
Chinese Responses to U.S. Missile Defenses: Implications for Arms Control and Regional Security

JING-DONG YUAN

*Dr. Jing-dong Yuan is Senior Research Associate in the East Asia Nonproliferation Program (EANP) at the Center for Nonproliferation Studies of the Monterey Institute of International Studies. Dr. Yuan writes on Asia-Pacific security, Chinese defense and foreign policy, and arms control and nonproliferation issues. He is the co-author of *China and India: Cooperation or Conflict?* (Lynne Rienner Publishers, 2003).¹*

President George W. Bush's December 17, 2002, announcement of initial U.S. missile defense deployment by 2004 received a moderate response from China. Instead of vehemently criticizing the U.S. decision for its potential to trigger an arms race, a Chinese Foreign Ministry spokesperson merely commented that the "development of the missile defense system should not undermine global strategic stability, nor should it undermine international and regional security."² Beijing's rather muted reaction, however, understates its deep concern over the serious security challenges it is likely to face in the coming years. For more than two decades, China has maintained (and appeared content with) a small strategic nuclear deterrent composed of some 20 or so intercontinental ballistic missiles (ICBMs) capable of reaching the continental United States. Partly because of technological hurdles that the Chinese defense industry has proved incapable of overcoming, but perhaps more out of a deliberate political decision in favor of economic development, Beijing until recently had not placed

nuclear modernization high on its policy agenda. Indeed, improvement of its aging strategic nuclear force—the liquid-fueled, silo-based Dong Feng 5A (East Wind, or DF; NATO designation CSS-4)—over the past two decades has been slow and measured, in effect leaving China extremely vulnerable to a decapitating first strike.³

Owing to its small size and its current deployment mode—in which nuclear warheads and the liquid-fueled ICBMs are separately stored and launch preparation takes several hours—a limited U.S. missile defense system could neutralize China's strategic nuclear deterrent. While the initial U.S. missile defense deployment seems moderate, the Bush administration has indicated that it would be "a starting point for improved and expanded capabilities later." Indeed, unlike the limited missile defenses planned by the Clinton administration, the layered missile-defense architecture the Bush administration envisions includes multiple basing missile defense systems capable of intercepting incoming ballistic missiles during their boost phase, mid-course, or terminal phase.⁴ Thus, while China's public rhetoric against U.S. missile defenses has receded,

its sense of vulnerability has not. U.S. missile defense systems, once operational, threaten the very credibility, reliability, and effectiveness of China's woefully inadequate strategic nuclear arsenal.

Barring a significant breakthrough in achieving strategic understandings between Beijing and Washington, a U.S. decision to deploy ballistic missile defense systems will force China to react in ways that could have far-reaching consequences for global arms control and non-proliferation and, consequently, regional stability.⁵ China may embark on a nuclear modernization drive in both quantitative and qualitative terms unseen in the past two decades. Unlike Russia, which hard economic realities may prevent from maintaining a large nuclear arsenal (a number higher than the 1,700-2,200 range stipulated in the May 2002 Moscow Treaty), China has the economic wherewithal to significantly expand and modernize its strategic nuclear force. While in relative terms Chinese defense spending remains low as a percentage of its gross domestic product, it has risen at a double-digit rate since 1990 as the economy registers significant growth during the same period. In addition, China has a large foreign exchange reserve (about \$286 billion at the end of 2002), which would make available additional funds for foreign acquisitions and purchases. Analysts suggest that based on such rates of increase, China's defense budget could double by 2005.⁶

This article documents key Chinese positions on U.S. missile defenses and discusses their broader strategic context. It analyzes a range of possible Chinese responses and implications for regional security, Sino-U.S. relations, and global arms control, disarmament, and nonproliferation. Next it provides a brief overview of U.S. missile defenses in terms of rationale, debates, and current status, followed by a discussion of key Chinese concerns against the broader backgrounds of an unstable Sino-U.S. relationship and the evolving complexity of post-Cold War security in Northeast Asia. The article then analyzes potential Chinese responses to U.S. missile defenses, and discusses their relative validity and impact on global arms control and regional security. I argue that Chinese concerns over U.S. missile defenses are driven by increasing uncertainties about Washington's strategic intentions toward Beijing, the vulnerability of China's limited nuclear retaliatory capabilities, and, more specifically, America's role in a potential military conflict between China and Taiwan over the issue of unification.

U.S. BALLISTIC MISSILE DEFENSES: THE DEBATE

In a speech delivered at the National Defense University on May 1, 2001, President Bush announced the administration's decision to deploy ballistic missile defenses.⁷ The decision fulfilled a campaign pledge to defend the United States against perceived growing missile threats.⁸ In December 2001, President Bush announced U.S. withdrawal from the ABM Treaty, and in June 2002 the treaty, once hailed as the cornerstone of international strategic stability, became history.⁹ Six months later, the administration made the decision to deploy a limited missile defense system by 2004. The system will comprise 20 ground-based interceptors (16 to be deployed in Alaska and 4 in California), 20 sea-based interceptors, and an unspecified number of Patriot Advanced Capability-3 (PAC-3) missiles, as well as upgraded radar systems.¹⁰

The Bush administration's approach to missile defense issues contrasts significantly with that of the Clinton administration, which sought to base its deployment decision on threat assessment, maturity of the technology, cost, and its impact on U.S.-Russian strategic arms control negotiations.¹¹ Assessing ballistic missile threats has always been a contentious issue within the U.S. intelligence and strategic communities, and between the United States and its European and Asian allies. On the one hand, Russia and China remain the only two non-U.S. allies with the capability to hit the continental United States. However, this reality has existed since the two countries deployed their first ICBMs (the Soviet Union in 1959; China in 1981). The North Korean Taepo Dong-I has a range of about 3,500 kilometers (km) while the Taepo Dong-II could reach as far as 4,500-6,000 km, theoretically capable of hitting Alaska, Hawaii, and the western continental United States. Nonetheless, the August 1998 test launch of the Taepo Dong-I failed, and the Taepo Dong-II has never been tested.¹² Iran's missile program lags behind North Korea's.¹³ Experts suggest that these countries face formidable obstacles to acquiring ICBM capabilities: propulsion technology, guidance and re-entry vehicle (RV) technology, and warhead construction (fissile materials, matching to missiles).¹⁴

Nevertheless missile defense proponents argue that ballistic missile proliferation over the past decade has become a serious concern for the international commu-

nity and is a growing threat to U.S. security interests at home and abroad. At a time when the United States and Russia continue to build down their missiles, since 1989, the total number of countries, other than the P-5 (the five permanent members of the United Nations Security Council), that possess operational ballistic missiles with ranges over 100 km has increased; a recent study suggests a number of 30 countries, compared to about a dozen more than a decade ago. Of these, about ten have the indigenous capability to develop and maintain missiles, and six—India, Iran, Israel, North Korea, Pakistan, and Saudi Arabia—possess missiles with ranges over 1,000 km. All but Saudi Arabia have produced or flight-tested their missiles and continue to conduct research and development (R&D).¹⁵ Earlier estimates of developing countries' capabilities in acquiring these missiles, especially the 1995 National Intelligence Estimate (NIE 95-19, "Emerging Missile Threats to North America during the Next 15 Years") were reassessed as overly optimistic by the July 1998 Rumsfeld Commission Report and then dramatized by North Korea's Taepo Dong-I launch a month later.¹⁶

Meanwhile, international efforts to stem missile proliferation have been hampered by the lack of uniform enforcement mechanisms and the fact that a number of key supplier states remain outside the Missile Technology Control Regime (MTCR). The recently launched International Code of Conduct against Ballistic Missile Proliferation, while a laudable effort, is limited in its ability to address the issue.¹⁷ Indeed, critics argue that missile nonproliferation efforts have not and could not prevent determined proliferant states from acquiring ballistic missiles.¹⁸ According to a 2001 Department of Defense report:

In recent years, a new proliferation dynamic has developed, with greater availability of components, technologies, expertise, and information. This availability stems from the willingness of various state suppliers, or companies within those states, to sell such materials, and a veritable information explosion from academic and commercial sources, or the Internet.¹⁹

Adding to this grim assessment are the worrisome characteristics of the growing arsenals of the new third-tier missile states: lower accuracy, survivability, reliability, and payload/range performance but increasing availability of WMD. India, Israel, and Pakistan are all de facto nuclear weapon states; Iraq was covertly pursuing WMD programs

prior to the 1990-1991 Gulf War, and North Korea and Iran are believed to be seeking WMD capabilities. In addition, ballistic missiles are increasingly seen and have been used as instruments of "coercive diplomacy" (as in the 1995-1996 Chinese missile exercises in the Taiwan Strait) as well as "weapons of terror" (during the 1980-1988 Iran-Iraq War).²⁰ While current capabilities for most emerging missile states remain confined to the development of short- to medium-range missiles, countries such as North Korea have revealed their ambitions to develop longer-range missiles. Once in operation, these missiles, armed with WMD, could complicate U.S. decisionmaking; indeed, the threat of use against U.S. interests is higher today than during the Cold War years.²¹

Finally, there is decreasing confidence that deterrence in the post-Cold War era could dissuade countries hostile to the United States from launching missile attacks against U.S. interests. Indeed, asymmetrical U.S. conventional superiority may make ballistic missiles an attractive weapon of intimidation and/or blackmail. According to one analyst, "For states trying to check America's enormous advantage in conventional military power, ballistic missiles and weapons of mass destruction appeared to be the quickest and cheapest solution."²² To counter such threats, President Bush emphasized: "We have adopted a new concept of deterrence that recognizes that missile defenses will add to our ability to deter those who may contemplate attacking us with missiles."²³ In short, defenders of missile defenses argue that America cannot be left defenseless and vulnerable to ballistic missiles.²⁴ While debates continue within the U.S. strategic community on new approaches to arms control and nonproliferation and on the implications of missile defenses for U.S. nuclear policy, the administration has already made up its mind: strengthened defenses in combination with unilateral deep cuts in deployed strategic nuclear arsenals.²⁵

The technological challenges of deploying effective missile defense systems remain daunting, with intercept tests yielding mixed results.²⁶ Of the various possible intercept modes, including boost phase, mid-course, and terminal, none is technologically proven.²⁷ Intercept tests of the three systems proposed in the December 17, 2002, announcement remain unfinished and will have to be rushed through between now and the announced deployment date in October 2004. Only three tests have taken place for the sea-based system, although all were success-

ful. The land-based system has undergone ten tests so far, with seven hits and three misses, including the one failed interception just one week prior to the missile defense announcement. Tests for the PAC-3 system have fared even less well, with two successful hits out of a total of seven tests.²⁸ Pouring more money into the project (the Bush administration has already put in \$15 billion in its first two years in office), critics suggest, would not change this reality.²⁹ One issue is the ability to intercept missiles flying at high speed. Another relates to countermeasures. The 1999 NIE suggests that countries successful in flight-testing an ICBM will also be able to develop countermeasures to penetrate missile defense systems; and there are other means to deliver WMD that would be more reliable, less expensive, and more accurate than an ICBM. For instance, critics point out ballistic missile defense would be useless against ship-based, low-level cruise missiles and other means of delivery such as a cargo ship sailing to a major port city with a nuclear bomb on board.³⁰ The September 11 terrorist attacks further suggest that ballistic missiles may not be the only or even the most dangerous threats to the United States. Indeed, missile defense opponents argue that the administration's "highest priority should be efforts to keep nuclear material out of the hands of terrorists, not building unproven technology to fulfill a campaign promise."³¹

However, missile defense proponents would not relinquish their case so easily. They argue that such logic misses an important point:

Indisputably, the United States is at risk of non-missile attack by terrorists and their state sponsors, and is hardly better equipped against such attacks today than it is against the missile-borne kind. This, however, is an argument for improving our defenses against all these threats; it is hardly an argument for leaving ourselves vulnerable to ballistic missiles.³²

The cost issue is complicated by the Bush tax cuts and growing government deficits, but the administration continues to raise overall defense spending. The challenges for the Bush administration are to continue providing the necessary funding for missile defense research, development, and testing against perceived shortfalls in government revenues as a result of the Bush tax plan and balance between various programs among services.³³ On the whole, as a percentage of the total U.S. defense budget, the amount designated to missile defense purposes (\$9.1 billion for FY 2004) remains small, especially with a

planned increase in the total defense budget to \$379.9 billion for the same fiscal year and a projected \$442 billion by 2007.³⁴ The Bush administration's allocation of funds for missile defenses is already higher than the Clinton administration's \$60 billion (over a period of ten years, averaging \$6 billion annually) but remains a manageable 2.4 percent of the total defense budget. However, the final cost may be much higher. The allocation issue may be largely political between Republicans and Democrats and among military services as each seeks to protect its major weapon platforms. For the time being, though, the Bush administration has been able to increase funding for missile defenses, and even missile defense opponents on the Hill find it difficult to reverse course.³⁵

Bush's May 2001 NDU speech was followed by a scurry of diplomatic maneuvers as the administration dispatched high-ranking officials to Europe and Asia to sell its missile defense plans. U.S. European and Asian allies—including Britain—remained noncommittal, if not openly critical.³⁶ European disagreements stem from their less than alarmist views of ballistic missile threats—they question both the capabilities and intentions of the so-called rogue states. In addition, they harbor doubts about the efficacy of missile defenses and have serious concerns about potential responses from Russia and China.³⁷ U.S. missile defense plans also received cautious responses from Asian allies. Most are concerned that such systems could undermine progress toward peace on the Korean peninsula and further alienate China.³⁸

Predictably, Russia and China have raised the strongest objections to U.S. missile defenses. Challenging Washington on the credibility of WMD and missile threats from rogue states, Moscow and Beijing argue that U.S. deployment could seriously threaten the strategic stability on which global arms control and nonproliferation regimes rest. Russian President Vladimir Putin warned that Moscow would no longer honor its START-II commitments should the U.S. unilaterally withdraw from the ABM Treaty.³⁹

The proposed U.S. missile defense architecture also introduces the concept of space-based systems with serious implications for both international arms control and civilian peaceful use of space.⁴⁰ Indeed, concerns about such systems have been shared by some American analysts, even by those within the U.S. military, who worry about resource diversion, the long-term implications of space weaponization, and threats to commercial satellites

by accumulated debris fields as a result of anti-satellite (ASAT) weapons tests. The danger is that growing low-orbit testing and deployment of space-based weapons can create serious problems for the safety of commercial satellites, so important and indispensable to many countries' economic activities and well-being. Clearly, some rules of the road must be conceived and formulated.⁴¹

To address the potential impact of missile defenses on U.S.-Russian strategic arms reduction, the Bush administration sought to gain the acquiescence of the Putin government either to a significant modification of the ABM Treaty so that U.S. ability to develop, test, and deploy a wide range of missile systems would not be hampered, or to seek the treaty's abrogation altogether should the Russian resistance prove insurmountable. Washington also made efforts to develop a new strategic framework with Moscow, including meeting Putin's request for a written document on the U.S.-Russian strategic nuclear reductions. Russian responses to both the U.S. withdrawal from the ABM Treaty and its missile defense announcement were muted, although as expected Moscow announced it would no longer be bound by the START-II Treaty.⁴² Two key points explain Russia's shift from strong opposition to rather restrained reactions. One is that, given the current stage of U.S. missile defense R&D and long lead time before any deployable and operational missile defense system could be in place, Russia's current and projected strategic deterrence capabilities would not be severely affected in the next five to ten years. Even after the implementation of the May 2002 Moscow Treaty, under which the United States and Russia agreed to reduce their respective strategic nuclear arsenals to 1,700-2,200 warheads each by December 31, 2012, Russia would still possess enough ICBMs, including the highly capable SS-18 and the new Topol-M (SS-27), to overwhelm U.S. ballistic missile defense systems.⁴³ The end result, as far as Russian strategic planners are concerned, is that the current strategic balance will remain intact for the foreseeable future, with minimum impact on Russia's nuclear deterrent capabilities.

The second factor derives from Russia's desire to maintain a good working relationship with the United States. Moscow fully understood that the Bush administration had already made the decision to withdraw from the 30-year-old treaty. U.S. and Russian negotiators had sought but failed to reach a grand bargain; a unilateral U.S. with-

drawal therefore was inevitable, just as was its determination to deploy missile defense systems.⁴⁴ Continued opposition to missile defenses had no prospects of succeeding, as Russia had few cards to play, but could risk missing the opportunity to build a new type of strategic relationship with the United States—one that seeks to codify reciprocal unilateral reduction of their respective nuclear arsenals in the form of written, if not verifiable, documentation. The Moscow Treaty, at least on paper, provides that format.⁴⁵

CHINESE CONCERNS OVER U.S. MISSILE DEFENSES

While official Chinese opposition to U.S. missile defenses became highly vocal and vehement only in the late 1990s, the issue itself was nothing new to Beijing. Chinese analysts carefully studied the implications of President Reagan's Strategic Defense Initiative (SDI, or Star Wars) in the early 1980s. The defense R&D establishment began internal analyses in the early to mid-1990s, focusing on missile defense and its impact on China's security interests.⁴⁶ Indeed, one prominent Chinese analyst suggested that U.S. missile defense developments could seriously affect China's security interests and that one of the conditions for Beijing to participate in nuclear disarmament should be a U.S. commitment to suspend ballistic missile defense efforts.⁴⁷ Between the late 1990s and mid-2001 when President Bush announced U.S. withdrawal from the ABM Treaty, the Chinese government launched a multi-pronged campaign opposing U.S. missile defenses. China's academic and think tank communities also caught on, producing voluminous and often repetitive treatises on this subject in official media, academic journals, and the popular press, transforming it into a household topic.⁴⁸

Chinese positions on missile defense have focused on three broad sets of issues. One is its impact on global strategic stability and arms control and nonproliferation processes. The second relates to the extent to which missile defenses in the context of an emerging U.S. military strategy of preemption, including the role of nuclear weapons in its defense planning, can directly affect vital Chinese security interests—i.e., the continued viability and credibility of its limited nuclear deterrence. The third concentrates on the regional aspects: how theater missile defense (TMD) will affect East Asia security and cross-

Strait relations. While the first set of issues has been raised largely to rally international diplomatic efforts in opposing U.S. missile defenses, it is the latter two concerns that have driven and will continue to guide Chinese policy in response.

Missile Defenses and International Strategic Stability

Beijing has always been very attentive to developments in missile defenses within the larger context of the international strategic environment at any given time. One of the key criteria is to assess how a specific offense-defense configuration could affect international strategic stability, major-power relations, regional security, and global arms control processes and direction. Indeed, missile defense itself has seldom been treated merely as a military development. Instead, the Chinese look at the broader implications since this particular military posture both reflects the threat perceptions and strategic intentions of the state adopting it, and inevitably will affect the existing international strategic environment and the perceptions and interests of other major powers.⁴⁹

Chinese officials and analysts argue that U.S. missile defenses would have long-term negative effects on the international security environment and progress in arms control and nonproliferation.⁵⁰ First is the serious disruption of global strategic balance and stability, harming mutual trust and cooperation between major powers. For years, Beijing argued that the now-defunct ABM Treaty must be preserved because it served as a cornerstone of global strategic stability, even though the concept was based on the balance of terror. "It is true that what the ABM treaty maintains is 'the balance of terror' and can only offer relative security—not an ideal situation. However, given the strong proclivity of a superpower for the use of force, 'the balance of terror' is certainly better than 'the terror of imbalance,' and relative security is better than absolute security."⁵¹ The ABM Treaty had maintained a rough balance between U.S. and Soviet/Russian strategic nuclear forces, reducing the incentives for any preemptive first strike and therefore sustaining stability. Any attempt to either amend or abrogate the treaty would destabilize such a balance.⁵² For this reason, Hu Xiaodi, Chinese ambassador for disarmament affairs, argued that "its [the ABM Treaty] significance is far beyond the scope of U.S.-Russian bilateral relationship and has a direct bearing on the security of all countries."⁵³

U.S. pursuit of a national missile defense (NMD) system, despite its unprecedented and unchallenged position in the international system, further reinforces the Chinese perception that Washington is seeking absolute security at the expense of others.⁵⁴ For Beijing, this individualistic position is not conducive to international stability. According to Ambassador Sha Zukang, Director-General of the Chinese Foreign Ministry's Department of Arms Control and Disarmament from 1997 to 2001, "what it [the U.S.] wants is absolute security, because it is only from a position of absolute security that it can enjoy complete freedom of action in dealing with other countries. The U.S. Government and Congress have found in NMD the best means to deliver this."⁵⁵ Washington's post-Cold War interventionist policy and growing defense budgets prompted Beijing to charge that "certain big powers are pursuing 'neo-interventionism,' 'neo-gunboat policy' and neo-economic colonialism, which are seriously damaging the sovereignty, independence and developmental interests of many countries, and threatening world peace and security."⁵⁶

Second, U.S. missile defenses would inhibit the international arms control process and could touch off a resurgence of the arms race, especially in outer space. It could also accelerate missile proliferation. Beijing suggests that there is an important link between doctrinal developments and nonproliferation. Liu Jieyi, Director-General of the Chinese Foreign Ministry's Department of Arms Control and Disarmament, recently argued, "An important factor for progress in international nonproliferation efforts is to decrease the dependence on nuclear weapons and to reduce their role in international relations and security strategies."⁵⁷ Indeed, "If a country, in addition to its offensive power, seeks to develop advanced TMD or even NMD, in an attempt to attain absolute security and unilateral strategic advantage for itself, other countries will be forced to develop more advanced offensive missiles. This will give rise to a new round of arms race."⁵⁸ Chinese analysts blame Washington for the generally negative developments in the arms control and nonproliferation field since the Bush administration came into power in 2001. U.S. abrogation of the ABM Treaty, its refusal to accept the Biological Weapons Convention verification protocol, reduction of funding for a Comprehensive Test Ban Treaty (CTBT) on-site inspections study, and a requirement for shortened preparation time for resuming nuclear tests are all negative signs from the Chi-

nese point of view.⁵⁹ The Chinese suggest that the broader implications for second-tier nuclear weapons states are that they will be less interested in joining any multilateral nuclear disarmament negotiations and instead will be developing their system penetration capabilities. With second-tier NWS developing more and better nuclear weapons, countries such as India and Pakistan will likely follow suit, having an overall negative impact on global arms control.

Chinese concerns over a potential arms race in outer space are not without basis. On January 11, 2001, the Commission to Assess United States National Security Space Management and Organization released its report just as the new Bush administration was about to take office, with the Commission's outgoing chair, Donald Rumsfeld, nominated to assume the position of the Secretary of Defense. Like the report of the 1998 Rumsfeld Commission on missile threats, the new report, recognizing the increasing dependence of the United States on space for its national security, warned against a "Space Pearl Harbor"—the possibility of enemy attacks on U.S. space systems. To defend U.S. space assets, the report urged that "U.S. national security space interests be recognized as a top national security priority" and recommended that "the U.S. must develop the means both to deter and to defend against hostile acts in and from space."⁶⁰ These tasks would be executed through reorganization and better coordination of U.S. national security space programs, and greater investment in science and technology resources to maintain America's superior space capabilities, which could lead to the development, testing, and deployment of ASAT based in space or on earth.

On May 8, 2001, Secretary Rumsfeld announced several changes to the U.S. space program's organization and management. An interagency Policy Coordinating Committee for Space within the National Security Council will be established, the command of Air Force Space Command will be independent of the U.S. Space Command/NORAD (North American Aerospace Defense Command) and headed by a four-star general, and the Air Force will be the executive agency for space within the Department of Defense (DoD).⁶¹ While dodging the question of whether this new announcement would usher in the weaponization of outer space, Rumsfeld did quote from the 1996 U.S. National Space Policy, which says that the United States "will develop, operate and maintain space control capabilities to ensure freedom of action in space

and, if directed, deny such freedom of action to adversaries." Then-Senator Bob Smith (R-N.H.), a strong supporter of U.S. space dominance, went even further. According to him, "There are nations out there who are hostile to us. And they are in space. They have such weapons as lasers, anti-satellite weapons and electromagnetic pulse weapons, and we have to be ready to recognize that threat."⁶²

U.S. Nuclear Posture and the Credibility of Chinese Nuclear Deterrence

Chinese concerns over U.S. missile defenses have also been driven by Washington's strategic intentions toward Beijing and the extent to which the credibility and effectiveness of China's small-sized nuclear retaliatory capabilities could be undermined by U.S. deployment. During the early 1980s, China followed the U.S. SDI developments closely. Beijing feared that the Reagan missile defense plan could trigger Soviet reactions, including the development and deployment of Moscow's own ballistic missile defense (BMD) system, resulting in possible neutralization of China's limited nuclear deterrent force. The need to counter this perceived negative development would force China to spend more on nuclear modernization, thus taking away much needed resources from economic development priorities.⁶³

Almost two decades later, the issues remain the same for China: the credibility and effectiveness of its nuclear deterrence, and the need to determine priorities and allocate resources. But the post-Cold War environments have introduced additional complications and uncertainties for Chinese security planners. One is the volatile relationship and competing interests between China and the United States. Beijing and Washington hold fundamentally different visions on core international and regional security issues, ranging from humanitarian intervention to military alliances.⁶⁴

Given Russia's large nuclear arsenals, proposed U.S. missile defenses would not be able to neutralize Russian retaliatory capabilities. The apparent U.S. targets—the so-called rogue states—do not yet possess long-range missiles to threaten continental America, nor would they risk massive retaliation by attacking the United States first. The only explanation for the U.S. missile defense system, Beijing strongly suspects, is that it is aimed at China's limited nuclear deterrent capability. This is particularly so in the context of the continued Sino-U.S. conflict over Tai-

wan and the declared U.S. commitment to Taiwan's defense.

Beijing is aware that U.S. development of missile defense systems as a way to pursue absolute security comes at a time when major shifts are emerging in new U.S. defense policy, including the heightened role of nuclear weapons in the strategy of preemption. In this context, missile defenses could elevate the importance of military elements in international relations, resulting in greater U.S. unilateralism and the threat and use of force. In January 2002, the Bush administration released the declassified summary of its Nuclear Posture Review (NPR). According to Chinese analysts, a number of fundamental trends in post-Cold War U.S. defense posture can be detected. These include Washington's reassessment of the new international security environment and major threats facing the United States and its allies; new strategic guidance for the U.S. nuclear force structure, size, and missions; and the move away from massive retaliation-based threats to the development of credible nuclear capabilities that could be put to use. Within this broad context, the Cold War nuclear triad of land-based ICBMs, airborne strategic bombers, and submarine-launched ballistic missiles (SLBMs) are to be replaced with the new strategic triad of offensive systems (nuclear and non-nuclear), active and passive defenses, and the defense-industrial infrastructure. This new U.S. defense posture would thus enable Washington to reserve massive retaliatory capabilities (even after the significant reduction of its strategic nuclear force) against the other major nuclear powers, to confront and neutralize threats from the so-called "rogue" states through its missile defense systems, and to deal with any potential opponents effectively by applying precision-guided munitions.⁶⁵

The elevation of the role of nuclear weapons is particularly worrisome to Chinese analysts. They perceive a fundamental shift in the premise upon which nuclear weapons are to be used. In the past, nuclear weapons were always the weapon of last resort, of deterrence against the use of nuclear weapons. But what has been revealed shows that the NPR has adopted a totally different rationale. The threshold for nuclear use has been lowered and, in contravention to its 1978 pledge and its negative security assurance (NSA) commitment not to use nuclear weapons against NPT Non-Nuclear Weapon State (NNWS) signatories, the new posture suggests the use of nuclear weapons against hardened, difficult-to-penetrate targets, as retaliation against WMD use, and as responses in certain circumstances.⁶⁶

On March 9, 2002, the *Los Angeles Times* reported the leaked classified portion of the NPR that contains U.S. contingency plans to use nuclear weapons against China and six other countries, including Russia.⁶⁷ Beijing reacted strongly. Ministry of Foreign Affairs officials demanded that the U.S. provide explanations of its targeting policy. At the same time, Chinese government statements accuse the U.S. of "nuclear blackmail" and vowed not to bow under any foreign threats.⁶⁸ What worries China the most is nuclear use "in the event of surprising military developments," including a war between China and Taiwan.⁶⁹ This revelation only convinces Beijing of the high likelihood that the U.S. military might intervene in the event that the mainland must use force to resolve the Taiwan issue.⁷⁰

Current Chinese discussions of the NPR remain confined to academic analysis. One of the most clearly articulated views is that China needs to maintain and enhance its deterrence proficiency in terms of capability, credibility, and survivability. The Chinese government has yet to articulate its position beyond mere initial reactions. Indeed, one would wonder about the heretofore relatively low-key responses from the official channel, given the fact that China probably would be the most negatively affected by a change in U.S. policy. This ambivalence may reflect the dilemma Beijing faces in developing viable counterstrategies, particularly in the international diplomatic arena. China would be all alone in opposing the United States, well aware that it won't have any real impact. At the same time, there is the need to assess the overall effect of the new U.S. strategy on China's security interests. In this regard, Chinese reactions cannot be seen as merely responding to the NPR but also reflecting the general trends in U.S. nuclear strategy in the coming years.

Theater Missile Defense in East Asia and Regional Stability

U.S. development and future deployment of theater missile defense systems in Northeast Asia have been major contentious issues between Beijing and Washington.⁷¹ The Bush administration has stopped using the terms *national missile defense* and *theater missile defense*, and replaced them with *ballistic missile defense*. This change aims to address allied concerns that U.S. national missile defense might lead the United States to "disengage" from the security of its allies. By contrast, Chinese analysts continue to refer to national missile defense and theater missile defense

because each has distinct security significance for Beijing. The former raises questions about China's limited nuclear deterrent capability while the latter has direct implications for Taiwan. China tacitly acknowledges the role of TMD in protecting U.S. forward-deployed troops from missile attacks, but it objects to an advanced TMD system that could extend to Taiwan and may also serve as a forward component of NMD.⁷² In an interview with *Defense News* in February 1999, Sha Zhukang said that China was not concerned about "what we call genuine TMD." Instead, "what China is opposed to is the development, deployment and proliferation of antimissile systems with potential strategic defense capabilities in the name of TMD that violate the letter and spirit of [the Anti-Ballistic Missile Treaty] and go beyond the legitimate self-defense needs of relevant countries."⁷³ Beijing also dismisses U.S. claims that its missile defenses are aimed at the so-called "rogue" states such as Iran and North Korea. For China, the claimed North Korean threats are much exaggerated; the real U.S. intentions, the Chinese contend, are to undermine Chinese security by neutralizing its nuclear deterrence.⁷⁴

Chinese analysts point to a number of strategic motivations behind the planned U.S. TMD in East Asia. One is to continue the predominant U.S. position in the region: TMD deployment would enable the United States to undertake military operations with little inhibition. Second, the United States seeks to exploit allies' technical expertise and funding in missile defense R&D and to increase allies' reliance on U.S. security guarantees and protection by integrating their defense systems into the U.S. East Asian security architecture. Third, the decision to move forward with missile defenses demonstrates the rise of conservative forces in the U.S. government to dominate the defense and foreign policy agendas and to strike a more confrontational posture toward China and North Korea. Fourth, the U.S. defense industrial complex could benefit from government contracts, and further consolidate its lead in the technological Revolution in Military Affairs (RMA). TMD, in particular its high-tier systems such as the Theater High Altitude Area Defense (THAAD) and the Navy Theater Wide Defense (NTWD), could also form a component of U.S. NMD systems. And finally, TMD would force Beijing to increase defense expenditure, hence delaying China's economic development.⁷⁵

China has voiced a number of specific concerns over the development and deployment of theatre missile defense.⁷⁶ First, the Chinese see TMD as yet another

deliberate step that the United States has taken to strengthen the U.S.-Japan military alliance, hence enhancing its offensive as well as defensive capabilities. It has been reported that the United States may begin deploying the TMD system as early as 2008.⁷⁷ In addition, China contends that TMD research and development encourage and provide a pretext for Japanese remilitarization. Beijing's suspicion of a post-Cold War assertive Japan is reinforced by Tokyo's reluctance to be forthcoming on its historical records, its ambiguity regarding its defense perimeter, its potent and potential military capabilities, and its potential involvement in a Taiwan crisis.⁷⁸

Indeed, China has become increasingly attentive to Japan's growing military capabilities. The December 2001 National Defense Program Outline (NDPO) earmarked 25.16 trillion yen for the next five years, making Japan second to the United States in terms of overall defense spending and first on a per-soldier basis. Large allocations have been devoted to procuring major sea and air weapons systems and platforms.⁷⁹ Beijing is also critical of the Japanese intention to upgrade the Japan Defense Agency (JDA) to the ministerial level.⁸⁰ When JDA announced its participation in the 2000 Rim of the Pacific (RIMPAC) military exercises, the *Liberation Army Daily* commented that Japan "is casting off its peace constitution" and "the ghost of Japanese militarism is stirring on the Japanese archipelago." General Zhang Wannian, then vice chairman of China's Central Military Commission, reportedly told high-ranking People's Liberation Army (PLA) officials that Sino-Japanese relations hinged on whether Tokyo would follow Washington's policy and whether Japan will remilitarize. More specifically, Zhang suggested that while Sino-Japanese economic relations have been close and stable, there has been limited cooperation in the political sphere since the mid-1990s, and that bilateral security cooperation has come to a standstill. Zhang also warned against the rise of militarist forces in Japan seeking hegemony in East Asia.⁸¹

Japan's participation in TMD research and development has been closely followed by Chinese analysts.⁸² According to Chinese estimates, the Japanese Self-Defense Agency began a covert study of TMD technical feasibility in 1995 and had spent 550 million yen between 1995 and 1998. The August 1998 North Korean launch of the Taepo-dong missile provided a convenient excuse for Tokyo to move ahead on TMD. Accordingly, the Japanese appropriated an additional 1 billion yen in its 1999

defense budget and 20 to 30 billion yen for the next five to six years. In September 1998, the United States and Japan formally signed a memorandum of understanding on joint TMD research and development.⁸³ Soon after the passage of the UN resolution on maintaining the ABM Treaty in November 1999, the deputy director-general of Japan's Self-Defense Agency told reporters that it would not affect U.S.-Japanese joint research on TMD.⁸⁴ In fact, the United States and Japan have recently decided to conduct joint missile defense tests over the next two years, and Japan reportedly may want to purchase a U.S. sea-based missile defense system.⁸⁵ Given Japan's current naval capability (it already possesses four *Aegis* destroyers and has the strongest naval fleet among Asian countries), TMD systems would equip Japan with both offensive and defensive capabilities.

Third, U.S. decisions to develop and deploy ballistic missile defense systems therefore must be seen in the context of the broader U.S. strategy in East Asia and its policy toward China. This policy has become more apparent with developments since early 1999: the bombing of the Chinese embassy in Belgrade, the release of the Cox Report, and growing political and military ties with Taiwan. Beijing is especially concerned with the latter development, which it considers the most potent threat to its national security interests.⁸⁶ One prominent Chinese missile defense analyst suggests that "China fears that if the USA believes that a first nuclear strike plus a [n] NMD system could render impotent China's nuclear retaliatory capability, the USA might become less cautious during any crisis involving China."⁸⁷

Indeed, China's threat perception has been further complicated in the last few years by internal political developments in Taiwan, which have resuscitated the island's independence movement. Beijing's angry reactions to Lee Tenghui's 1995 visit to the United States were manifested in its high-handed missile saber rattling. A tense crisis in the Taiwan Strait ensued, leading to the dispatch of two U.S. aircraft carrier battle groups.⁸⁸ Beijing considers the U.S. demonstration of its commitment to the defense of Taiwan under the Taiwan Relations Act (TRA) to be a serious threat to its unification agenda and reflective of hostile U.S. strategic intentions toward China. U.S. arms sales to Taiwan over the years are a clear manifestation of this quasi hedging and containment policy on the part of the United States.

Washington's Taiwan policy is the most serious security concern for Beijing. Three trends are particularly worrisome for the Chinese leadership. The first is U.S.

deviation in recent years from the "One China" principle set forth in the three Sino-U.S. joint communiqués. This shift is clearly manifested by U.S.-sanctioned official contacts with Taiwanese officials, hence changing the nature of the U.S.-Taiwan relationship. High-ranking Taiwanese officials have been granted visas to make transit stops on their way to Central and South America (including Chen Shui-bian's stopover in New York and Houston in May 2001).⁸⁹ Beijing is equally upset by the March 2001 visit of Taiwan's defense minister to the United States and his meetings with U.S. deputy secretary of defense and assistant secretary of state for East Asian and Pacific Affairs. For China, this attention from the United States only encourages independence advocates in Taiwan.⁹⁰

The second trend is the continuing practice of U.S. military sales to Taiwan, which is seen by China as contravening the spirit of the August 17, 1982, Sino-U.S. Communiqué.⁹¹ Over the years, the United States has provided Taiwan with a full spectrum of military equipment, including F-16 air superiority fighters, Knox-class frigates, Kidd-class destroyers, anti-submarine S-2T helicopters, E-2T Hawkeye airborne early-warning aircraft, Patriot-derived Modified Air Defense Systems, and Hawk and Chaparral ground-based air defense systems. The U.S. Department of Defense also runs exchange programs with Taiwan on C4I, air defense, anti-submarine warfare.⁹²

Third, incessant congressional efforts have been made to not only enhance the U.S.-Taiwan relationship, as is manifest in the TRA of 1979, but also to expand it to include closer security cooperation. The 1999 Taiwan Security Enhancement Act, which was passed in the House in a landslide, would require even closer defense cooperation between the United States and Taiwan in the areas of defense planning, threat analysis, training, and missile defense systems, all of which are strongly opposed by Beijing.⁹³

Chinese analysts emphasize that a regional TMD system, especially if it is to include Taiwan under its coverage, likely will give a false sense of security to the island's pro-independence elements. At the same time, incorporating Taiwan into the TMD system would represent a gross violation of China's territorial integrity, a blatant act of interference in China's domestic affairs, and a de facto reinstatement of the now defunct 1954 U.S.-Taiwan Defense Pact. Indeed, these factors may well present Taipei its most obvious motivation to acquire missile defense capabilities.⁹⁴ Again, to quote Ambassador Sha, "China's opposition to U.S. transfers of TMD to Taiwan is also based on ... its adverse impact on China's

reunification. TMD in Taiwan will give the pro-independence forces in Taiwan a false sense of security, which may incite them to reckless moves. This can only lead to instability across the Taiwan Strait or even in the entire North-East Asian region.⁹⁵

And finally, TMD threatens China's limited deterrence capability. Due to Japan's proximity to China, TMD deployment in Japan could well pose a threat to China's strategic retaliatory capability. The Chinese point out that a highly advanced TMD system such as THAAD can intercept missiles in outer space and cover a wider area, and are therefore capable of neutralizing China's limited strategic nuclear capability. The Bush administration's merging of NMD and TMD into layered missile defense systems only confirms Chinese suspicions.⁹⁶

From a military perspective, Chinese concerns over missile defenses focus on the impact on its "niche"—that is, its ability to deter Taiwan from declaring independence by the threat of short-range missiles. Indeed, "[g]iven China's weak naval and air force capabilities, ballistic missiles are one of few tools that China can use to deter or coerce Taiwan and Japan. TMD threatens to undermine this strategic comparative advantage in missiles and remove Chinese leverage."⁹⁷ According to Jia Qingguo, a professor at Beijing University, "the missiles are put there as a sort of deterrent against Taiwan's independence or separatist activities." TMD deployment in or near Taiwan therefore could reduce China's ability to use missile threats to politically intimidate Taiwan's leaders to prevent the island's permanent break from the mainland. If that perception is established, then independent elements in Taiwan could be emboldened, forcing China to resort to the use of force.⁹⁸

THE CHINESE CAMPAIGN AGAINST U.S. MISSILE DEFENSES

Beijing began an intense, multifaceted campaign to mobilize international opposition to missile defenses toward the late 1990s, was one of the leading advocates for the preservation of the ABM Treaty, and continues to call for the nonweaponization of outer space.⁹⁹ These efforts included official statements denouncing U.S. missile defenses; diplomatic initiatives/maneuvers at the United Nations and the Conference on Disarmament to exert pressure on the United States and raise the diplomatic/political cost for Washington by linking various treaty negotiations; united-front strategies to gain understanding and sympathy from U.S. allies; and close coordination with Russia, especially with regard to the

maintenance of the ABM Treaty and the negotiation of an international treaty banning weaponization of outer space. The anti-missile-defense campaign served to raise China's diplomatic profile in the global arms control arena and to size up China's position in the new China-Russia-U.S. strategic triangle.¹⁰⁰

At international fora, Chinese representatives warned of the adverse consequences for global arms control and nonproliferation efforts should U.S. missile defense plans be implemented, and they emphasized the importance of keeping outer space out of a potential arms race. At the United Nations, China, in collaboration with Russia and other countries opposing U.S. missile defense, pushed through a nonbinding resolution in its First Committee on sustaining the ABM Treaty and the prevention of weaponization in outer space.¹⁰¹ Beijing was also active (and remains so today) in pushing for the negotiation of an international treaty to ban weaponization in outer space at the Conference on Disarmament (CD), adopting PAROS (Prevention of an Arms Race in Outer Space). In his statement at the 2000 NPT Review Conference in New York on April 24, 2000, Sha Zhukang, head of the Chinese delegation, argued that PAROS was of a more urgent nature at the CD given some countries' determination to develop and deploy missile defenses. At the minimum, there should be a reasonable balance between PAROS, the Fissile Materials Cut-off Treaty (FMCT), and nuclear disarmament. A Chinese working paper submitted to the conference echoed this stand.¹⁰²

Chinese concerns over U.S. domination of outer space derive from China's own relatively weak position. China does not want to engage in a space arms race: A weaponized outer space would endanger commercial use. PAROS would serve to prevent this eventuality from taking place.¹⁰³ At an international conference on the disarmament agenda for the 21st century—held in Beijing in April 2002 under the auspices of the United Nations and China's Foreign Ministry—Chinese officials again reiterated the call for an international treaty preventing an outer space arms race and weaponization.¹⁰⁴ In June 2002, China and Russia proposed the outline of a new draft space treaty at the CD.¹⁰⁵ Specifically, the treaty would bind states

not to place in orbit around the earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies, or not to station such weapons in outer space in any other manner; not to resort to the threat or use of force against outer space objects; and not to assist or encourage other states, groups of states, international organizations to participate in activities prohibited by this treaty.¹⁰⁶

Addressing the First Committee of the 57th Session of the UN General Assembly on the issue of Prevention of an Arms Race in Outer Space, Chinese Disarmament Ambassador Hu Xiaodi emphasized the importance of outer space for peaceful use and the increasing danger of weaponization:

If the trend is not reversed, countries will be compelled to take measures to protect the security of their space assets and relevant ground facilities in the near future. The peaceful use of outer space will also be more costly, vulnerable satellites and manned spaceships will have to orbit a weaponized space, also full of weapon debris. Efforts for peaceful uses of outer space will be retarded and fruitful achievements endangered.¹⁰⁷

As missile defense became a top policy issue for the MFA Department of Arms Control and Disarmament in the late 1990s, Sino-Russian coordination was used to raise the department's profile and draw attention from top Chinese and Russian leaders (Jiang Zemin and Boris Yeltsin). Between April 1999 and July 2001, the two countries issued a series of joint statements or communiqués and co-sponsored several resolutions on the preservation of the ABM Treaty and opposition against NMD.¹⁰⁸ Indeed, Beijing had placed a lot of stock on Russian opposition to amendments to the ABM Treaty and to U.S. NMD deployment. The Chinese media followed Russian initiatives and activities in this regard closely, described approvingly Russian capabilities to overcome such systems, and emphasized the close coordination between China and Russia on this issue. For instance, the Chinese press often described the difficulties in U.S.-Russian nuclear disarmament negotiations and Russian determination to uphold the integrity of the ABM Treaty.¹⁰⁹

Beijing also sought to gain the support of U.S. allies, including Canada, in its opposition to missile defenses. In particular, Beijing endorsed Ottawa's proposal for denuclearization of outer space.¹¹⁰ China also recognized the differences between the United States and its European allies over the implications of missile defense deployment. Europeans worried about the plan's negative impact on international nonproliferation regimes and the implementation of U.S.-Russian strategic arms reduction agreements, as well as the positive impact on a potential global arms race. NATO allies were most concerned with the decoupling of U.S.-European security, which could turn Europe into a defenseless gray area, further diminishing the role of already limited British and French nuclear forces, and enhancing U.S. domination in European affairs.¹¹¹

Beijing's anti-NMD positions have undergone a noticeable change since mid-2001. Its reaction to the U.S. announcement of withdrawal from the ABM Treaty was moderate. Chinese response to the December 17, 2002, missile defense deployment announcement was typical of the adjusted position: "The development of the missile defense system should not undermine global strategic stability, nor should it undermine international and regional security."¹¹² Indeed, Chinese officials now comment that international efforts must be expended to develop a new strategic framework and emphasize that China and the United States share important common interests in maintaining global peace. Instead of arguing how U.S. missile defense would lead to instability and even an arms race, the official Chinese statement on missile defense issues now reads: "Under [the] current situation, it is crucial and in the interests of all countries to maintain global strategic stability and preserve international regimes of arms control, disarmament and non-proliferation. China is willing to engage in constructive dialogues with all parties concerned to maintain international peace and security through joint efforts."¹¹³

What explains this dramatic shift in public positions? There are three important variables. The first is the Russian factor. Beijing realized that notwithstanding all the talk about a strategic partnership between China and Russia, important differences existed between the two countries in terms of near-term policy priorities and longer-term strategic interests. Given Russia's relatively weak position, it was both unrealistic and unreasonable to expect that it could sustain a confrontation with the United States on strategic nuclear, ABM, and NMD issues.¹¹⁴ Indeed, since September 11, Russia's positions on these issues have shown clear signs of softening and retreat. Obviously, China's hope of sustaining a Sino-Russian united front would also unravel because of China's and Russia's different priorities and fundamental interests.¹¹⁵ The Moscow Treaty and the new strategic partnership between Russia and the United States undercut Chinese hope for a united front against missile defense. Once the new strategic cooperation takes shape, Russia may act on the idea of developing joint missile defenses with the United States. Potential use of Russian technology is reportedly being studied.¹¹⁶

The second variable is Beijing's careful consideration of missile defense issues and the broader Sino-U.S. bilateral relationship. In a way, Russia's change of positions left China with no choice but to acquiesce in the development. The Chinese leadership came to a realistic

assessment of the prospects of sustaining a prolonged fight against missile defenses and doing it alone without seriously and negatively affecting Sino-U.S. relations. Continued confrontation with the United States would not dissuade U.S. determination to discard the ABM Treaty and pursue missile defense. Instead, it would further strain a bilateral relationship that had just seen signs of improvement in the wake of the September 11 terrorist attacks.¹¹⁷ Certainly, Beijing considers other more important issues as critical, and a stable bilateral relationship is essential to their management.

The realization of the futility of picking a fight with the United States on missile defense issues and the need to stand the moral high ground provide the rationale for China's toned-down responses and comments. The emphasis is now on the need for international cooperation, including that between Beijing and Washington, to maintain global peace with continued efforts in nonproliferation—not on counterproductive efforts that would tarnish China's image as a responsible great power. Indeed, Chinese policymakers actually decided to de-link missile defense and Taiwan issues from China's own responsibilities and obligations in the international nonproliferation regime. As a consequence, the second half of 2002 saw the promulgation of a series of export control regulations.¹¹⁸

The Bush administration's efforts to engage China on missile defense—albeit belatedly—constitute the third variable and, ironically, may explain China's rather restrained responses to both the December 2001 announcement of the ABM withdrawal and the December 2002 decision on initial missile defense deployment. Great power consultation at least offers the opportunity to clarify strategic intent if not to change positions. During the Clinton administration, the need to secure Russian agreement on amendments to the ABM Treaty focused U.S. attention to bringing the Russians on board but largely ignored Chinese concerns.¹¹⁹ The fact that Washington's verbal assurance about U.S. missile defenses could not convince Beijing of its true intentions, and the recognition that China would be less likely to cooperate on issues important to U.S. strategic interests, led to limited engagement late in the Clinton administration on some of the issues Beijing raised, in particular the TMD coverage of Taiwan. Although it is still far from receiving the needed reassurance from Washington, Beijing at least is content with the fact that it is now being consulted. That the United States did not sell Taiwan the few critical TMD systems, such as the *Aegis* system, that most concern China also is an important factor.¹²⁰

Overall, while the Chinese campaign against U.S. missile defenses did not produce the results Beijing desired, its active engagement in missile defense debates was nonetheless useful in a number of respects. First, although it demonstrated the limitations of the Sino-Russian strategic partnership, it also helped to consolidate it. It highlighted areas where joint efforts in opposing U.S. missile defenses could continue, even after the demise of the ABM Treaty and the Bush decision on missile defense deployment. The shared concerns over U.S. unilateralism also enabled the two countries to seek closer cooperation, including continued efforts in PAROS and military technology cooperation. Second, the campaigns helped Beijing assess the overall international balance of power and recognize the limit to any real coalition against U.S. predominance. The lesson China learned was that beneath the façade of shared opposition to U.S. missile defenses were hidden, complex, and conflicting national interests and calculations.

Third, the campaign raised both China's profile on the international stage and domestic awareness of the critical impact that global arms control and strategic developments could have on Chinese security interests. While in the past, Chinese involvement in international arms control processes had been limited and passive, Beijing's active diplomacy in its anti-missile-defense efforts demonstrated it wanted to play a key role as a rising power. At the same time, domestic debates on missile defenses at once introduced and popularized arms control issues in the classroom and the public beyond the rather exclusive expert fora traditionally monopolized and dominated by the government.

Fourth, China's strong stance on missile defense issues and its potential to expand its nuclear forces significantly forced its way to the U.S. policy agenda. While initially it largely ignored Beijing's interests and concerns in preference to dealing with Moscow, Washington has now begun a strategic dialogue with Beijing. Indeed, since September 11, the Bush administration has taken important steps by engaging in more regular consultation with the Chinese government, including recent consultations in Beijing on strategic security, multilateral arms control, and nonproliferation talks between U.S. Under Secretary of State John Bolton and Chinese Vice Foreign Minister Wang Guangya. In addition, the administration has resumed the bilateral Defense Consultation Talks.¹²¹ These venues provide a useful platform for China to make known its bottom line on its vital security interests—such as missile defense to Taiwan—and discuss issues of com-

mon interest—such as the Korean Peninsular nuclear issues, South Asia, and Middle East nonproliferation. Broader and significant bilateral engagement could subdue China's rhetoric further, if not completely mitigate all its concerns.¹²²

POSSIBLE CHINESE RESPONSES TO MISSILE DEFENSES

Missile defense proponents tend to dismiss the impact of BMD on Chinese nuclear modernization by arguing that “the [People's Republic of China] has long since embarked upon an ambitious plan to increase both the quality and the quantity of its long-range missile inventory, and is unlikely to be swayed one way or the other by the defensive actions of the U.S.”¹²³ While it is true that China has been engaged in nuclear modernization programs to replace its aging, liquid-fuel missiles with the new-generation, solid-fuel, mobile missiles to enhance the overall survivability and credibility of its nuclear deterrence, U.S. missile defenses could influence decisions in Beijing concerning the scope and speed of its nuclear buildup. Such a buildup will, at a minimum, maintain the effectiveness of China's nuclear deterrence and could also be proportionate to the projected size of U.S. missile defenses.¹²⁴ According to Charles Ferguson:

Past history demonstrates that when China has experienced nuclear threats and containment, it has reacted by developing nuclear weapons, thereby undermining U.S. security. In a reminiscent manner, China's current perceptions of infringements on its sovereignty through deployment of a U.S. NMD system and possible fortified military ties between the United States and Taiwan, including advanced TMD, could lead to a strengthening of China's missile force and nuclear arsenal. Such a reaction would also undercut U.S. security.¹²⁵

Within China, opinions differ on how Beijing should respond to U.S. missile defense. Some analysts argue that China should focus on economic development for the next 50 years as long as missile defense does not involve Taiwan. Others suggest that China should be prepared; once the United States has deployed such systems, it would be too late to muster a response.¹²⁶ According to Sha Zhukang, China's top arms control negotiator until summer of 2001, should the U.S. missile defense plan proceed,

We'll have to do something. As a peace-loving country China has not participated, and will not participate, in any arms race with any country. However, in a world where hegemonism and power politics run rampant, and as a sovereign country, China cannot afford to sit on its

hands without taking the necessary measures while its strategic interests are being jeopardized. China, *inter alia*, may be forced to review the arms control and non-proliferation policies it has adopted since the end of the Cold War in light of new developments in the international situation.¹²⁷

Indeed, some Chinese analysts are already talking about the likely responses that Beijing might and should adopt in the face of U.S. NMD deployment. Predictable responses to defeat U.S. missile defense could take a number of forms: increasing the number of ICBMs, applying countermeasures such as decoys, arming ICBMs with multiple independently retargetable reentry vehicles (MIRVing), deploying mobile ICBMs and SLBMs, putting ICBMs on LOW (launch on warning) status, and deploying ASAT capability. Some of these options are more feasible than others.¹²⁸ To these analysts (and the PLA), U.S. missile defenses may not be an entirely negative development. Without missile defenses, Beijing probably would have put its priorities on economic development. Now the country can devote more resources to defense modernization.¹²⁹

Western analysts suggest that Chinese responses could consist of three categories of programs: the expansion of its current ballistic missiles, technical countermeasures that include countersurveillance and counterintercept capabilities, and possible asymmetrical measures such as ASAT.¹³⁰ Among the five *de jure* nuclear weapons states, China possesses the most primitive nuclear force, one that has raised questions about the very credibility of its second-strike (deterrence) capabilities. Indeed, given China's vulnerability to a disarming first strike during much of its existence, some Western observers of PLA affairs question “whether China ever actually achieved a fully credible minimal deterrent.”¹³¹ Within this context, deployment of even the thin U.S. NMD system envisioned by the Clinton administration—let alone the layered missile defenses currently planned by the Bush administration—would threaten China's strategic nuclear deterrent.¹³² Beijing worries that its aging and limited number of ICBMs might not be able to penetrate a U.S. national missile defense system after absorbing a first strike. Chinese leaders are determined not to return to a situation where they are vulnerable to U.S. nuclear blackmail.¹³³

Hence, U.S. NMD deployment would probably result in a significant increase in the size of the Chinese ICBM force, while TMD deployment in Japan might also lead to an increase in the number of Chinese medium-

range ballistic missiles (MRBMs). A 1999 report alleged that the Chinese leadership had decided to spend an additional \$9.7 billion on boosting its second-strike capabilities.¹³⁴ The need to maintain a credible nuclear retaliatory capability would likely push China to speed up its ballistic missile modernization programs, increase deployments of current missiles, or both.¹³⁵ The rationale behind a strong Chinese reaction to U.S. missile defenses and hence a larger strategic nuclear force is explained by Li Bin, a prominent Chinese nuclear strategist:

Chinese nuclear deterrence depends directly on American perceptions about the Chinese nuclear retaliatory capability. Without the backup of NMD, the Americans would always worry about a Chinese retaliation with the few Chinese nuclear weapons that might survive a U.S. first nuclear strike against China. The deployment of a [sic] NMD system would provide the American public with an illusion that the several surviving retaliatory Chinese ICBMs would be intercepted by the NMD system—since it is both designed and said to be able to defeat attacks by small numbers of missiles. If the Americans tended to believe that a first nuclear strike plus a [sic] NMD system would be able to disarm the Chinese nuclear retaliatory capability, the U.S. could become incautious in risking nuclear exchanges with China in a crisis.¹³⁶

Of the various systems that have been under R&D in the past 15 years or so, China is likely to increase the number and speed up the development and deployment of the DF-31 within the next five years. A three-stage, solid-fuel, mobile ICBM mounted on a transporter-erector-launcher (TEL), the 8,000-km DF-31 has been flight-tested several times since 1999.¹³⁷ The extended range version of the DF-31, the DF-31A, would have a range of at least 12,000 km. An SLBM derivative, JL-2, with a range of about 8,000 km, is also under development and will be deployed on the next-generation fleet ballistic missile submarine (SSBN), the Type 094.¹³⁸ The exact number will likely depend on the types of missile defenses that the United States is going to deploy, the estimated ICBMs surviving a first strike, and the ability of the remaining missiles to penetrate missile defenses with or without penetration aids, such as decoys and other countermeasures. The July 2002 DoD report put the number at 60 ICBMs, while the December 2001 NIE report projected 75-100 by 2015.¹³⁹ China might also retain older missiles in its inventory for longer periods instead of retiring them. The same July 2002 DoD report on Chinese military power suggests that the DF-5A, Mod-2 will likely be deployed over the next few years.

China has tested multiple reentry vehicles (MRVs), decoys, and penetration aids, but has not deployed these capabilities on operational missiles.¹⁴⁰ It could deploy MRVs or MIRVs to increase the number of warheads that could penetrate U.S. missile defenses. U.S. missile defenses would also make the deployment of penetration aids essential. While Beijing may still face significant technological hurdles in adopting these measures, it certainly would respond to U.S. missile defense by expanding its current strategic nuclear force. China could also turn to Russia for technical assistance in developing countermeasures and even develop its own missile defense systems. China and Russia may also pool their resources together to develop means to overcome U.S. missile defenses.¹⁴¹

The ways in which China's responses take place will be determined by whether it will seek to enhance the survivability of its limited nuclear forces, thus maintaining the uncertainty principle, or reformulate its nuclear doctrine to adopt a limited deterrence posture or launch on warning. The latter would also have significant impact on China's no-first-use (NFU) principle and its ability to develop smaller nuclear warheads, raising questions about its commitment to a nuclear test moratorium. It also raises the issue of its nuclear transparency.¹⁴² Missile defenses would make submarines more attractive as a means of increasing missile survivability and for launching from locations and depressed trajectories where missile defenses have limited coverage.

China might try to develop an antisatellite system capable of directly attacking key components of a U.S. NMD system. Chinese military analysts have increasingly recognized that space control provides the key to military victories in modern warfare. Increasingly, attention is being paid to information dominance through space power, in particular with reference to Desert Storm and Operation Allied Force. In both contexts, U.S. space systems played a critical role in gathering and transferring intelligence.¹⁴³ One of the major lessons PLA analysts have drawn from the 1990-1991 Gulf War is how U.S. dominance and utilization of space gave it a decisive edge over Iraq. More than 70 satellites crisscrossed the skies over the Gulf, forming four major aerial systems: surveillance and monitoring, communications logistics, navigation and global positioning, and meteorological logistics. The same concept was applied during the Kosovo air operations in 1999, in which NATO deployed 50 satellites of 15 to 20 different types to coordinate intelligence gathering and air attacks.¹⁴⁴ Commenting on the U.S. Air Force space war game *Schriever-2001*, Colonel Teng Jianqun, editor-

in-chief of the journal *Waiguo junshi xueshu* (*World Military Review*, a publication by the prestigious PLA Academy of Military Science), pointed out that “whoever first occupies the commanding height in military technology may be able to seize the initiative in war.” That commanding height today is space dominance. The implications for the PLA?

Space fighting is not far off. National security has already exceeded territory and territorial water and air-space, and territorial space should also be added. The modes of defense will no longer be to fight on our own territory and fight for marine rights and interests, and we must engage in space defense as well as air defense.¹⁴⁵

Even though no conclusive evidence exists as to specific programs regarding the development of these weapons, viable motives and defensive military strategic implications for China’s ASAT use are not inconceivable.¹⁴⁶ First, given that U.S. missile defense systems must operate with satellite assistance, a Chinese ASAT capability could be useful in disabling U.S. satellites, hence paralyzing NMD. Indeed, Chinese experts have suggested three specific measures in response to U.S. NMD deployment. These range from direct space-launched attacks from satellites armed with nuclear warheads, SLBMs, and ASAT.¹⁴⁷ Second, the United States is increasingly utilizing its satellites when firing precision-guided munitions. Formerly using lasers to pinpoint a target, these conventional weapons are now beginning to depend on global positioning satellites to find their destinations. These weapons were used in the Kosovo bombing campaign when U.S. forces destroyed the Chinese Embassy. Third, in the future China may face hostile U.S. action against its own limited space assets.¹⁴⁸

Beijing’s acute concern about the shifts in U.S. nuclear thinking could also precipitate shifts in Chinese policies on nuclear testing and the CTBT. China signed the CTBT in 1996 but has not yet ratified it, mainly because the U.S. Senate rejected it in 1999. Since then, a fierce internal debate about CTBT ratification has been raging in China. Some support ratification because China has already stopped testing and can assume the moral high ground on this global arms control issue. Others argue 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 growing body of analysts in China believes it is probable the United States will start testing again to develop a new generation of small nuclear weapons.¹⁴⁹

Of the various responses China could adopt in response to U.S. missile defenses, one of the most feasible would be to expand the number of current missile forces to avoid a potential decapitating first strike. A higher number will also give China psychological reassurance as well as sustain the level of uncertainty that the United States must cope with. This short-term makeshift measure could be paralleled by accelerated development, testing, and deployment of the road-mobile DF-31s and DF-31As to enhance survivability of China’s retaliatory capability. The new generation ICBMs are likely to be armed with countermeasures, such as decoys. Once deployed, these new capabilities will enable China to achieve real credible minimum deterrence, even under a U.S. missile defense environment. However, MIRVing will remain a question, as it requires smaller nuclear warheads. Without nuclear tests, the technical hurdles involved in MIRVing could prevent its introduction in the near term. Chinese responses likely will remain proportionate to the size and types of missile defenses the U.S. will deploy.

The pace and scope of Chinese nuclear modernization in the past have been affected by technological and economic constraints. While China demonstrated a remarkable feat in achieving a nuclear detonation, an MRBM flight, and a hydrogen bomb explosion within a short span of three years (1964-1967)—generating great expectations of its future nuclear weapons developments—the actual experiences suggest that such optimism was not well founded.¹⁵⁰ Economic constraints and political turmoil such as the Cultural Revolution of 1966-1976 may have contributed to slow progress, and a technological bottleneck may have been a key impediment to the development of new-generation ICBMs and miniature nuclear warheads, prompting the Cox Report charges of Chinese nuclear espionage. While finding the necessary resources presents few obstacles given China’s growing economic capabilities, technological deficiencies will remain a serious impediment to what China can achieve in its strategic nuclear force modernization and at how fast a pace.

Technical assistance from Russia could significantly speed up China’s modernization. There have been unconfirmed reports of Ukrainian missile experts working in China, and Russia may have shared technical data on its own 4th-generation ICBM (SS-18 and SS-25).¹⁵¹ While such information is difficult to verify, recent developments in Sino-Russian and Sino-Ukrainian military cooperation are openly reported. From the Russian/Ukrainian perspective, there is much to gain through such assistance. It

could further strengthen the so-called strategic partnership, and it serves to alleviate concerns about what it views as a recent tilt toward the United States. Economic factors are also important as Russia and Ukraine seek to maintain the viability of their defense industrial complexes. R&D on future weapons development could also be funded through greater cooperation with and assistance to China.

Asymmetrical countermeasures such as ASAT capabilities are lesser prospects simply because of the immense risks involved. ASAT development also runs counter to China's claimed opposition to weaponization of outer space. Threats to abrogate arms control commitments are equally untenable for two reasons. One is that the Bush administration does not regard international arms control highly and therefore is unlikely to be swayed by the prospect of setbacks in this area. The other is that China realizes that negating its arms control and nonproliferation commitments tarnishes its image as a responsible power without the benefit of obtaining U.S. concessions on missile defenses. At the same time, there are also arguments that strengthening China's own nonproliferation infrastructure could facilitate strategic consultation between China and the United States by removing unnecessary irritants to focus on real, strategic issues.¹⁵² The recent promulgation of missile transfer export control regulations is a clear indication that China is moving in this direction.

The fallout of Chinese responses discussed above could be severe in several respects and could well affect regional security and stability, global arms control and disarmament, and potential misperception of strategic intents between China and the United States. In the first instance, the expansion of China's nuclear arsenals could cause India to respond; India's nuclear armament in turn could trigger Pakistani reactions. The end result could be greater nuclear weapons and missile proliferation in China and South Asia.¹⁵³ In addition, the growth of the Chinese nuclear missile force could undermine the credibility of U.S. extended deterrence over Japan and, coupled with the uncertainty over North Korea's nuclear programs, could impel Tokyo to reconsider its own nuclear policy.¹⁵⁴

The U.S. decision to deploy missile defenses could potentially bring the global arms control process to a complete halt. Beijing has warned that U.S. missile defense plans could derail Chinese nonproliferation commitment with the West, reversing the progress made in the last two decades.¹⁵⁵ Ambassador Sha once observed:

The NMD program...is designed to gain unilateral strategic superiority by building U.S. security on the inse-

curity of others. This will undoubtedly undercut the basis for its cooperation with relevant countries. How can you expect progress in [the] arms control field while you yourself are developing NMD at full speed? It's just wishful thinking.¹⁵⁶

A Chinese response could include renegeing on its bilateral pledges not to transfer nuclear, chemical, and missile technology. But short of declaring that it would abrogate all its commitments, Beijing's warning sent a clear message to Washington.¹⁵⁷ In turn, the U.S. Senate's rejection of the CTBT, its abrogation of the ABM Treaty, and its determination to move forward with NMD all send negative signals to China. For instance, the current stalemate at the CD on FMCT negotiations reflects Chinese thinking that the topic and scope of international arms control negotiations cannot be dictated by the United States.¹⁵⁸

CONCLUSIONS

U.S. plans to develop and deploy ballistic missile defense systems have become a most contentious issue over the last few years. While debates in the United States continue over both the technical feasibility of such systems and the politics involved, a greater impact will be on the future of global arms control, disarmament and nonproliferation endeavors, and on regional security. Missile defense proponents' arguments for protecting American territories and troops overseas against missile attacks from the so-called rogue states ring hollow to the Chinese as they continue to be suspicious of U.S. determination to seek absolute security and dominance in the post-Cold War era. Not only were Russia and China strongly opposed to U.S. missile defense and its attempt to amend/abrogate the ABM Treaty (now a *fait accompli*), U.S. allies have also been skeptical about the effectiveness, cost, and negative impact of what is seen as the revived but scaled-down version of the Reagan-era Star Wars.

As the Bush administration is set to implement its missile defense plans, China could be forced to respond out of concern for the credibility of its limited deterrence capability. None of the potential responses that China could adopt augurs well for arms control and nonproliferation. China can deploy more and better missiles simply to overwhelm missile defense. It can speed up its current nuclear and missile modernization programs and improve upon the reliability and survivability of its existing strategic missile forces. And it can also arm missiles with penetration aids and decoys to defeat missile

defenses. Each and every one of these possible responses will have important arms control and nonproliferation consequences. Combined, they can affect Beijing's commitments to a nuclear test moratorium, its attitude toward and participation in negotiating a fissile materials cut-off treaty, and its bilateral pledges in the areas of nuclear and missile exports and assistance. Additionally, China's enhanced efforts at nuclear and missile modernization, coupled with the continued growth of its economic and military power, will have a ripple effect on countries such as India and Japan, among others. The net impact will probably be less, rather than more, security for all concerned.

These potential Chinese responses may generate or reinforce misperceptions of strategic intentions in the world's capitals. Washington, for one, could well be swayed by the argument that Beijing's nuclear modernization has all along been aimed at either intimidating the United States from intervening on behalf of Taiwan should China apply force against the island, or challenging core U.S. interests in the Western Pacific. Others may see the expansion of China's nuclear and missile forces alongside its irredentist demands and territorial disputes with its neighbors as a harbinger of its aspiration for regional hegemony. What is deplorable and indeed most worrisome, is that even though Beijing may harbor none of the above ulterior motives and simply is reacting in self-defense, the lack of strategic dialogue between key players in the region could well push all of them to paths none desires but nonetheless takes unintentionally.

Perhaps one of the obstacles to convincing the Chinese that U.S. missile defense is not aimed at China is the fact that Washington did not take Beijing's interests and concerns seriously.¹⁵⁹ This is not to deny that some forms of security dialogue do exist between China and most of its major interlocutors: the United States, Japan, and India. What is needed is the kind of strategic dialogue cum negotiations developed over the years between the former Soviet Union/Russia and the United States. A key element of superpower arms control negotiation during the Cold War years was the development of communication channels to address potential misperceptions and miscalculations that could trigger a nuclear exchange. A corollary of that process was the forming of what analysts later called the epistemic community, which shared a culture of hard-nosed, no-nonsense but nevertheless professional exchanges of views on substantive life-and-death issues in the nuclear age.¹⁶⁰ It is just such strategic dia-

logue that is lacking and needed now. Chinese officials have expressed on many occasions that untying the current missile defense knots depends on the kind of strategic political relationships that China will have with the key powers surrounding it. Assuming both Beijing and Washington regard nuclear weapons and deterrence as an instrument for stability among major powers, not as one of coercion, any conflict between them out of misperception and miscalculation would be all the more deplorable. Adequately addressing Chinese concerns without allowing Beijing to dictate U.S. policy could help avert such an outcome. However, any serious strategic dialogue must demand a minimum degree of reciprocity; transparency on China's part about its general views on nuclear deterrence and its force structure could go a long way toward dispelling regional concerns and discrediting accusations that China seeks nuclear blackmail against the United States.

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