
Chinese Perceptions of the Utility of Nuclear Weapons

Prospects and Potential Problems in Disarmament

In collaboration with the Atomic Energy Commission (CEA)

Jing-dong Yuan

Spring 2010



Security Studies Center

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Proliferation Papers

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Contents

Introduction	9
The Role of Nuclear Weapons in Chinese Defense Posture	11
Nuclear Arms Control and Disarmament	21
Beijing's Views of the Nuclear-Free World	31
Concluding Remarks	37

Introduction

The Obama administration is putting nuclear disarmament back on the agenda. In a major speech in Prague in April 2009, he envisioned a world free of nuclear weapons and called on nations to work toward that end. Reversing years of setbacks and stagnation, Washington and Moscow agreed on renewing negotiation on extending the START I Treaty last year and concluded the New START treaty in March 2010. The 2010 Nuclear Posture Review indicates a shift in U.S. nuclear doctrine in that Washington pledges not to use nuclear weapons against non-nuclear weapons states that abide by the Nuclear Nonproliferation Treaty. The prospects of nuclear disarmament look much promising as the momentum generated could also exert pressure on the second-tier nuclear-weapon States: Britain, France, and China.

Beijing's responses to these developments have been favorable, viewing them as positive contribution to international nuclear disarmament and nonproliferation. In particular China endorses President Obama's call for securing global nuclear materials and safeguarding vulnerable nuclear facilities to prevent nuclear terrorism. However, Chinese perspectives and policies on important international nuclear arms control and disarmament, and on the role of nuclear weapons and nuclear deterrence remain largely declaratory and less specific on its own commitments and participation. Chinese analyses, at the same time, point out the difficulties ahead on the road toward a nuclear weapons free world. Indeed, rhetoric notwithstanding, Beijing continues to modernize its nuclear arsenal to develop a secure and reliable second-strike deterrence capability.

This paper takes a careful look at China's perceptions of the role of nuclear weapons in its national security policy and defense posture. This is important because China is perceived to be the only country among the five original nuclear-weapon States that is actually expanding its nuclear arsenal, as indicated by the recent deployment of the long-anticipated DF-31 and DF-31A long-range ballistic missiles and the *Jin*-class ballistic missile submarines. In addition, China is also developing anti-space weapons and missile defense, as well as cruise missile capabilities. The qualitative as well as quantitative improvements of the Chinese nuclear arsenal raise important questions for the global nuclear balance in 2025 as the United States and Russia implement their nuclear disarmament commitments, further cutting down their nuclear arsenals.

But the more critical question to ask is how Beijing views the utility of nuclear weapons and how and to what extent such perspectives influence China's attitudes toward and participation in multilateral nuclear disarmament. This paper begins with a detailed analysis of Chinese positions on the role of nuclear weapons and of its arms control and disarmament policies. This is followed by a preliminary discussion of Chinese responses to the nuclear-free world initiative. Finally, the paper concludes by offering some recommendations on what needs to take place to remove the obstacles and concerns that may prohibit Beijing from endorsing and participating in efforts toward eliminating nuclear weapons.

The Role of Nuclear Weapons in Chinese Defense Posture

China has long maintained that its nuclear weapons development is largely driven by the need to respond to nuclear coercion and blackmail. Over the years, Beijing has maintained three basic principles that guide its nuclear policy. These are no-first-use, a limited arsenal, and support of complete nuclear disarmament.¹ The role of nuclear weapons, as stipulated in Beijing's official positions and maintained by Chinese analysts, is purely defensive and retaliatory, rather than war-fighting, as some western analysts suggest.²

Following its first nuclear test in 1964, Beijing announced that it would adhere to a policy of no-first-use (NFU) of nuclear weapons and called for worldwide nuclear disarmament. It has adopted a minimal deterrent strategy relying on a small number of nuclear weapons to deliver punitive, counter-value responses in retaliation against an adversary's first strike. Clearly, given the technological and resource constraints it faced at the time, such a posture fit its limited nuclear capabilities. Indeed, many Chinese analysts discussing the no-first-use issue argue that this position has served Chinese strategic interests well since the 1960s, giving Beijing the moral high ground and lending credence to its commitment to the total elimination of nuclear weapons worldwide.

¹ Rong Yu and Hong Yuan, "Cong fanheweishe dao zuidi heweishe zhanlue: zhongguo hezhanglue yanjin zhilu [From Counter-Nuclear Deterrence to Minimum Deterrence: The Evolution of Chinese Nuclear Doctrine]", *Dangdai Yatai [Journal of Contemporary Asia-Pacific Studies]*, No. 3, 2009, pp. 120-132; Yao Yunzhu, "China's Nuclear Strategy", in Yan Xuetong (ed.), *World Politics – Views from China: International Politics*, Beijing: New World Press, 2007; Jia Qingguo, "China's Nuclear Weapon Policy", in Christopher P. Twomey (ed.), *Perspectives on Sino-American Strategic Nuclear Issues*, New York: Palgrave/Macmillan, 2008, pp. 87-92; Sun Xiangli, "Zhongguo hezhanlue xingzhi yu tedian fenxi [China's Nuclear Strategy: Nature and Characteristics]", *Shijie Jingji yu Zhengzhi [World Economics and Politics]*, No. 9, September 2006, pp. 23-28; Li Bin, "Zhongguo hezhanlue bianxi [Analyzing China's Nuclear Strategy]", *Shijie Jingji yu Zhengzhi [World Economics and Politics]*, No. 9, September 2006, pp. 16-22.

² See Alastair Iain Johnston, "China's New 'Old Thinking': The Concept of Limited Deterrence", *International Security*, Vol. 20, No. 3, Winter 1995/96, pp. 5-42, for a discussion of whether or not Chinese nuclear strategists are debating such a doctrinal shift. See also, Michael S. Chase and Evan Medeiros, "China's Evolving Nuclear Calculus: Modernization and Doctrinal Debate", in James Mulvenon and David Finkelstein, (eds.), *China's Revolution in Doctrinal Affairs: Emerging Trends in the Operational Art of the Chinese People's Liberation Army*, Alexandria: The CNA Corporation, November 2005, pp. 119-154.

While NFU remains China's official policy regarding nuclear weapons use, it is clear that Beijing also recognizes the importance of maintaining an effective and reliable strategic force composed of both nuclear and conventional weapons capabilities. Nuclear weapons would be used for strategic retaliation and counterstrikes, while conventional weapons would be used for precision attacks, including long-range strikes against fixed targets or mobile ones such as carrier battle groups in an offensive posture, as well as in defensive, anti-access mode.³ In essence, China's nuclear doctrine, the size of its nuclear arsenal, and scope and speed of its modernization will depend on a host of politico-strategic considerations, Sino-U.S. relations, and developments in the revolution in military affairs (RMA).⁴

China's 2006 Defense White Paper describes at length the country's nuclear doctrine. Reaffirming its long-held NFU principle and calling for the comprehensive prohibition and complete elimination of nuclear weapons, the white paper emphasizes the defensive nature of its nuclear strategy, stating that:

Its fundamental goal is to deter other countries from using or threatening to use nuclear weapons against China. ... China upholds the principles of counterattack in self-defense and limited development of nuclear weapons, and aims at building a lean and effective nuclear force capable of meeting national security needs. It endeavors to ensure the security and reliability of its nuclear weapons and maintains a credible nuclear deterrent force. ... China exercises great restraint in developing its nuclear force. It has never entered into and will never enter into a nuclear arms race with any other country.⁵

This position is reinforced in China's latest white paper on defense, released in January 2009. Specifically, the paper lays out the circumstances in which Beijing may contemplate the use of nuclear weapons in retaliation against nuclear attacks against it.

In peacetime the nuclear missile weapons of the Second Artillery Force are not aimed at any country. But if China comes under a nuclear threat, the nuclear missile force of the Second Artillery Force will go into a state of alert, and get ready for a

³ Bates Gill, James Mulvenon, and Mark Stokes, "The Chinese Second Artillery Corps: Transition to Credible Deterrence", in James C. Mulvenon and Andrew N.D. Yang (eds.), *The People's Liberation Army as Organization*, Santa Monica: RAND, 2002, pp. 510-586; Mark Stokes, *China's Evolving Conventional Strategic Strike Capability: The Anti-Ship Ballistic Missile Challenge to U.S. Maritime Operations in the Western Pacific and Beyond*, September 2009, available at: http://project2049.net/documents/chinese_anti_ship_ballistic_missile_asbm.pdf.

⁴ See Jeffrey Lewis, *The Minimum Means of Reprisal: China's Search for Security in the Nuclear Age*, Cambridge: The MIT Press, 2007.

⁵ Information Office of the State Council of the People's Republic of China, "China's National Defense in 2006", Beijing, December 29, 2006, available at: english.peopledaily.com.cn/whitepaper/defense2006/defense2006.html.

nuclear counterattack to deter the enemy from using nuclear weapons against China. If China comes under a nuclear attack, the nuclear missile force of 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.⁶

PLA analysts emphasize that the terms “nuclear strategy” and “nuclear doctrine” are rarely used in Chinese strategic discourse; instead, a more commonly used term refers to “nuclear policy”, which in turn is governed by the country’s national strategy. Hence, the deployment and use of nuclear weapons are strictly under the “supreme command” of the Communist Party and its Central Military Commission. Nuclear weapons are for strategic deterrence only; no tactical or operational utility is entertained. If and when China is under a nuclear strike, regardless of the size and the yield, it warrants strategic responses and retaliation. One could infer from such declaratory rhetoric that Beijing’s understanding of “strategic”, and hence the condition under which nuclear weapons will be used, is determined less by the types of weapons involved than by the overall geo-strategic considerations.⁷ Chinese leaders and military strategists consider the role for nuclear weapons as one of defensive nuclear deterrence (*ziwei fangyu de heweishe*).⁸ However, research has indicated that China has in the past engaged in the development of tactical nuclear weapons and some of its nuclear-capable MRBMs such as the DF-21A apparently could reach targets within a range that typically would fall in the area of tactical rather than strategic use.⁹

Major General (ret.) Pan Zhenqiang, a former director of the Institute of Strategic Studies at the PLA National Defense University and a prolific writer on nuclear strategy and nuclear disarmament, argues that while China’s possession of nuclear weapons has deterrent impact on whoever should contemplate nuclear strikes against it, the country does not pursue a strategy of nuclear deterrence in that nuclear weapons become part of military capabilities to be used to achieve certain political objectives such as coercion or blackmail, or simply to threaten others with nuclear intimidation. Pan further suggests that the NFU pledge “has not only reflected the nature and missions of China’s nuclear forces, but also

⁶ Information Office of the State Council of the People’s Republic of China, “China’s National Defense in 2008”, available at: http://www.fas.org/programs/ssp/nukes/2008DefenseWhitePaper_Jan2009.pdf.

⁷ Yao Yunzhu, “Chinese Nuclear Policy and the Future of Minimum Deterrence”, in Twomey (ed.), *Perspectives on Sino-American Strategic Nuclear Issues*, op. cit., pp. 111-24.

⁸ Yao Yunzhu, “China’s Nuclear Policy”, in Yan Xuetong, (ed.), *World Politics – Views from China: International Politics*, Beijing: New World Press, 2007; “Summary of Key Findings”, Conference on U.S.-China Strategic Nuclear Dynamics, Beijing, June 20-21, 2006, available at: www.csis.org/media/isis/events/060620_china_nuclear_report.pdf.

⁹ Charles D. Ferguson, Evan S. Medeiros, and Phillip C. Saunders, “Chinese Tactical Nuclear Weapons”, in Brian Alexander and Alistair Millar (eds.), *Tactical Nuclear Weapons: Emerging Threats in an Evolving Security Environment* Washington: Brassey’s Inc., 2003, pp. 110-126.

determines the size, configuration, readiness, and pace of development of China's nuclear forces".¹⁰ However, this may only partially explain the glacial pace with which China has introduced, modified, and modernized its small-size nuclear arsenals over the past four decades. Mainly guided by the principle that nuclear weapons will only be used (but used in a rather indiscriminate way) if China is attacked with nuclear weapons by others, nuclear weapons in China's defense strategy serve political rather than military purposes.¹¹ At the same time, one could also argue that technological impediments and competing demands for finite financial resources have hampered Chinese efforts in nuclear weapons modernization in the past.

Chinese views on nuclear deterrence for a long time have been quite ambivalent. Indeed, until recently, Beijing outright rejected the concept of deterrence, regarding it as an attempt by the superpowers to compel others with the threat of nuclear weapons. As pointed out by two Chinese military analysts,

As a matter of fact, China has never endorsed the concept of deterrence – the conceptual basis for the MAD situation. In China's view, deterrence implies a certain legitimacy of nuclear weapons, thereby running contrary to the objective of nuclear disarmament that China has consistently sought. Deterrence also generates fears of being overtaken by other side(s), and the breaking of the balance. It is the source of the endless nuclear arms race. China, therefore, seeks to change the irrational situation exactly through first casting away the concept of deterrence and the utility of nuclear weapons".¹²

In addition, Chinese analysts point out that unlike conventional deterrence, nuclear deterrence depends less on the size of the arsenal than the ability to ensure second strikes after absorbing a first attack. However, this characterization of nuclear deterrence ignores the fact that the credibility of nuclear deterrence depends as much on the resolve to use nuclear weapons as on the ability to respond to military attacks in a discriminate fashion. For instance, they argue that such thinking was behind the development of multiple layers of deterrence and types of arsenals aimed at achieving escalation dominance and/or conflict

¹⁰ Pan Zhenqiang, "China's Nuclear Strategy in a Changing World Strategic Situation", in Barry Blechman (ed.), *Unblocking the Road to Zero: China and India* Washington: The Stimson Center, March 2009, p. 30.

¹¹ Wang Zhongchun, *Hewuqi, Heguoqia, Hezhanlue* [Nuclear Weapons, Nuclear Powers, and Nuclear Strategies] Beijing: Shishi chubanshe, 2007; Sun Xiangli, "Zhongguo hezhanlue pingxi" [China's Nuclear Strategy], in China Arms Control and Disarmament Association, 2005: *Guoji Junbei Kongzhi yu Caijun Baogao* [2005 Yearbook on International Arms Control and Disarmament], Beijing: Shijie Zhishi Chubanshe [World Affairs Press], 2005, pp. 213-20; Jia Qingguo, "China's Nuclear Weapon Policy", in Twomey (ed.), *Perspectives on Sino-American Strategic Nuclear Issues*, op. cit., pp. 87-92.

¹² Zhong Jing and Pan Zhenqiang, "Redefining Strategic Stability in a Changing World: A Chinese View", *Contemporary Security Policy*, Vol. 25, No. 1, April 2004, p. 134.

termination, leading to ever growing nuclear arsenals of the two superpowers during the Cold War. In recent writings, Chinese analysts have noted the role and stability that MAD provided between the United States and the Soviet Union in the Cold War context while at the same time pointing out that such “balance of terror” ran into serious problems and contradictions ranging from strategic goals and means, nuclear umbrellas for allies, to the very morality of nuclear weapons use.¹³ Hence, even when China’s economic growth enables the expansion of its nuclear arsenal, Beijing continues to keep the size relatively small. At the same time, with the changing international security environment and developments in conventional weapons, it is also noted that China needs to adjust the number of its nuclear weapons, and to enhance their security, reliability, mobility, and their ability to survive attacks and penetrate defenses.¹⁴

Chinese nuclear doctrine and force modernization have been informed and guided by three general principles: effectiveness (*youxiaoxing*), sufficiency (*zugou*), and counter-deterrence (*fanweishe*).¹⁵ China’s 2006 Defense White Paper emphasizes developing land-based strategic capabilities, both nuclear and conventional, but provides no specifics on the existing arsenal, the structure of the Second Artillery Corps (SAC, which is China’s strategic nuclear force) order of battle, or the projected size of the nuclear force. It indicates only that China will continue to maintain and build a lean and effective nuclear force. While Chinese analysts acknowledge that deterrence underpins China’s nuclear doctrine, it is more in the sense of preventing nuclear coercion by the superpower(s) without being coercive itself, and hence it is counter-coercion. Rather than build a large nuclear arsenal when resources and relevant technologies have become available as the superpowers pursued during the Cold War, the size of Chinese nuclear weapons has remained modest and compatible with its doctrine of minimum deterrence.¹⁶

China continues to modernize its nuclear arsenal, focusing specially on the survivability and effectiveness of a credible second-strike capability.¹⁷ To that goal, efforts are under way to develop and deploy new-

¹³ Wang Zhongchun, *He Wuqi, He Guojia, He Zhanlue* [Nuclear Weapons, Nuclear Weapons States, and Nuclear Strategies], Beijing: Shishi Chubanshe, 2007, chap. 7.

¹⁴ Sun Xiangli, “Zhongguo hezhanlue xingzhi yu tedian fenxi [China’s Nuclear Strategy: Nature and Characteristics]”, *op. cit.*

¹⁵ Yao, “China’s Nuclear Strategy”; CSIS, “Summary of Key Findings.”

¹⁶ Rong and Hong, “From Counter-Nuclear Deterrence to Minimum Deterrence”; Wu Zhan, “Heweishe [Nuclear Deterrence]”, *Meiguo Yanjiu* [American Studies], Spring 1988, pp. 16-22; Dingli Shen, “China’s Nuclear Perspective: Deterrence Reduction, Nuclear Non-Proliferation, and Disarmament”, *Strategic Analysis*, Vol. 32, No. 4, July 2008, pp. 637-653; Yao, “Chinese Nuclear Policy”. Jeffrey Lewis characterizes China’s nuclear doctrine as one of maintaining “the minimum means of reprisal”. Lewis, *The Minimum Means of Reprisal*, *op. cit.*

¹⁷ However, some suggest that China’s nuclear arsenal has actually increased at least two-fold in the last years and could continue to expand in the coming decades. Michael D. Maples, Director, Defense Intelligence Agency, “Annual Threat Assessment: Statement before the Committee on Armed Services, United States Senate, March 10, 2009; remarks at the Carnegie International

generation land- and submarine-based ballistic and cruise missiles. A review of the literature and discussions of both U.S. and Chinese analysts suggest that the Chinese focus is on missile rather than warhead development. One possible reason for such a choice is that missile modernization emphasizes dual capability – they will be equipped with both nuclear and conventional warheads to give China an option in the future of not resorting to nuclear weapons in case of a conventional attack.¹⁸ Among the five nuclear-weapon States, China claims to maintain the smallest number of operational nuclear weapons. The most recent publicly available sources estimate that China's current nuclear forces consist of approximately 186 deployed warheads and reportedly about 240 weapons in total when additional warheads in the stockpile are counted.¹⁹ China's strategic arsenal is deployed on a triad that includes 134 land-based missiles, 40 strategic bombers, and 12 submarine-launched ballistic missiles on board the *Xia*-class SSBN. However, should the newly deployed *Jin*-class nuclear-powered submarine reach "initial operational capabilities," they will be carrying 12 JL-2 SSBNs each, the number of China's strategic nuclear arsenal could increase by 36 to 60 warheads over the next few years.²⁰ Of this relatively small but growing arsenal, only a limited number of missiles (about two dozen) are capable of striking targets throughout the continental United States (compared to the hundreds of U.S. missiles that could strike Chinese targets). However, this could change as additional DF-31s and DF-31As are deployed in the coming decade. In addition, China's medium-range ballistic missiles, such as the DF-4 and DF-21, could effectively reach U.S. bases in Guam and Japan.²¹

With the end of the Cold War and emerging new challenges that China faces, Chinese analysts have been engaged in debates and discussions on whether the new security environment and China's own security needs require modifications of the long-held "minimum deterrence" posture. In a seminal 1996 article published in *International Security*, Alastair Iain Johnston pointed out that Chinese nuclear thinking was shifting

Nonproliferation Conference, panel on U.S.-China strategic stability, Washington, April 6, 2009, available at: http://www.carnegieendowment.org/files/npc_us_china3.pdf.

¹⁸ Wang Zhongchun and Liu Ping, "Shilun lengzhanhou de shijie hetaishi [An Analysis of the Post-Cold War Global Nuclear Posture]", *Shijie Jingji yu Zhengzhi* [World Economics & Politics] No. 5, 2007, pp. 6-13; Jeffrey G. Lewis, "Chinese Nuclear Posture and Force Modernization", *The Nonproliferation Review*, Vol.16, No. 2, July 2009, pp. 197-209; Michael S. Chase, Andrew S. Erickson, and Christopher Yeaw, "Chinese Theater and Strategic Missile Force Modernization and Its Implications for the United States", *The Journal of Strategic Studies*, Vol. 32, No. 1, February 2009, pp. 67-114.

¹⁹ Shannon N. Kile, Vitaly Fedchenko and Hans M. Kristensen, "World Nuclear Forces", *SIPRI Yearbook 2009: Armaments, Disarmament and International Security*, Oxford: Oxford University Press, 2009, pp. 364-367.

²⁰ Hans M. Kristensen, "New Chinese SSBN deploys to Hainan Island", *FAS Strategic Security Blog*, Federation of American Scientists, 24 April 2008, available at: <http://www.fas.org/blog/ssp/2008/04/new-chinese-ssbn-deploys-to-hainan-island-naval-base.php>.

²¹ Toshi Yoshihara and James R. Holmes, "China's New Undersea Nuclear Deterrent: Strategy, Doctrine, and Capabilities", *Joint Forces Quarterly*, Vol. 50, Third Quarter, 2008, pp. 31-38; Reuters, "U.S. Voices Concerns over China Nuclear Weapons Plans", June 4, 2008.

from a minimum to a limited deterrence posture. He cited internal and published Chinese military analysts to this effect; at the same time, he also pointed out that such a shift would require significant changes in China's overall arsenal so as to enable flexible and hence credible use of nuclear weapons under various contingencies.²² Chinese analysts have by and large dismissed such a dichotomy; however, from the recent Chinese defense white papers and Chinese discussions of nuclear strategy, there is clearly a recognition of the moral dilemma and the credibility of a deterrence based on counter-value use of nuclear weapons and hence the emphasis on developing a more credible and effective conventional missile strike capability.²³ Chinese military textbooks and internal discussion also began to discuss a wide range of issues related to nuclear weapons, including tactical nuclear weapons. Questions related to the size of the nuclear force and composition, mobility and survivability, command and control, among others, were raised. And increasingly the subject of whether the NFU pledge should be modified is being raised if not rejected. The primary Chinese concern is whether effective counter-nuclear deterrence could be preserved under the new security environment, where the US could take benefit of long-range precision conventional missile attacks, missile defenses, and space dominance.²⁴

Prevailing Chinese nuclear threat perceptions in recent years have revolved around at least four issues: the 2001 U.S. Nuclear Posture Review (NPR) and its inclusion of China as one of the seven target countries; U.S. missile defenses, in particular as they are deployed in the East Asian region; space weaponization; and U.S. ability to use precision-guided conventional weapons to attack Chinese nuclear infrastructure. Given China's small nuclear arsenal and weaknesses of its current ICBM inventory, which is very old (deployment of modern weapons is only beginning), U.S. missile defenses in East Asia could threaten to neutralize Chinese nuclear deterrence capabilities. Washington's declared policy to maintain space dominance and the danger of weaponization of outer space further erode Chinese confidence.²⁵ However, while Beijing publically advocates for international treaty banning weaponization of outer space and objects to U.S. missile defenses, it nonetheless began its own ASAT and missile defense programs, culminating in a 2007 ASAT test and a recent successful missile defense intercept.²⁶ Clearly, China has

²² Alastair Ian Johnston, "China's New 'Old Thinking: The Concept of Limited Deterrence", *op. cit.*

²³ Sun Kuaiji, "Cong 'hebaofu' dao 'hechang liangyong'—xinshiqi wo zhanluedaodan budui de zhanlue zhuanbian [From 'Nuclear Retaliation' to 'Nuclear-Conventional Dual-use'—the Strategic Transition of the Strategic Missile Forces in the New Era]", *Ban Yue Tan [News Bi-monthly]*, No. 1, 2000; Rong and Hong, "From Counter-Nuclear Deterrence to Minimum Deterrence", *op. cit.*

²⁴ Chase *et al.*, "Chinese Theater and Strategic Missile Force Modernization and its Implications for the United States", *op. cit.*

²⁵ Wang Zhongchun, "Nuclear Challenges and China's Choices", *China Security* Vol. 5, Winter 2007, pp. 52-65.

²⁶ "China's Successful Anti-Missile Test", *Strategic Comments*, Vol. 16, February 2010; Ashley J. Tellis, "China's Military Space Strategy", *Survival*, Vol. 49, No. 3, Autumn 2007, pp. 41-72; Ian Easton, *The Great Game in Space: China's Evolving ASAT Weapons Programs and Their Implications for Future U.S. Strategy*,

determined that it is necessary to develop at a minimum an asymmetrical capacity even as it pursues diplomatic initiatives in preventing space weaponization.

And finally, China's no-first use (NFU) policy would be seriously challenged if potential adversaries could use precision-guided munitions to preventively attack its nuclear facilities and forces. This assessment of the security environment has generated internal discussions within China on the role of nuclear weapons and the viability of sustaining the NFU policy. Clearly, given the recent developments, in particular the U.S. attempts to maintain its overwhelming conventional capabilities while at the same time developing missile shields and even new nuclear warheads, Beijing wants to: (1) maintain the credibility of its nuclear deterrent by improving the survivability of its nuclear missiles; (2) develop the capacities to respond to various contingencies, including a scenario of conventional strikes; and (3) sustain the NFU unilateral obligations under the new security environment.²⁷

As Chinese analysts have often emphasized, China's nuclear force serves only two purposes. One is to deter a potential enemy's nuclear use and threats of use; the other is to retaliate against any nuclear first strike against China. It is not clear how Chinese nuclear force would be applied in circumstances where its vital national security interests (e.g., Taiwan) are threatened and conventional deterrence and use would fall short of preventing either Taipei from actions that are considered to be moving toward *de jure* independence or the United States from intervention. One cannot dismiss out of hand that there could be a third, undeclared, objective, that is to deter or to delay any initiative or endeavor (especially from the U.S.) threatening Chinese "vital interests" (regarding Taiwan for instance, China could threaten an escalation). While NFU remains a guiding principle for the SAC, it is less clear when and what would be considered as enemy first use that would invite Chinese retaliation without violating its own NFU principle. Since China will not be the first one to use nuclear weapons, it has to be able to protect its own assets/forces to ensure some degree of survival so that a counter-attack can be launched. In addition, given the small size of its arsenal and the fact that a first enemy strike would presumably further reduce that size, China has to consider where it will use its remaining weapons for retaliation. Target selection then becomes critical. However, the challenges are how to engage in low-level nuclear conflicts without running the risk of escalation, say, in a Taiwan or west-Pacific scenario, and how to respond to conventional strikes, including on its nuclear arsenals.²⁸

Washington : Project 2049 Institute, undated, available at: http://project2049.net/documents/china_asat_weapons_the_great_game_in_space.pdf.

²⁷ Peng Guangqian and Rong Yu, "Nuclear No-First-Use Revisited", *China Security*, Vol. 5, No. 1, Winter 2009, pp. 78-87.

²⁸ Forrest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century*, Santa Monica: RAND, 2008, chapter 3.

U.S. assessments of China's nuclear doctrine, force structure, and the size of its arsenals suggest that Beijing is moving away from the traditional minimum deterrence toward developing and deploying a credible and effective nuclear force, in particular with the deployment in recent years of new-generation, road-mobile, and solid-fueled strategic and theater ballistic and cruise missiles, as well as the *Jin*-class SSBNs. While China's 2008 Defense White Paper maintains that the no-first-use position remains unchanged, the Pentagon's latest report on China's military power questions the conditions under which the NFU will be upheld. In addition, it also notes the challenges that the Chinese military will likely face in command and control regarding nuclear use, following the steps taken by the SAC in order to reduce its vulnerability. Indeed, there are suggestions that a more mobile and survivable Chinese nuclear force does not necessarily contribute to crisis stability notwithstanding the conventional wisdom.²⁹

Given China's nuclear posture and its avowed position of NFU, nuclear warheads and ballistic missiles are typically separated (as stated in the 2008 Defense White Paper), a different type of readiness than either launch on warning (LOW) or launch under attack (LUA). However, this does not mean that China will not seek to develop and eventually adopt a more launch-ready posture as it modernizes its nuclear arsenal. The deployment of an effective and operational sea-leg of its deterrent in the next five to ten years could raise new questions about LUA. Should China continue to improve its early warning capabilities and assure survival of its nuclear arsenal even after absorbing a disarming first strike, Beijing could be expected to support the proposed de-alerting to alter the current hair-trigger status of superpowers' nuclear weapons readiness.³⁰

While the key tenets of China's nuclear doctrine have remained more or less unchanged over the past four decades since its first nuclear test in 1964, such as its official position on no-first-use and the maintenance of a small arsenal, there is increasing debate – although at this moment it is confined to academic rather than official discussion – on what nuclear posture China should adopt given the changing international and regional security environments. This latter change is informing, and at the same time being determined by developments in the country's nuclear modernization, in particular in the improvements made to its inventory of delivery means, both land- and submarine-based. These efforts have been first and foremost driven by the need to secure a credible and survivable nuclear retaliatory capability by moving from silo-based and liquid propellant launch mode to road-mobile and solid-fuel based one. Western

²⁹ Department of Defense, *Military Power of the People's Republic of China 2009*; Mark Schneider, "The Nuclear Doctrine and Forces of the People's Republic of China", *Comparative Strategy*, Vol. 28, No. 3, July 2009, pp. 244-270; Chase *et al.*, "Chinese Theater and Strategic Missile Force Modernization and its Implications for the United States", *op. cit.*

³⁰ Chase *et al.*, "Chinese Theater and Strategic Missile Force Modernization", *op. cit.*; Toshi Yoshihara and James R. Holmes, "China's New Undersea Nuclear Deterrent: Strategy, Doctrine, and Capabilities", *Joint Forces Quarterly*, Vol. 50, Third Quarter, 2008, pp. 31-38.

analysts suggest that “with the introduction of the DF-31 and DF-31A road-mobile intercontinental ballistic missiles (ICBMs) and the JL-2 missiles on Jin SSBNs, China is thus on the verge of achieving a credible nuclear deterrent based on a survivable second-strike capability”.³¹

Secondly, China’s nuclear modernization is also a function of how Beijing perceives the imminent and over the horizon developments in other nuclear weapons states that could threaten to undermine its nuclear deterrence. These would include missile defenses, space-based weapons, and conventional long-range precision strike capabilities, among others. To a significant extent, the pace and scope of Chinese modernization efforts will be influenced by these developments. At a minimum, Beijing seeks to retain an ability to retaliate after absorbing either a first nuclear strike or a conventional one that is aimed at its nuclear arsenal. And finally, Chinese programs in developing multiple platforms – ballistic and cruise missiles that could be launched from land, sea and air, with either nuclear or conventional warheads, will continue to enhance China’s overall nuclear deterrence capabilities but at the same time impose significant demands on command and control, early warning, and reconnaissance. These developments, while driven largely by China’s needs for maintaining the credibility of its nuclear deterrence, could lead to misinterpretation or misunderstanding, such as being interpreted by other major nuclear weapons states as efforts toward achieving parity, especially at a time when the latter are drawing down their arsenals.³²

³¹ Andrew S. Erickson and Michael Chase, “An Undersea Deterrent?” *Proceedings* Vol. 135, No. 6, June 2009, available at: http://www.usni.org/magazines/proceedings/story.asp?story_id=1907

³² Bill Gertz, “Gates Wants Nuclear Talks with China”, *Washington Times*, January 21, 2010, available at: <http://www.washingtontimes.com/news/2010/jan/21/gates-wants-nuclear-talks-with-china/>

Nuclear Arms Control and Disarmament

China is no stranger to the idea of nuclear disarmament. Beijing called for complete prohibition and thorough destruction of all nuclear weapons on the very same day it conducted its first nuclear test – October 16, 1964. That position has remained unchanged over the past forty-six years, even though the global strategic landscape has undergone multiple changes and transformation. In a recent speech at an international conference on arms control and disarmament, a high-ranking Chinese diplomat argued emphatically that if mankind could invent nuclear weapons in the twentieth century, surely it can eliminate them in the twenty-first.³³ China's 2008 Defense White Paper reiterates the position that "China holds that all nuclear-weapon States should make an unequivocal commitment to the thorough destruction of nuclear weapons, undertake to stop research into and development of new types of nuclear weapons, and reduce the role of nuclear weapons in their national security policy".³⁴ In addition, the Chinese government has also proposed measures calling for abandonment of the policy and practice of providing a "nuclear umbrella" through extended deterrence, and pledges by nuclear-weapon States not to develop new types of nuclear weapons and to renounce nuclear first use.³⁵ One of the issues that could arise from such a dismissal of extended deterrence and has yet to be addressed in Chinese analysis is what impact this would have on some of U.S. allies such as Japan and South Korea in facing a North Korean nuclear threat and/or a potential security challenge from China.

³³ The 11th PIIC Beijing Seminar on "International Security: Building a Harmonious World of Stability and Win-Win", Qingdao, China, October 26-30, 2008.

³⁴ Information Office of the State Council of the People's Republic of China, "China's National Defense in 2008", January 2009, available at: http://www.gov.cn/english/official/2009-01/20/content_1210227.htm

³⁵ "Recommendations for achieving the objective of nuclear disarmament and non-proliferation of nuclear weapons", working paper submitted by China, Disarmament Commission, United Nations, 2006 substantive session, April 10-28, 2006, A.CN.10/2006/WG.I/WP.3; available at: [http://disarmament.un.org/library.nsf/0bb8a163b66d627f85256beb0073f596/142743dd5842b10e8525732200559d51/\\$FILE/a-cn10-2006-wgi-wp3.pdf](http://disarmament.un.org/library.nsf/0bb8a163b66d627f85256beb0073f596/142743dd5842b10e8525732200559d51/$FILE/a-cn10-2006-wgi-wp3.pdf)

Beijing's participation in nuclear arms control and disarmament is predicated on the perceived benefits and potential constraints on China's national security. In general, Chinese positions tend to be declaratory and emphasize that the two nuclear superpowers bear major responsibilities in deep reductions of their arsenals in a verifiable and irreversible manner. In addition, Beijing calls on nuclear weapons states to abandon the doctrine of nuclear deterrence based on nuclear first use. Furthermore, China supports early entry into force of the CTBT even though it has yet to ratify the treaty.³⁶ While critical of deterrence, China nonetheless is strengthening its own nuclear second strike capability. Yet, according to a retired PLA general, "the most basic feature of China's nuclear strategy, in a nutshell, is to be a deterrent but present no threat".³⁷ Chinese officials and analysts also maintain that the key is to maintain what they describe as strategic stability. Any unilateral attempt to disrupt and undermine such stability, either at the global or regional level, will lead not to disarmament, but to countermeasures at best and arms races at worst.³⁸ As discussed above, China has long maintained a no-first-use (NFU) stand, and has called on other nuclear-weapons States to adopt the same position. In addition, China has pledged negative security assurance (NSA) to non-nuclear-weapon States of the Nonproliferation Treaty and the nuclear weapons free zones. These are positions of long-standing. However, less clear is how Beijing views the legitimacy and role of nuclear weapons in its own national defense apart from statements on their defensive nature. While Chinese positions oppose deployment of nuclear weapons on foreign soils, it is not obvious, in the case of U.S. extended deterrence to its East Asian allies, that a weakening of such commitments would benefit Chinese interests. On the contrary, withdrawal of U.S. extended deterrence could actually induce Japan and perhaps South Korea, to seriously re-consider their nuclear options.³⁹

Chinese diplomats and analysts in particular draw attention to four key steps critical to successful nuclear disarmament: the Comprehensive Nuclear-Test-Ban Treaty (CTBT), Fissile Material Cutoff Treaty (FMCT), treaty on the Prevention of an Arms Race in Outer Space (PAROS), and negative security assurances (NSA).⁴⁰ The first two would restrict the development of nuclear weapons in both quantitative and qualitative ways. The third prevents a potential arms race in a new arena, and the last gives

³⁶ "Statement by Mr. Kang Yong, Head of the Chinese Delegation, at the General Debate of the United Nations Disarmament Commission", New York, March 29, 2010, <http://www.fmprc.gov.cn/eng/zxxx/t676205.htm>; Bates Gill, "China and Nuclear Arms Control: Current Positions and Future Policies", *SIPRI Insights on Peace and Security*, no. 2010/4.

³⁷ Chris Buckley, "China Military Paper Spells Out Nuclear Arms Stance", Reuters, April 22, 2010, <http://www.reuters.com/article/idUSTRE63L0PR20100422>.

³⁸ Zhong Jing and Pan Zhenqiang, "Redefining Strategic Stability in a Changing World: A Chinese View", *op. cit.*

³⁹ Michael J. Green and Katsuhisa Furukawa, "Japan: New Nuclear Realism", pp. 347-372 and Kang Choi and Joon-sung Park, "South Korea: Fears of Abandonment and Entrapment", pp. 373-403, in Muthiah Alagappa (ed.), *The Long Shadow: Nuclear Weapons and Security in 21st Century Asia*, Stanford: Stanford University Press, 2008; Llewelyn Hughes, "Why Japan Will Not Go Nuclear (Yet)", *International Security*, Vol. 31, No. 4, Spring 2007, pp. 67-96.

⁴⁰ Chinese diplomat speaking at the 11th PIIC Beijing Seminar.

assurance to non-nuclear-weapon States that nuclear-weapon States would not use or threaten to use nuclear weapons against them, therefore removing fear (and incentives) from non-nuclear-weapon States which might pursue nuclear weapons in response to nuclear coercion or blackmail.

In its 2008 Defense White Paper, China calls on all nuclear-weapon States to “stop research into and development of new types of nuclear weapons, and reduce the role of nuclear weapons in their national security policy”. In principle it supports efforts to start the negotiation on a fissile materials cut-off treaty (FMCT) although for years it has sought to link negotiation on banning weapons in outer space and fissile materials at the Conference on Disarmament (CD).⁴¹ China has also signed but has not yet ratified the Comprehensive Test Ban Treaty (CTBT), which should eventually impose significant constraints on its ability to develop new nuclear weapons. It is believed to have stopped producing weapons-grade highly enriched uranium (HEU) and military plutonium, although it retains a stockpile sufficient in quantities for future expansion of its nuclear arsenal should the need arise. Publically available non-governmental estimates of China’s stocks of weapon-grade uranium are between 17 to 26 tons and 2.3-3.2 tons of plutonium.⁴²

In a recent speech at the CD, Chinese foreign minister Yang Jiechi reiterated Chinese positions on the need to maintain international strategic balance and stability and on a range of specific disarmament issues ranging from CTBT entry into force to negotiation on an FMCT at the CD. He emphasized that “nuclear-weapon States should reduce the role of nuclear weapons in their national security and commit themselves to no-first-use of nuclear weapons as early as possible”. In addition, he also pointed out that securing outer space from weaponization serves the interests of all nations.⁴³ While one readily acknowledges that China has come a long way in embracing the concept of security interdependence and has shown a willingness to participate in multilateral security arrangements, when it comes to nuclear arms control and disarmament, Beijing has taken very cautious steps – such as signing without ratifying the CTBT and placing a moratorium on fissile material production – due to its relatively

⁴¹ Lisbeth Gronlund, David Wright, and Yong Liu, “China and a Fissile Material Production Cut-Off”, *Survival*, Vol. 37, No. 4, Winter 1995-96, pp. 147-167; Paul Meyer, “Breakthrough and Breakdown at the Conference on Disarmament: Assessing the Prospect for an FM(C)T”, *Arms Control Today*, Vol. 39, No. 9; September 2009, available at: http://www.armscontrol.org/act/2009_09/Meyer.

⁴² Li Bin, “China,” in International Panel on Fissile Materials, *Banning the Production of Fissile Materials for Nuclear Weapons: Country Perspectives on the Challenges to a Fissile Material (Cutoff) Treaty*, Princeton: Program on Science and Global Security, Princeton University, 2008, pp. 7-13, 70; David Albright and Corey Hinderstein, “Chinese Military Plutonium and Highly Enriched Uranium Inventories”, *ISIS*, June 30, 2005; David Albright, Frans Berkhout, and William Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities, and Policies*, Oxford: Oxford University Press, 1997, pp. 76-78.

⁴³ “Address by H.E. Yang Jiechi, Minister of Foreign Affairs of the People’s Republic of China at the Conference on Disarmament”, Geneva, August 12, 2009, available at: <http://www.fmprc.gov.cn/eng/zxxx/t578020.htm>.

weaker position vis-à-vis other major nuclear powers, the uncertainty it faces in a volatile international security environment, including developments in the RMA and nuclear proliferation on its periphery, and the possibility of military conflicts over the Taiwan Strait.⁴⁴

China's support of an FMCT and its ratification of the CTBT would largely be conditioned on its own assessment of future needs for nuclear weapons development, which in turn is influenced by its threat perceptions and confidence in its defense capabilities, nuclear as well as conventional. The more confident it becomes in its conventional military capabilities and a survivable nuclear arsenal for self-defense deterrence purposes, the more it will be willing to engage in multilateral nuclear disarmament processes. However, this would take place only if and after the United States and Russia undertake further reductions of their nuclear arsenals to a much lower level, perhaps under 1,000. Beijing's position on CTBT ratification could be influenced by the U.S. position; indeed, Chinese officials have suggested that should Washington take the necessary steps toward ratification, as President Obama has indicated, that will provide a positive environment for China's efforts to ratify the treaty as well. At the same time, while China continues a de facto moratorium on fissile materials production, it will not make public commitments on such a moratorium but would pursue/support a legally binding treaty (i.e., FMCT).⁴⁵ It is doubtful if Washington and Moscow would be comfortable in allowing Beijing a continued "free ride" in nuclear disarmament; indeed, China's ongoing efforts in nuclear modernization may give the two nuclear superpowers incentive to retain sizeable arsenals, at least in storage if not operationally deployed. Some analysts argue that this calculation could lead to a potential nuclear arms race between China and the United States.⁴⁶

While one could give credit to China for its efforts in recent years with regard to its nonproliferation policy and practices, in particular in the context of its previous records and its efforts in recent years in introducing domestic regulations governing sensitive exports and transfers, less can be said about its nuclear arms control and disarmament policy.⁴⁷ On disarmament, Beijing could claim that it has held a principled position on complete nuclear prohibition even before it conducted its first nuclear test in 1964. In a response to the 1963 Partial Test Ban Treaty, the Chinese government issued a statement proposing that all countries renounce and completely prohibit and destroy nuclear weapons, withdraw nuclear weapons and troops from foreign bases, establish nuclear weapons free

⁴⁴ Bates Gill, *Rising Star*, Washington: Brookings Institution, 2007; Banning N. Garrett and Bonnie S. Glaser, "Chinese Perspectives on Nuclear Arms Control", *International Security*, Vol. 20, No. 3, Winter 1995/96, pp. 43-78.

⁴⁵ Dingli Shen, "China's Nuclear Perspective: Deterrence Reduction, Nuclear Non-proliferation, and Disarmament", *op. cit.*, p. 649; presentation by a high-ranking Chinese diplomat (not for attribution) at the 11th PIIC conference, Qingdao, China, October 2008.

⁴⁶ Christopher P. Twomey, "Chinese-U.S. Strategic Affairs: Dangerous Dynamism", *Arms Control Today*, Vol. 39, January/February 2009, pp. 17-20.

⁴⁷ On nonproliferation, see Evan S. Medeiros, *Reluctant Restraint: The Evolution of China's Nonproliferation Policies and Practices*, Stanford: Stanford University Press, 2007.

zones, and hold global summit meetings to discuss nuclear disarmament issues.⁴⁸ At the same time, over the past four decades, China has maintained that the two largest nuclear-weapon States should take the lead in drastically reducing their nuclear arsenals before the second-tier nuclear-weapon States participate in multilateral nuclear disarmament. China's 2008 Defense White Paper argues that further U.S. and Russian reductions in "a verifiable and irreversible manner" could "create the necessary conditions for the participation of other nuclear-weapon States in the process of nuclear disarmament". In addition, the paper argues that nuclear arms control and disarmament measures cannot succeed unless the root causes of global/regional conflicts are addressed.⁴⁹

In recent years, Beijing has put more emphasis on how nuclear arms control and disarmament should contribute to global strategic stability and the national security of participating states, rather than undermine them. Strategic stability and national security considerations may become both a benchmark for and an excuse against China's participation in multilateral nuclear disarmament processes. As alluded to above, Chinese analysts are not encouraged by recent developments in both nuclear and conventional armament of a number of states and are concerned that they could invite reactions that ultimately result in an arms race. Some have suggested that certain nuclear-weapon States spend more on conventional systems than nuclear arsenals because the latter cannot be used; others argue that fear of being coerced and intimidated continues to be the logic for non-nuclear states to pursue nuclear weapons options.⁵⁰ Indeed, Beijing is keenly aware that

Some major powers are realigning their security and military strategies, increasing their defense investment, speeding up the transformation of armed forces, and developing advanced military technology, weapons and equipment. Strategic nuclear forces, military astronautics, missile defense systems, and global and battlefield reconnaissance and surveillance have become top priorities in their efforts to strengthen armed forces.⁵¹

Chinese positions on nuclear arms control and disarmament could be influenced by three specific developments in U.S. defense policy. The

⁴⁸ Pan Jingguo and Zhang Ying, "Zhou Enlai yu zhongguo hewaijiao zhanlue de xingcheng [Zhou Enlai and the Evolution of Chinese Nuclear Diplomacy]", *Dangdai Zhongguoshi Yanjiu* [Contemporary China History Studies], Vol. 11, No. 1, January 2004, p. 31.

⁴⁹ Liu Huaqiu, "Evaluation and Analysis of China's Nuclear Arms Control Policy", *Xiandai Junshi* [Contemporary Military Affairs], November 11 1995, pp. 15-18, in FBIS-CHI-95-246, December 22, 1995; Information Office of the State Council of the People's Republic of China, "China's National Defense in 2008".

⁵⁰ Dingli Shen, "China's Nuclear Perspective: Deterrence Reduction, Nuclear Non-Proliferation, and Disarmament", *op. cit.*

⁵¹ Information Office of the State Council of the People's Republic of China, "China's National Defense in 2008", available at: http://english.gov.cn/official/2009-01/20/content_1210227_3.htm.

first revolves around the overall strategic orientation of U.S. nuclear forces. Chinese analysts argue that the end of the Cold War has resulted in a unique environment in which the United States is gradually achieving unchallenged nuclear dominance, as the result of declining Russian nuclear arsenal and still-limited Chinese nuclear capabilities. Chinese analysts are concerned that Washington may be emboldened by this newfound advantage to pursue policies of unilateralism and preemptive attack more aggressively than in the past.⁵²

In addition, Chinese analysts have expressed considerable concern about perceived U.S. efforts to develop new types of nuclear weapons. The United States has already achieved unchallenged conventional and nuclear weapons dominance but is still pursuing research and development programs that will eventually make nuclear weapons more readily usable and capable of penetrating hardened underground facilities. Chinese analysts argue that the U.S. attempt to change the nuclear balance of power in this way could lead to renewed nuclear arms races between nuclear-weapon States, induce threshold states to openly pursue nuclear weapon capabilities, and fundamentally undermine global nuclear nonproliferation efforts.⁵³

Finally, U.S. missile defense deployments in East Asia pose a serious threat to China's second-strike nuclear capabilities. Given the size and sophistication of China's small nuclear arsenal, the ability to survive a first strike is critical to maintaining the credibility and reliability of its deterrence.⁵⁴ Despite Washington's assurance that it seeks only a limited missile defense not directed at China, Beijing continues to seek – and this may well explain its current nuclear modernization efforts – to reverse the growing imbalance as a result of U.S. missile defense plans,⁵⁵ not to mention the new nuclear security environment that China has to face, namely, the emergence of India and Pakistan as nuclear-weapon States and North Korea's nuclear weapons and ballistic missile developments. The latter developments in particular have presented a serious challenge to Chinese security interests. Pyongyang's nuclear brinkmanship and defiance could potentially trigger a regional nuclear domino, which Beijing does not want to see, least of which a nuclear-armed Japan. Indeed, North Korea's second nuclear test of May 2009 has touched off serious debates

⁵² Wang Zhongchun, "Nuclear Challenges and China's Choices", *China Security*, Vol. 5, Winter 2007, pp. 52-65.

⁵³ Dingli Shen, "Upsetting a Delicate Balance", *Bulletin of the Atomic Scientists*, Vol. 63, No. 4, July/August 2007, p. 37; "U.S. Develops Nuclear Blueprint to Implement Strategy of Preemption", China International Institute for Strategic Studies, April 12, 2006.

⁵⁴ Presentation by a PLA analyst at the 11th CIIP conference, Qingdao, October 26-30, 2008.

⁵⁵ Mark A. Stokes, "Chinese Ballistic Missile Forces in the Age of Global Missile Defense: Challenges and Responses", in Andrew Scobell and Larry M. Wortzel (eds.), *China's Growing Military Power: Perspectives on Security, Ballistic Missiles, and Conventional Capabilities*, Carlisle: U.S. Army War College, 2002, pp. 107-167; Brad Roberts, "Arms Control and Sino-U.S. Strategic Stability", in Twomey (ed.), *Perspectives on Sino-American Strategic Nuclear Issues*, op. cit., pp. 185-200.

in China whether its North Korea policy need to be reevaluated.⁵⁶ The U.S. dependence on space assets for military operations – along with the fact that Beijing sees U.S. missile defense systems as a precursor to weaponization of outer space – may also explain China's efforts to develop a limited anti-satellite capability.⁵⁷ Chinese concerns extend beyond missile defenses; U.S. capabilities in long-range precision conventional strike weapons, combined with C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance), further deepen China's sense of vulnerability.⁵⁸

It is therefore not surprising that Beijing continues to have strong reservations about U.S. missile defenses. A November 6, 2008 statement by the Foreign Ministry spokesman pointed out that "China always believes that setting up global missile defense system, including deploying such system in some regions of the world or conducting cooperation in this field, is detrimental to global strategic balance and stability, undermines mutual trust among countries and affects regional stability. The recent development makes it evident that relevant countries should take other countries' concerns seriously".⁵⁹ Indeed, Chinese analysts remain keenly attentive to this issue against the larger context of the international strategic environment at any given time. One of the key criteria for Chinese analysts is to assess how a specific offense-defense configuration could affect international strategic stability, major power relations, and global arms control processes and direction.

During the early 1980s, China followed the U.S. Strategic Defense Initiative closely. Beijing feared that the Reagan administration's missile defense plan could trigger certain Soviet reactions, including the development and deployment of Moscow's own ballistic missile defense, resulting in possible neutralization of China's limited nuclear deterrent force. This would exert strong pressure on China to spend more on nuclear modernization, thus taking away much needed resources from economic development priorities. At the same time, the superpower arms race raised the specter of space weaponization and hence serious implications for international security and stability.⁶⁰ Over a quarter-century later, the issues

⁵⁶ Hui Zhang, "Ending North Korea's Nuclear Ambitions," *Arms Control Today*, Vol. 39, No. 6, July/August 2009, pp. 21-27.

⁵⁷ Bruce W. MacDonald, *China, Space Weapons, and U.S. Security*, Council Special Report, No. 38, New York: Council on Foreign Relations, 2008; available at: <http://www.cfr.org/publication/16707/>, Hui Zhang, "Action/Reaction: U.S. Space Weaponization and China" *Arms Control Today*, Vol. 35, December 2005, pp. 6-11.

⁵⁸ Dennis M. Gormley, "The Path to Deep Nuclear Reductions: Dealing with American Conventional Superiority", *Proliferation Papers*, No. 29, Fall 2009, available at: <http://www.ifri.org/downloads/pp29gormley1.pdf>.

⁵⁹ Chinese Foreign Ministry, "Foreign Ministry Spokesperson Qin Gang's Regular Press Conference on November 6, 2008", November 11, 2008, available at: <http://www.fmprc.gov.cn/eng/xwfw/s2510/2511/t521425.htm>.

⁶⁰ Bonnie S. Glaser and Banning N. Garrett, "Chinese Perspectives on the Strategic Defense Initiative", *Problem of Communism*, Vol. 35, No. 2, March-April 1986, pp. 28-44; John W. Garver, "China's Response to the Strategic Defense Initiative", *Asian Survey*, Vol. 26, No. 11, November 1986, pp. 1220-39. For an outstanding analysis of the Strategic Defense Initiative programs, see Frances

remain the same for China: the credibility and effectiveness of its nuclear deterrence, the danger of weaponization of outer space, and the need to determine priorities and resource allocation for nuclear weapons modernization. Since the late 1980s, Chinese defense expenditure has maintained a double-digit increase, with the official defense budget at USD \$78 billion in 2010, placing China second – albeit a distant second – to the United States as the world's top military spenders. Other estimates put the total even higher, ranging between USD \$ 100 to 150 billion.⁶¹ However, these figures give no indication as to the expenditure on nuclear weapons, including maintenance and modernization. In essence, the strategic stability as China sees it could be significantly undermined if one sides seeks to pursue policies that enhance one's security at others' expense. In that context, it can be expected that Beijing will remain vigilant and reluctant to participate in multilateral nuclear disarmament until and unless these concerns are addressed either as a result of further drastic reduction of the U.S. and Russian nuclear arsenals, or when China has developed a more secure and credible nuclear second-strike capability.

If these trends continue, it could lead China to take action to redress an emerging nuclear imbalance. Given its relatively smaller and less sophisticated arsenal, there is good reason Beijing would be reluctant to endorse measures that could impose significant constraints on its ability for self-defense. China's nuclear modernization efforts in recent years – with an emphasis on qualitative rather than quantitative improvements, especially in areas such as enhanced mobility, survivability, and, hence, credibility of its deterrence – are indicative of Beijing's serious concerns.⁶²

This preoccupation with maintaining or restoring what Beijing considers to be strategic stability has been a major factor in its approach CTBT ratification. Indeed, it was with great reluctance that the PLA and the nuclear weapons community endorsed China's decision to sign the treaty.⁶³ While China signed the CTBT in 1996, Beijing has not yet ratified it, mainly because of the U.S. Senate's rejection of it in 1999. Since then, a fierce internal debate about CTBT ratification has been raging in China. Some

Fitzgerald, *Way Out There in the Blue: Reagan, Star Wars and the End of the Cold War*, New York: Simon & Schuster, 2000.

⁶¹ Sam Perlo-Freeman, Catalina Perdomo, Elisabeth Sköns and Petter Stålenheim, "Military Expenditure", in *SIPRI Yearbook 2009: Armaments, Disarmament and International Security*, Oxford: Oxford University Press, 2009, p. 182; Department of Defense, *Military Power of the People's Republic of China 2009: Report to Congress*, available at: http://www.defense.gov/pubs/pdfs/China_Military_Power_Report_2009.pdf.

⁶² Paul J. Bolt and Albert S. Willner (eds.), *China's Nuclear Future*, Boulder and London: Lynne Rienner Publishers, 2006; Chase *et al.*, "The Future of Chinese Nuclear Strategy", *op. cit.*

⁶³ Bates Gill and Evan S. Medeiros, "Foreign and Domestic Influences on China's Arms Control and Nonproliferation Policies", *China Quarterly*, Vol. 16, No. 1, March 2000, pp. 66-94; Zou Yunhua, "China and the CTBT Negotiations", Center for International Security and Cooperation (CISAC), Stanford University, CISAC Working Papers, December 1998.

support ratification because China has already stopped testing, giving China the moral high ground on this global arms control issue. Others in China argue that ratification would prevent China from resuming testing in response to a new round of U.S. testing. Some Chinese analysts believe China was duped into signing the treaty before the United States initiated its missile defense programs. A few of them have even suggested that it is probable the United States could start testing again to develop a new generation of small nuclear warheads.⁶⁴ China's signature of the CTBT means that China continues to accept the constraints imposed on its ability to test, a critical step in the development of new nuclear weapons, especially the miniaturization of warheads for new ballistic missiles currently under development.⁶⁵ If this is the case, then Beijing's acute concern about the shifts in U.S. nuclear thinking could precipitate shifts in Chinese policies on nuclear testing. On the other hand, a U.S. ratification of the CTBT would put significant pressure on China; the last thing Beijing wants is diplomatic isolation on this issue.

Related to the testing issue is the issue of fissile material production and China's position on an FMCT. Clearly, if there are serious concerns among Chinese strategic analysts about the need to maintain a sufficiently sized nuclear arsenal that could survive a first strike and still be able, in both quantitative and qualitative terms, to retaliate against the striking country by penetrating and defeating missile defenses, then China would have to consider the question of how much is enough as a hedge against future contingencies. China is believed to have stopped producing weapons-grade highly enriched uranium and military plutonium, although it retains a fissile material stockpile for future expansion of its nuclear arsenal, should the need arise.⁶⁶ In this context, the "how much" question is informed by three factors: changes in nuclear doctrine, the international security environment, and military technology.⁶⁷ Thus notes Li Bin, a prominent Chinese arms control analyst, "Possible revolutions in military technology are the major sources of uncertainty in calculating China's future needs for nuclear weapons. ... A safe strategy for China to hedge against unfavorable technical developments is therefore to reserve the option of expanding its nuclear force as a last resort".⁶⁸

⁶⁴ Zhu Qiangguo, "US Seeks Absolute Military Superiority", *China Daily*, March, 13, 2002; Zhou Jianguo, "Nuclear Strategy of Bush Administration Moving Gradually From Deterrence to Actual Combat", *Jiefangjun Bao*, March 18, 2002.

⁶⁵ Robert S. Norris, "French and Chinese Nuclear Weapon Testing", *Security Dialogue*, Vol. 27, No. 1, March 1996, pp. 39-54.

⁶⁶ David Albright and Corey Hinderstein, "Chinese Military Plutonium and Highly Enriched Uranium Inventories", Institute for Science and International Security, June 30, 2005; David Albright, Frans Berkhout, and William Walker, *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities, and Policies*, Oxford: Oxford University Press, 1997, pp. 76-78.

⁶⁷ Li Bin, "China," in International Panel on Fissile Materials, *Banning the Production of Fissile Materials for Nuclear Weapons: Country Perspectives on the Challenges to a Fissile Material (Cutoff) Treaty*, Princeton: Program on Science and Global Security, Princeton University, 2008, pp. 7-13, 70.

⁶⁸ *Ibid.*, pp. 8, 9.

In sum, Chinese analyses of the post-Cold War global nuclear posture depict a rather pessimistic picture. Before the Obama administration assumed office in early 2009, U.S. strategic nuclear posture dominated Chinese discussions and was perceived as a key factor affecting global trends. Four specific developments during the previous US administrations were identified by Chinese analysts as reflecting what can be characterized as Washington's nuclear hegemony – rejection of CTBT ratification by the U.S. Senate in 1999, unilateral withdrawal from the 1972 ABM Treaty, unilateral approaches to international arms control and disarmament processes, and nuclear threats against other states as the 2002 Nuclear Posture Review indicated. Given the international strategic uncertainties, Chinese analysts argued that the country needs to maintain a credible, reliable, and effective nuclear arsenal to deter and reject nuclear threats and/or coercion.⁶⁹

President Obama's calls for nuclear disarmament toward a world free of nuclear weapons and for combating nuclear terrorism through international cooperation bring new hope and expectations. The U.S.-Russian New START treaty further reduces the two countries' nuclear arsenals by a third and the newly released Nuclear Posture Review redefines the role of nuclear weapons by renewing the NSA pledge to non-nuclear weapons states with good standing in the NPT. Chinese analysts have noted these important developments and the prospects for further progress in international nuclear disarmament and nonproliferation.⁷⁰

⁶⁹ Wang Zhongchun and Liu Ping, "Shilun lengzhan houde shijie hetaishi [On Post-Cold War Global Nuclear Posture]", *Shijie Jingji Yu Zhengzhi* [World Economics and Politics], No. 5, 2007, pp. 6-13.

⁷⁰ "Arms Control Expert Teng Jianqun Discusses U.S. Nuclear Posture Review", People's Daily Online, April 7, 2010, available at: <http://military.people.com.cn/GB/11319741.html>.

Beijing's Views of the Nuclear-Free World*

A window of opportunity for nuclear disarmament has opened up in recent years. Initially jump-started by the two *Wall Street Journal* essays by George Shultz, William Perry, Henry Kissinger, and Sam Nunn and continuing with the Obama administration's renewed efforts toward a nuclear-free world, nuclear disarmament is back and prominently on the international agenda of nuclear arms control, disarmament, and nonproliferation.⁷¹ President Obama's April 2009 speech in Prague, his statements at the September 2009 United Nations General Assembly and the UN Security Council summit on nuclear nonproliferation and disarmament, demonstrate a commitment by the Obama administration to move forward the nuclear disarmament agenda and, by extension, salvage the Nuclear Nonproliferation Treaty. Clearly, Washington wants to engage Beijing in nuclear disarmament, especially as the United States and Russia continue to negotiate and implement deep cuts in their respective nuclear arsenals, and expects Chinese supports on nuclear nonproliferation.⁷²

Official Chinese responses to this renewed call for nuclear disarmament and the Obama administration's efforts toward a nuclear-free world have only recently been stipulated in President Hu Jintao's speech at the September 2009 UN General Assembly meeting and an address by Foreign Minister Yang Jiechi at the Conference on Disarmament in August 2009.⁷³ Reiterating and reinforcing long-standing Chinese government

* This section draws on Jing-dong Yuan, "China and the Nuclear-Free World", in Cristina Hansell and William C. Potter (eds.), *Engaging China and Russia on Nuclear Disarmament*, Occasional Paper No. 15, Monterey, James Martin Center for Nonproliferation Studies, March 2009, pp. 25-36.

⁷¹ George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, "A World Free of Nuclear Weapons", *Wall Street Journal*, January 4, 2007, p. A15; George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, "Toward a Nuclear-Free World", *Wall Street Journal*, January 15, 2008, p. A13.

⁷² Glenn Kessler and Mary Beth Sheridan, "Security Council Adopts Nuclear Weapons Resolution", *Washington Post*, September 24, 2009; Richard Weitz, "Global Insights: Chinese Offer Hope, Obstacles for Obama Nuclear Agenda", *World Politics Review*, August 18, 2009, <http://www.worldpoliticsreview.com/article.aspx?id=4205>

⁷³ In their recent speeches on nuclear disarmament, both President Hu Jintao and Foreign Minister Yang Jiechi continue to call on the United States and Russia to achieve deep cuts in their respective nuclear arsenals without giving any hint as to when and at what point China would participate in multilateral nuclear disarmament negotiations. President Hu Jintao, "Work Together to Build a Safer World for All," statement at the United Nations Security Council Summit on Nuclear Non-

positions on nuclear disarmament issues, the Hu and Yang speeches again call on all nuclear-weapon States to adopt the no-first-use policy, reduce the role of nuclear weapons in national security, and emphasize that the largest nuclear-weapon States should bear the primary responsibility for taking the lead in nuclear disarmament. Less spelled out, though, is China's position on the conditions under which it will participate in multilateral nuclear disarmament negotiations, since that could involve a reduction in its relatively smaller arsenal.

At the same time, initial interest and discussions among Chinese civilian and military analysts on the subject of eliminating nuclear weapons do offer some preliminary insights into Beijing's thinking on the prospects of nuclear disarmament and the potential impact on its security interests. Three broad and very preliminary perspectives can be identified.⁷⁴ The three perspectives – which by no means are mutually exclusive – and their proponents could be characterized roughly as follows:

- The first perspective includes the endorsement of the general principles of a nuclear-free world, as well as the argument that China has maintained a position in support of complete prohibition and thorough destruction of nuclear weapons ever since the day it conducted its first nuclear test. Proponents of this perspective also argue that the United States and Russia should take the lead in drastically reducing their nuclear arsenals, with some alluding to numbers below 1,000.
- A second perspective argues that instead of pursuing a nuclear-free world as measured by the number of weapons in nuclear stockpiles, the focus should be on changing the role of nuclear weapons in states' national security policies and defense doctrines. The fewer nuclear weapons incorporated into military strategies, the better prospect there is for nuclear disarmament. Proponents of this perspective also call for the de-legitimization of nuclear weapons.
- A third view suggests that careful analyses be undertaken of the specific proposals in the two *Wall Street Journal* articles and the Thirteen Practical Steps to see if adopting some, many, or all of these measures would advance China's national security interests and enhance its overall security.

proliferation and Nuclear Disarmament", New York, September 24, 2009, available at: <http://www.mfa.gov.cn/ce/ceun/eng/hyyfy/t606550.htm>; "Address by H.E. Yang Jiechi, Minister of Foreign Affairs of the People's Republic of China at the Conference on Disarmament", August 12, 2009, available at: <http://www.fmprc.gov.cn/eng/zxxx/t578020.htm>.

⁷⁴ This discussion is based on a review of Chinese publications on the subject and author's interviews with Chinese analysts over the past sixteen months. Given the limited discussions by and with Chinese analysts, this categorization is rather tentative and serves more as an analytical framework for the paper than as a definitive or even accurate one at that.

Chinese officials (in their unofficial capacities) and analysts are beginning to offer their responses to and assessments of the nuclear-free world initiatives. Indeed, they view these in the plural because they have considered the ideas contained in the two *Wall Street Journal* articles as well as those embodied in other equally high-profile, well-publicized efforts, such as the Final Report of the Weapons of Mass Destruction Commission, the Canberra Commission on the Elimination of Nuclear Weapons, and the 2008 Oslo Conference on Nuclear Disarmament, not to mention President Obama's speeches in Prague and New York. They identify the following reasons for this renewed interest in nuclear disarmament. With the end of the Cold War, the prospect of nuclear war between nuclear-weapon States has significantly diminished and therefore there is no longer the need to maintain large nuclear arsenals, which are costly and risk terrorist sabotage and/or acquisition. In addition, in recent years, a global movement for nuclear disarmament has again rekindled, with major international non-governmental organizations and influential former officials taking the initiative and pushing for global actions to get rid of nuclear weapons. And finally, lack of progress in nuclear disarmament could undermine efforts in nuclear nonproliferation as non-nuclear-weapon States view the terms contained in the Nuclear Nonproliferation Treaty as discriminatory as it is untenable.⁷⁵

While most Chinese analysts support the ideal of a nuclear-free world as a noble cause and a desirable goal, they also point out that getting there requires painstaking efforts that must involve both nuclear-weapon States and non-nuclear-weapon States, with the United States and Russia bearing special responsibilities. In sum, they see three major barriers to overcome in order to achieve the goal of a nuclear-free world: security, politics and verification. Despite President Obama's determination to reduce the role of nuclear weapons in U.S. national security, he could face resistance from the military and indeed, there are strong voices in the U.S. national security community in favor of sustaining nuclear superiority and ensuring the security, reliability and safety of its nuclear arsenal.⁷⁶ They argue that before the complete destruction of nuclear weapons can be achieved, nuclear-weapon States should negotiate and sign a legally binding international document banning the use of nuclear weapons, with a no-first-use (NFU) pledge by all nuclear-weapon States as the first step. In addition, nuclear disarmament should follow the principles of ensuring global strategic stability, striving for downward balance and large-scale reduction of arsenals, and withdrawing overseas deployments.

⁷⁵ Teng Jianqun, "Dangqian guoji hecaijun xingshi he qianjing [Current Situation and Prospect of International Nuclear Disarmament]", *Guoji Wenti Yanjiu* [International Studies Quarterly], No. 5, 2008, pp. 33, 34-39.

⁷⁶ See, for example, "The Disarmament Illusion", *The Wall Street Journal*, September 26, 2009. Wang Qianhui and Guo Xiaobing, "'Wuhe shijie' haiyou xingxiwang [New Hope of a 'Nuclear-Free World']?", *Shijie Zhishi* [World Affairs], No. 13, 2009, pp. 38-39; Fan Jishe, "Aubama zhengfu de junking zhengce: xiwang yu tiaozhan [The Obama Administration's Arms Control Policy: Hope and Challenges]", *Waijiao Pinglun* [Foreign Affairs Review], No. 1, 2009, pp. 20-24.

On whether creating a nuclear-free world is remotely plausible, the Chinese offer two contrasting views. One group, a clear minority, believes that “nuclear zero” is achievable. Those in this minority note that in the 1990s, when a group of Princeton professors proposed that the United States and the former Soviet Union could reduce their respective nuclear arsenals by 90 percent, the idea was dismissed as “crazy.” Today, that goal has almost been achieved. Therefore, there is reason to believe that further reduction toward zero is within the realm of possibility. Proponents cite two grounds for this hopefulness: first, further reduction of the nuclear stockpiles by major nuclear powers would not undermine their national security given that they still maintain quite sizeable arsenals; and second, non-state terrorist groups such as Al Qaeda simply cannot be deterred, even if large nuclear arsenals are maintained and their use is threatened. In that context, some even suggest that regardless of what the United States and Russia do, China should and could undertake its own nuclear reductions.

Those in the majority are far less sanguine about the prospect of a nuclear-free world in the near future. Analysts within this group do note the drastic and continuing reduction of the nuclear arsenals in nuclear-weapon States, but they continue to see nuclear weapons as relevant in states’ national security policies and defense doctrines. Indeed, they suggest that given the volatile international security environment, some states may find it imperative to maintain nuclear weapons for self-defense and security and to deter potential adversaries.⁷⁷ In addition, they are also aware of the divergent views on how to get to nuclear zero, specifically, who should do what with regard to nuclear reduction. Some Chinese analysts point out that current reductions typically involve excess stockpiles or older systems and weapons facilities, without affecting or weakening their deterrence or even nuclear war-fighting capabilities.⁷⁸

A more effective approach to achieving a nuclear-free world, they argue, would address the doctrinal rather than the numerical issues. As long as nuclear weapons remain a critical component in states’ national security policies and defense doctrines, there will be resistance to reducing the number of nuclear weapons beyond a certain level and motivation to improve the existing nuclear arsenals by developing new nuclear weapons. This in turn provides a reason to keep the option of nuclear tests open and

⁷⁷ Kong Guang and Yao Yunzhu, “‘Wuhe wuqi shijie’ yundong pingxi” [Analysis of the Campaign for a ‘Nuclear Weapons Free World’], *Shijie Jingji yu Zhengzhi* [World Economics and Politics], No. 9, 2009, pp. 73-80; “Junshi zhuanjia: hewu zongxiang kuosan weixian zhuyao laizi hedaguo” [Military Expert: Risk of Horizontal Nuclear Proliferation Mainly Comes from Major Nuclear Powers], *Zhongguo Pinglun Xinwen* [China Review News], February 11, 2009.

⁷⁸ Teng, “Dangqian wuhe wuqi shijie yundong de qianjing” [The Prospect of the Current Nuclear-Free World Movement]; presentation at the 11th PIIC conference, October 30, 2008.

reduces incentive to engage in good-faith negotiation leading to fissile material production cutoff and stockpile accounting and elimination.⁷⁹

Chinese responses to the nuclear-free-world concept remain preliminary and exploratory with some analysts recognizing that important progress has been made since the end of the Cold War toward the final goal of a nuclear-free world. U.S.-Soviet/Russian arms control and arms reduction treaties such as the Strategic Arms Reduction Treaty and the Strategic Offensive Reductions Treaty are considered to be positive steps. But it is also acknowledged that the road to the ultimate goal remains tenuous and full of difficult twists and turns. Given the unique political and military utility of nuclear weapons, proliferation is still a major threat and concern. Divergent interests and motivations among states further complicate the process of nuclear arms control and disarmament.⁸⁰ One Chinese arms control analyst points out that for some time to come, China is not likely to stop its research and development of new types of nuclear weapons, for a number of reasons. One reason is that U.S. missile defenses require that China maintain its minimum deterrent capabilities, including the ability to penetrate and defeat missile defenses. This will require the development and deployment of new nuclear weapons. In addition, for security and safety reasons, China will need to modernize its nuclear arsenals.⁸¹ Some argue that China needs to assess what pre-conditions are needed and how momentum for nuclear disarmament would affect Chinese diplomacy and its national security interests. While published works are scant, Chinese analysts, including arms control specialists in both civilian and military institutions, are beginning to organize studies and attend international meetings.

While most view the *Wall Street Journal* articles and the steps proposed therein as laudable efforts to re-jump-start the nuclear disarmament process, many also harbor doubts about whether the ultimate goal can ever be obtained. One People's Liberation Army (PLA) analyst commented that it would be difficult for China to follow some of the sixteen steps stipulated in the two articles.⁸² An earlier article on the prospects for the implementation of the "Thirteen Steps" cautioned against overly optimistic expectations. As the author pointed out, key nuclear-weapon States, in particular the United States, still seek a nuclear disarmament framework that would give the United States maximum flexibility.⁸³ Indeed, Chinese analysts point out that the United States continues to modernize

⁷⁹ Arend Meerburg and Frank N. von Hippel, "Complete Cutoff: Designing a Comprehensive Fissile Material Treaty", *Arms Control Today*, No. 39, March 2009, http://www.armscontrol.org/act/2009_03/Meerburg_VonHippel.

⁸⁰ Wang, *Nuclear Weapons, Nuclear Powers, and Nuclear Strategies*, pp. 432-46.

⁸¹ Teng Jianqun, "Zhongguo weihe butingzhi yanjiu xinxing hewuqi" [Why China Does Not Halt Research on New Types of Nuclear Weapons], *Renminwang [People's Daily Online]*, January 26, 2009.

⁸² Author discussion with Chinese analysts, October 2008.

⁸³ Tian Jingmei, "Dui hecailun '13 ge buzhou' de fenxi yu zhanwang" [An Analysis and Forecasting of the '13 Steps' in Nuclear Disarmament], in China Arms Control and Disarmament Association, 2005: *Guoji Junbei Kongzhi yu Caijun Baogao [2005 Yearbook on International Arms Control and Disarmament]*, Beijing: Shijie Zhishi Chubanshe [World Affairs Press], 2005, pp. 19-27.

both nuclear and conventional arsenals. U.S. deployments of missile defenses in East Asia and the declared U.S. intention for space dominance – including potential space weaponization – along with nuclear warheads modernization program allow it to retain its dominant strategic deterrence even as it proceeds with quantitative nuclear disarmament with Russia.⁸⁴

⁸⁴ Wu Tianfu, “Waikong junshi jingzheng xingshi ji fazhanzhong guojia mianlin de waikong weixie” [Military Competition in Outer Space and the Threat Faced by Developing Countries], in Li Genxin and Teng Jianqun (eds.), 2008: *Guoji Junbei Kongzhi yu Caijun Baogao*, [2008 Yearbook on International Arms Control and Disarmament], Beijing: Shijie Zhishi Chubanshe [World Affairs Press], 2008, pp. 141-52.

Concluding Remarks and Recommendations

While China has more or less maintained the three principles that provide the guidance to its nuclear weapons policy over the past four decades – no-first-use, a limited nuclear arsenal, and support of complete nuclear disarmament –, it nonetheless continues with steady nuclear modernization programs that aim to enhance the survivability and mobility of its small nuclear arsenal with the introduction and deployment of new-generation land-based ballistic missiles and nuclear submarines. Chinese declarations on nuclear disarmament remain positive whereas its commitment to participation in multilateral negotiation is less clear and could be affected by a number of factors. Fundamentally, whether or not Beijing endorses and eventually participates in efforts to achieve a nuclear-free world will depend on whether the efforts could enhance or undermine its security. Beijing is receptive to some of the ideas proposed for achieving nuclear zero, appears lukewarm to others, and remains strongly suspicious of the rest. For instance, it is supportive of efforts in strengthening nuclear security to prevent nuclear terrorism. It also supports negotiation toward an international treaty on fissile materials cut-off. It welcomes the new START treaty concluded by the United States and Russia. However, it remains reluctant in participating in multilateral nuclear disarmament negotiation, and concerned that restrictions on its small nuclear arsenal could compromise its ability to respond to nuclear attacks. China's positions are invariably linked to its threat perceptions and its assessment of the role of nuclear weapons in its national security policy. Based on the analysis above, it could be argued that China is likely to be more willing to endorse and support the nonproliferation and nuclear materials protection measures proposed by the two "Gang of Four" *Wall Street Journal* articles.

A number of specific steps, if taken by other major nuclear powers, could address China's security concerns and therefore offer good incentive for Beijing to be on board the nuclear-free-world enterprise. An NFU policy issued by all nuclear-weapon States would lessen the threat of nuclear weapons and significantly reduce their role in states' national security and military strategies. In addition, non-targeting arrangements among nuclear weapons states could demonstrate good will without depriving each of the retaliatory capability since re-targeting can easily be reinstalled. These measures could also address concerns of non-nuclear weapons states and assure them that nuclear weapons will not be used against them. In that context, the shift in U.S. nuclear policy toward no use against non-nuclear weapons states has been considered by Beijing as a positive development. De-alerting, withdrawing nuclear weapons deployed in foreign territories,

and pledging universal and unconditional NSAs would further ensure the absence of misuse and accidental launch. On the other side, in the East-Asian context, where the United States currently provides extended deterrence to its allies Japan and South Korea, resolving the North Korean nuclear issue and instituting confidence-building and strategic assurance measures such as more regular high-level defense dialogues, codes of conduct in international waters and/or disputed maritime territories to avoid incidents, and exchanges of military officers through educational programs between Washington, Beijing, Tokyo, and Seoul would ease concern and pressure for Japan and South Korea to go nuclear. On the latter issue, it is clearly to China's interest to seek resolutions to North Korea's nuclear issue. While Beijing has played an active role in the Six-Party Talks process, there is more it can and should do to rein in its unwieldy neighbor.⁸⁵ Rhetoric notwithstanding, Beijing fully understands the potential pitfalls in the withdrawal of U.S. security commitments to Japan and South Korea, including extended deterrence. Finally, reducing and eventually delegitimizing the role of nuclear weapons in national security policy could also enhance confidence among major powers. Continuing to rely on nuclear deterrence in the current international security environment, where terrorist activities pose significant threats to all, could only induce additional states to pursue nuclear weapons.⁸⁶

Washington could play an important role in eliciting desired policy changes in China in support of the nuclear-free-world agenda. It should be noted that there remain significant misperceptions and misunderstandings between the United States and China over the issues of nuclear weapons, deterrence, and strategic stability.⁸⁷ Both countries are making important adjustments in defense policies, nuclear modernization, and force modernization in response to perceived threats. However, such dynamics could lead to a security dilemma due to both structural differences and lack of good communication in strategic nuclear issues between the two countries.⁸⁸ U.S. officials and analysts point out that China's nuclear modernization and ballistic missile programs, and the lack of transparency about them, incite suspicion and contradict Beijing's rhetoric on nuclear

⁸⁵ Zhang, "Ending North Korea's Nuclear Ambitions", *op. cit.*

⁸⁶ These arguments are contained in Teng, "Dangqian wuqie shijie yundong de qianjing" [The Prospect of the Current Nuclear-Free World Movement], *op. cit.*

⁸⁷ Ambassador Linton Brooks, "The Sino-American Nuclear Balance: Its Future and Implications", in Abraham Denmark and Nirav Patel (eds.), *China's Arrival: A Strategic Framework for a Global Relationship*, Washington: Center for a New American Security, September 2009, pp. 61-76. There are a limited number of largely Track-II dialogues between Chinese and American analysts and officials (in their private capacities) on strategic nuclear issues. See Christopher P. Twomey and Kali Shelor, *Conference Report: U.S.-China Strategic Dialogue, Phase II*, Monterey: Center for Contemporary Conflict, Naval Postgraduate School, 2008; Center for Strategic and International Studies *et al.*, "Conference on 'U.S.-China Strategic Nuclear Dynamics': Introduction and Key Findings", October 2008, available at: http://www.csis.org/media/isis/pubs/081015_intro_and_key_findings.pdf.

⁸⁸ Christopher P. Twomey, "Comparing Perspectives: Dangers to Avoid, Prospects to Develop", in Twomey (ed.), *Perspectives on Sino-American Strategic Nuclear Issues*, *op. cit.*, pp. 201-209; Joshua Pollack, "Emerging Strategic Dilemmas in U.S.-Chinese Relations", *Bulletin of the Atomic Scientists*, Vol. 65, No. 4, July/August 2009, pp. 53-63.

disarmament.⁸⁹ Likewise, Beijing is suspicious of Washington's pursuit of ballistic missile defenses, its refusal to negotiate PAROS, and its enhanced and redeployed conventional military capabilities to East Asia as aimed at China. Clearly, there is a great need for the two countries to establish avenues for strategic dialogues on these critical issues.⁹⁰

There remain, however, significant differences and obstacles to further cooperation, given Beijing and Washington's differences over the priorities, approaches, and some substantive issues in managing current and future proliferation challenges. Failing to manage these differences could have serious long-term implications for regional stability and the prospect of peaceful transition to a multipolar world for both China and the United States.

These concerns may well become significant impediments to Chinese participation in nuclear disarmament and certainly could strengthen the hands of opponents, both institutional and individual, to adoption of some of the measures and steps proposed in the Shultz et al. articles and in the Final Document of the 2000 NPT Review Conference.⁹¹ In practical terms, these opponents' concerns about the possible negative impact of these measures on Chinese security act as strong disincentives to negotiating an FMCT or ratifying the CTBT.⁹²

However, limited proposals relating to nuclear safeguards and nonproliferation are more acceptable to Beijing than far-reaching disarmament steps, since nuclear terrorism and WMD proliferation are recognized as serious threats to international security. At the recent Nuclear Security Summit hosted by President Obama, world leaders committed themselves to securing and safeguarding nuclear materials and facilities. President Hu Jintao put forward five proposals and called for international cooperation on strengthening nuclear security and safety.⁹³ The U.S. Department of Energy maintains an office in the U.S. Embassy in Beijing for nuclear safety and security, tasked with enhancing bilateral nuclear cooperation on topics including Material protection, control, and accounting (MPC&A) for Chinese nuclear facilities. More regular exchanges between Chinese and American nuclear scientists on these issues could foster dialogue not only on nuclear safeguards and preventing nuclear terrorism, but also on technical aspects of nuclear arms control and

⁸⁹ Brooks, "The Sino-American Nuclear Balance", *op. cit.*, pp. 61-76.

⁹⁰ Lewis A. Dunn, "Reshaping Strategic Relationships: Expanding the Arms Control Toolbox", *Arms Control Today*, Vol. 39, No. 4, May 2009, pp. 19-21.

⁹¹ See specifically the so-called Thirteen Practical Steps, 2000 NPT Review Conference, Final Document, available at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N00/453/64/PDF/N0045364.pdf?OpenElement>.

⁹² Gill, *China and Nuclear Arms Control*, *op. cit.*

⁹³ "Hu Jintao Delivers Speech at Nuclear Security Summit", April 14, 2010, available at: <http://military.people.com.cn/GB/1076/52963/11360395.html>. A recent study suggests that China exercises strict and secure custody of its nuclear warheads in storage. See Mark A. Stokes, *China's Nuclear Warhead Storage and Handling System* (Washington, DC: Project 2049 Institute, March 2010), available at: http://www.project2049.net/documents/chinas_nuclear_warhead_storage_and_handling_system.pdf.

strategic stability. The goal should be to promote the development of an “epistemic community” among Chinese and U.S. analysts, similar to that forged between the United States and the Soviet Union during the Cold War.

The Sino-U.S. dialogue on arms control and disarmament at the official level is minimal, unlike U.S.-Russian strategic nuclear arms control interactions. There are some encouraging signs, however. One is that over the last few years, CSIS and its Chinese counterpart China Foundation for International & Strategic Studies (CFIIS) have cosponsored a series of Track 1½ conferences on Sino-U.S. strategic nuclear stability. In addition, a dedicated dialogue on nuclear issues between the U.S. and Chinese militaries was launched in April 2008. Furthermore, drawing on the lessons from the 1999 NATO bombing of the Chinese Embassy in Belgrade and the April 2001 midair collision between a Chinese fighter aircraft and U.S. EP-3 spy plane, analysts in both countries have initiated dialogues on how to develop measures for crisis stability and management. At the official level, it would be useful if the two countries would reaffirm their commitment to the 1998 nuclear non-targeting agreement.

Much could be accomplished through the expansion and deepening of official bilateral dialogue. Indeed, despite the growing ties between the two countries on a range of bilateral, regional, and global issues where Beijing and Washington engage in extensive consultation and cooperation, there remains deep deficit in the area of nuclear strategic dialogue. While the recent Strategic & Economic Dialogue meeting indicates that the PLA and U.S. military may finally start the formal dialogue on this sensitive subject, it is not to be expected that any concrete results will come out of the planned preliminary discussions. Both countries continue to view the policies and actions of the other with suspicion if not outright hostility. Washington considers China's nuclear modernization and in particular the development of asymmetrical capabilities a potential threat to U.S. interests in Asia Pacific while Beijing views U.S. pursuit of absolute security as directly undermining its security interests, most prominently China's ability to maintain a reliable nuclear deterrence capability in face of a growing gap in conventional military power and its ultimate goal for national unification.⁹⁴

The Obama administration needs to engage in strategic dialogue on these issues and have a better understanding and appreciation of Beijing's concerns and disincentives for engaging in multilateral nuclear disarmament. While Washington and Beijing currently maintain channels of regular communication on political/security, economics, and defense issues, there is no official strategic nuclear dialogue between the two countries, which Secretary Gates proposed in mid-2008. Given the asymmetry in the two countries' nuclear arsenals and delivery capabilities, any discussion that directly copies the U.S.-Soviet experiences during the Cold War would be a non-starter. Strategic CBMs and reassurance should

⁹⁴ Mark Schneider, “The Nuclear Doctrine and Forces of the People's Republic of China”, *Comparative Strategy*, Vol. 28, No. 3, July 2009, pp. 244-270; Du Ke, “Wujiao dalou ‘jiaoju’ zhongmei guanxi [The Pentagon ‘Disturbs’ Sino-U.S. Relations],” *Huanqiu Junshi [Global Military]*, June 2009, pp. 16-18.

be the starting points instead. As Lewis Dunn warns, “miscalculation by China or the United States remains conceivable, as does the danger of growing strategic competition. Chinese officials are uncertain and concerned about the eventual scope of U.S. missile defenses as well as growing U.S. longer-range conventional strike capabilities”. Developing and institutionalizing bilateral strategic dialogues in the nuclear armament and disarmament area would be critical to avoiding any misunderstanding and more dangerously, miscalculation on either side.⁹⁵

Relative security and maintenance of minimum deterrence capabilities are of utmost concerns and serve as the guiding principles for Beijing to decide whether, and to what extent, to participate in multilateral nuclear disarmament. China is less concerned with the numerical totals than the overall strategic balance that could either enhance or undermine its security position. In this context, issues such as missile defenses, space, and the role of nuclear weapons in other NWS will need to be addressed. However, the issue remains whether – by acknowledging such Chinese concerns and acting on them – Washington would be receptive to the idea of mutual vulnerability vis-à-vis China. At a minimum the two countries should deepen dialogues on such critical issues as nuclear transparency, strategic assurance, respective perspectives on strategic stability and how threat perceptions in each affect nuclear decision-making, and some mechanisms on crisis management. Without such understanding, the dynamics in both countries, driven largely by defensive motivations could still get the two into a potential strategic arms competition, the scenario dictated by the security dilemma.⁹⁶ The Obama administration should strengthen the current process of Track 1½ bilateral arms control and disarmament dialogue and engage the Chinese military in such semi-official fora to influence and shape the PLA perspectives, given the military’s role in China’s decision making process. Both funding and the visa process should be improved to facilitate the PLA participation in various ongoing visiting fellow programs and multilateral meetings.

While anticipating these potential pitfalls and challenges in nuclear arms controls between the two countries, it is nonetheless useful and even imperative for Beijing and Washington to build upon areas of past success and future opportunities in cooperation in nuclear nonproliferation, materials safety, and measures against nuclear terrorism. Clearly, the Six-Party Talks process – now stalled – has proven to be beneficial to both China and the United States with regard to nuclear nonproliferation, regional stability and prevention of a nuclear domino effect in Northeast Asia.⁹⁷ Beijing could also be instrumental – and may become more willing to – in seeking a resolution to the Iranian nuclear issue. Here China and the United States could engage in fruitful discussions and move toward common positions.

⁹⁵ Dunn, “Reshaping Strategic Relationships”, *op. cit.*, p. 19.

⁹⁶ Joshua Pollack, “Emerging Strategic Dilemmas in U.S.-Chinese Relations”, *The Bulletin of the Atomic Scientists*, Vol. 65, No. 4, July/August 2009, pp. 53-63.

⁹⁷ Bonnie S. Glaser and Wang Liang, “North Korea: The Beginning of a U.S.-China Partnership?”, *The Washington Quarterly*, Vol. 31, No. 3, Summer 2008, pp. 165-180.

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<http://ifri.org/downloads/pp29gormley1.pdf>
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http://ifri.org/downloads/PP28_Moodie_Summer2009.pdf

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