundreds of millions of dead Chinese is still influencing views in China. For example, in 1996, Lieutenant General Xion Guangkai, then a Deputy Chief of the PRC General Staff, made an implied threat to destroy Los Angeles in the event of a conflict over Taiwan.⁴⁵ He was also quoted as saying that to prevent Taiwanese independence, “China was prepared to sacrifice millions of people, even entire cities in a nuclear exchange...”⁴⁶ In 2005, Chinese Major General Zhu Chenghu threatened nuclear first use against the United States in which, “We Chinese will prepare ourselves for the destruction of all of the cities east of Xian...Of course, the Americans will have to be prepared that hundreds of cities will be destroyed by the Chinese.”⁴⁷ No Western military leaders make threats like this. Will the Chinese act on such a basis in a crisis? I can’t get into their heads and neither can anyone else.

China is most likely to initiate the use of nuclear weapons if it is being defeated in warfare – such as during a Taiwan scenario or because of the scale of damage from conventional precision guided munitions.

China announced years ago that it was going forward with ballistic missile defense. China’s commitment to missile defense was reiterated in the 2010 defense white paper which linked missile defense to its broader strategy of “Active Defense”: “The PLAAF [Peoples Liberation Army Air Force] is working to ensure the development of a combat force structure that focuses on air strikes, air and missile defense, and strategic projection, to improve its leadership and command system and build up an informationized, networked base support system.”⁴⁸ The 2011 edition of the Pentagon report on Chinese military power detailed Chinese missile defense efforts.

China is proceeding with the research and development of a missile defense umbrella consisting of kinetic energy intercept at exo-atmospheric altitudes (>80 km), as well as intercepts of ballistic missiles and other aerospace vehicles within the upper atmosphere. In January 2010, China successfully intercepted a ballistic missile during its mid-course phase of flight, using a ground-based missile.⁴⁹ According to Richard Fischer and Bill Sweetman, China is developing, “A new air- and missile-defense interceptor family, sometimes called the HQ-19 (HHQ-26 for the naval version), [which] reportedly has performance goals similar to the 400-km Russian S-400.”⁵⁰ Longer range radars could upgrade this system into one capable of intercepting ICBMs. In February 2012, the Hong Kong *Wen Wei Po Online*, which is owned by the PRC, reported Chinese interest in buying the Russian S-400 and quoted “Hong Yuan, a famous military science scholar in Beijing” to the effect that “possessing S-400 will play an important role in enhancing China’s missile defense and air defense, but as the missile system has not been tested in actual operations, its technical parameters have yet to be verified in contemporary wars.”⁵¹ It also reported, “The purchase of S-400 will play an important role in enhancing China’s missile defense and air defense power, especially being of high reference significance for intermediate-range to long-range missile defense.”⁵² There is nothing unusual about the Chinese buying a Russian system and attempting to develop a Chinese counterpart with similar or improved capabilities.

The PRC’s nuclear threat is serious not at least because it is in the context of a general military buildup that is aimed at combating the United States and enabling the expansion of Chinese power in the Pacific. With the demise of the Soviet Union, the PRC ceased to face any serious national security threat. China is beginning to throw its weight around and its actions have generated serious security concerns in the Far East. At this moment, Taiwan is not on the front burner but that could change quickly. No other country has increased its military spending by double digits for twenty years with the intent of a “peaceful rise”?

¹ “FY04 REPORT TO CONGRESS ON PRC MILITARY POWER Pursuant to the FY2000 National Defense Authorization Act,” Washington D.C. U.S. Department of Defense, 2004, available at: <<http://www.defense.gov/pubs/d20040528prc.pdf>>.

² “STATEMENT OF DR. JAMES N. MILLER PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE FOR POLICY BEFORE THE HOUSE COMMITTEE ON ARMED SERVICES NOVEMBER 2, 2011,” p. 1, available at: <http://armedservices.house.gov/index.cfm/files/serve?File_id=faad05df-9016-42c5-86bc-b83144c635c9>.

³ “Section 2 PRC Military Capabilities and Threats,” Taipei: Republic of China, Ministry of National Defense, 2011, available at: <<http://2011mndreport.mnd.gov.tw/en/info04.html>>.

⁴ “China’s National Defense in 2008.” Beijing: Information Office of the State Council of the People’s Republic of China, January 2009, available at: <http://www.fas.org/programs/ssp/nukes/2008DefenseWhitePaper_Jan2009.pdf>.

⁵ *China's Changing Nuclear Policy, A Reaction to the South Asian Nuclear Tests*, Washington: D.C.: Carnegie Endowment for International Peace, 1999, available at: <<http://www.ceip.org/pubs/china-zhang/Contents.html>>.

⁶ Duncan Lennox, "Unravelling a Chinese puzzle," *Jane's Defence Weekly*, November 07, 2007.

⁷ "Nuclear Weapons Systems in China," DIA, *Defense Estimate Brief*, April 24, 1984, available at: <<http://www.gwu.edu/~nsarchiv/news/19990527/01-01.htm>>.

⁸ Ibid.

⁹ William Wan, "Georgetown students shed light on China's tunnel system for nuclear weapons," *The Washington Post*, November 29, 2011, available at: <http://www.washingtonpost.com/world/national-security/georgetown-students-shed-light-on-chinas-tunnel-system-for-nuclear-weapons/2011/11/16/gIQA6AmKAO_story.html>.

¹⁰ Gennadiy Nechayev, "In Order To See Better," *Moscow Vzglyad Online*, April 9, 2010. Translated by Open Source Center Doc. ID: CEP20100412358009.

¹¹ Mark Schneider, "The Nuclear Doctrine and Forces of the People's Republic of China," *Comparative Strategy*, July 1, 2009, p. 259, available at: <<http://www.tandfonline.com/doi/abs/10.1080/01495930903025276#preview>>.

¹² Ibid.: Toronto *Kanwa Asian Defense Review Online*, September 1, 2011. Translated by Open Source Center Doc. ID: CPP20111103715031.

¹³ *ANNUAL REPORT TO CONGRESS Military and Security Developments Involving the People's Republic of China 2011*, Washington D.C.: U.S. Department of Defense 2011, p. 34, available at: <http://www.defense.gov/pubs/pdfs/2011_cmpr_final.pdf>.

¹⁴ Bill Sweetman and Richard D. Fisher, Jr., "Air Sea Battle Concept Is Focused On China," *Aviation Week*, April 7, 2011, available at: <http://www.aviationweek.com/aw/generic/story.jsp?id=news/awst/2011/04/04/AW_04_04_2011_p62-99099.xml&headline=AirSea%20Battle%20Concept%20Is%20Focused%20On%20China&channel=awst>.

¹⁵ "Taiwan Report on PRC Missile Buildup to Deter U.S. Forces," Taipei *Taipei Times*, May 7, 2001. Transcribed in Open Source Center Doc. ID: CPP20010507000114.

¹⁶ *ANNUAL REPORT TO CONGRESS Military and Security Developments Involving the People's Republic of China 2011*, op. cit. p. 34.: "Defense of Japan 2011," part, 1, page 78, available at: <http://www.mod.go.jp/e/publ/w_paper/pdf/2011/12Part1_Chapter2_Sec3.pdf>.: "Short-range Campaign Tactical Missiles Deployed in Guangdong," Toronto *Kanwa Asian Defense Review Online*, September 1, 2011 Transcribed by Open Source Center Doc. ID: CPP20111103715037.

¹⁷ Ibid.

¹⁸ "BALLISTIC AND CRUISE MISSILE THREAT," NASIC-1031-0985-09, p. 29, available at: <<http://www.fas.org/programs/ssp/nukes/NASIC2009.pdf>>

-
- ¹⁹ “Comparison of Missile Strength Between China and Taiwan,” *Hong Kong Kuang Chiao Ching*, December 16, 2002. Translated in Open Source Center Doc. ID: CPP200212218000070.
- ²⁰ “China, Russia: PRC Navy Status, Development Prospects Detailed,” *Moscow Morskoy Sbornik*, August 17, 2003. Translated in Open Source Center Doc. ID: CPP20031120000002.
- ²¹ Richard D. Fisher, Jr. and Bill Sweetman, “Sizing Up China’s Military Capability,” *Aviation Week*, April 5, 2011, available at: <http://www.aviationweek.com/aw/jsp_includes/articlePrint.jsp?headLine=Sizing%20Up%20China%27s%20Military%20Capabilities&storyID=news/dti/2011/04/01/DT_04_01_2011_p32-295855.xml>.
- ²² Chin Chien-li, “A Critical Biography of General Peng Xiaofeng, Political Commissar of the Second Artillery Corps,” *Hong Kong Chien Shao*, December 1, 2006-December 31, 2006. Translated by Open Source Center Doc. ID: CPP20061215710002.
- ²³ “Sumbatyan discusses a ‘modernizing’ People’s Liberation Army,” *Moscow Voyenno-Promyshienny Kuryer*, June 30, 2004. Translated in Open Source Center Doc. ID: CEP20040701000368.
- ²⁴ Andreas Rupprecht, “The Dragons’ Wings,” *Air Combat*, February 2012, p. p. 63.
- ²⁵ “Xian H-8 Chinese Stealth bomber,” available at:<<http://www.grandstrategy.com/2007/11/xian-h-8-chinese-stealth-bomber.html>>.: “China’s H-10 stealth bomber secret flight - can carry nuclear bomb,” *China Arsenal*, December 7, 2009, available at: <<http://china-arsenal.blogspot.com/2009/12/chinas-h-10-stealth-bomber-secret.html>>.
- ²⁶ “PRC Nuclear Weapons Researcher Comments on Development of H-Bombs,” *Beijing Xinhua*, December 21, 2005. Transcribed in Open Source Center Doc. ID: CPP20001221000097.
- ²⁷ PRC Chief Engineer of Neutron Bomb Interviewed on Nuclear Weapons Development,” *Chengdu Sichuan Ribao*, June 11, 2001. Translated in Open Source Center Doc. ID: CPP20010613000011.
- ²⁸ “Report of the Select Committee on U.S. National Security and Military/Commercial Concerns with the People’s Republic of China,” available at:<<http://www.access.gpo.gov/congress/house/hr105851-html/ch2bod.html#anchor4309987>>.
- ²⁹ *Report of the Select Committee on U.S. National Security and Military/Commercial Concerns with the People’s Republic of China*, Volume I (unclassified), May 1999, pp. 69-76 and 241.
- ³⁰ “Opinion: The Trouble With China’s Nuclear Doctrine,” *Jane’s Defense Weekly*, February 22, 2006, available at: <http://www.janes.com/defense/news/jdu/jdw060216_1_n.shtml>.
- ³¹ *ANNUAL REPORT TO CONGRESS Military and Security Developments Involving the People’s Republic of China 2011*, op. cit. p. 34
- ³² “Chinese Military Yes Preemptive Nuclear Attack in Event of Crisis,” *Kyodo News Agency*, January 5, 2011, available at: <<http://www.professionalsoldiers.com/forums/showthread.php?t=31796>>.

³³ Wu Pin, "Military Scholar on Tactics Views Defense Issue," *Hong Kong Ta Kung Pao Internet Version*, August 1, 2007. Translated in Open Source Center Doc. ID: CPP20070806710004.

³⁴ Colonel Wen Shang-hsien, "An Investigation into the Impact of the PRC's Use of Nuclear Weapons on both Taiwan and the PRC," *Taipei Ho-sheng-hua Fang-hu Pan-nien-k'an*, January 1, 2005. Translated in Open Source Center Doc. ID: CPP20071030312005.

³⁵ "'Great Wall Project' Said To Deter Taiwan Independence," *Hong Kong Sing Tao Jih Pao*, November 26, 1999. Translated in Foreign Broadcast Information Service Doc. ID: FTS19991227000170.

³⁶ Cheng Feng and Larry M. Wortzel, "PLA Operational Principles and Limited War," in Mark A. Ryah, David M. Finkelstein and Michael A. McDevott. *Chinese Warfighting, The PLA Experience Since 1949*, Armonk NY: M.E. Sharpe, 2003, p. 181.: "Sino-India Border Self-Defense Counter-Attack Battle 1962," *Orbat*, April 7, 2002, available at: <<http://orbat.com/site/history/historical/china/sinoindia1962.html>>.

³⁷ Vivian Yang, "Days Without Whites," *Co/ASIS*, available at: <<http://www.sun oasis.com/whitestory.html>>.

³⁸ Michael D. Swain and Ashley T. Fellis, *Reinterpreting China's Grand Strategy, Past Present and Future*, Santa Monica: Rand Corporation, 2000, p. 77.

³⁹ *Report of the Commission To Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack, Volume 1: Executive Summary*, 2004, available at: <http://www.globalsecurity.org/wmd/library/congress/2004_r/04-07-22emp.pdf>.

⁴⁰ *The Military Power of the People's Republic of China 2005*, Washington D.C.: U.S. Department of Defense, 2005, p. 40 available at: <<http://www.defense.gov/news/jul2005/d20050719china.pdf>>.

⁴¹ Ronald O'Rourke, *China's Naval Modernization: Implications for U.S. Navy Capabilities – Background and Issues for Congress*, Washington D.C.: Congressional Research Service, November 18, 2005, p. CRS-15.

⁴² "Xinhua: 'Full Text' of White Paper titled "China's National Defense, 2004," Beijing *Xinhua*, December 27, 2004. Transcribed in Foreign Broadcast Information Service Doc. ID: CPP200412270000034.

⁴³ Beijing Scholar: China Should Contain Taiwan Independence by Force," Singapore *Lianhe Zaobao*, November 28, 2003. Translated in Open Source Center Doc. ID: CPP20031130000033.

⁴⁴ "Hu Jintao meets PLA officers, professionals," *Xinhua*, March 12, 2012, available at: <<http://english.peopledaily.com.cn/90785/7757331.html>>.

⁴⁵ Patrick Moore, "Asia: China Becoming a Regional Military Threat?" July 22, 2005, available at: <<http://www.rferl.org/featuresarticle/2005/07/71c5f120-4cbd-487f-927c-0d0420df09e0.html>>

⁴⁶ Quoted in Keith Payne, *The Fallacies of Cold War Deterrence and a New Direction*, Lexington: University of Kentucky Press, 2001, p. 128, available at: <<http://books.google.com/books?id=rJ2MD4V84pIC&dq=The+Fallacies+of+Cold+War+Deterrence+and+a+New+Direction&pg=PP1&ots=fjM1veXkKg&sig=3yOJwuK9rFGnEoqo3f5EW0qxbdw&prev=http://www.google.com/search%3Fhl%3Den%26q%3DThe%2BFallacies%2Bof%2BCold%2BWar>>

%2BDeterrence%2Band%2Ba%2BNew%2BDirection%26btnG%3DGoogle%2BSearch&sa=X&oi=print&ct=title#PPP1,M1>.

⁴⁷ Jonathan Watts, "Chinese general warns of nuclear risk to US," *The Guardian*, July 15, 2005, available at: <<http://www.guardian.co.uk/world/2005/jul/16/china.jonathanwatts>>.

⁴⁸ "Full Text: China's National Defense in 2010 (1)," Xinhua: 'Full Text' of China's National Defense in 2010, Beijing *Xinhua*, March 31, 2011. Transcribed by Open Source Center Doc. ID: CPP20110331968049.

⁴⁹ *ANNUAL REPORT TO CONGRESS Military and Security Developments Involving the People's Republic of China 2011*, op. cit. p. 32.

⁵⁰ Fisher, Jr. and Sweetman, "Sizing Up China's Military Capability," op. cit.

⁵¹ Wang Hsiao-hsueh, "Expert Interpretation: Purchase of Russian S-400 Missiles Will Enhance China's Missile Defense," Hong Kong *Wen Wei Po Online*, February 27, 2012. Translated by Open Source Center Doc. ID: CPP20120227787011.

⁵² *Ibid.*