Building Toward a Stable and Cooperative Long-Term U.S.-China Strategic Relationship

RESULTS OF A TRACK 2 JOINT STUDY BY U.S. AND CHINESE EXPERTS

DECEMBER 31, 2012

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Organized by Science Applications International Corporation, The Pacific Forum CSIS, and China Arms Control and Disarmament Association *with the support of the* U.S. National Nuclear Security Administration and the Ford Foundation

Acknowledgements

The organizers would like to thank all of the American and Chinese paper writers for their participation in this project. Their contributions were the key to the project's success and also demonstrated the benefits of this type of joint undertaking on the part of Chinese and American experts. Mr. David Santoro of Pacific Forum CSIS also played a key role in helping organize the July, 2012 Beijing workshop of the paper-writers.

Science Applications International Corporation and the Pacific Forum CSIS also would like to thank the National Nuclear Security Administration of the U.S. Department of Energy for its support of this project. The China Arms Control and Disarmament Association would like to thank the Ford Foundation for its support. The authors alone are responsible for the contents of the report.

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Foreword

Dr. Lewis A. Dunn (SAIC), Mr. Ralph Cossa and Mr. Brad Glosserman (The Pacific Forum CSIS), Mr. Li Hong (CACDA)

The relationship between the United States and China, one country an established power, the other country a rising power, will decisively shape the 21st century. A more cooperative and stable strategic relationship between the two countries will make it easier to meet today's global economic, political, security, social, and environmental challenges. Such a relationship will in turn allow both countries to focus scarce leadership attention, political capital, and economic resources on achieving their domestic priorities. By contrast, a more confrontational and troubled strategic relationship would undermine the security and well-being of both China and the United States. For these reasons, the importance but also the challenges of building toward a more stable and cooperative U.S.-China relationship are widely recognized in both countries today.

The Joint Study Project

There are many aspects of today's U.S.-China relationship, from economic and trade interaction to political and social issues. This report focuses on one dimension—the strategic relationship between the two countries, with strategic encompassing the many ways that the two countries plans, doctrines, capabilities, postures, and actions interact across the nuclear offenses and defenses, outer space, and cyber realms. This report and the overall project from which it derives explore the challenges but especially the opportunities for building habits of strategic cooperation between China and the United States while managing if not reducing areas of disagreement or competition.

In pursuing that purpose, this project has entailed a Joint Study by a small group of U.S. and Chinese experts aimed at "Building a Stable and Cooperative Long-Term U.S.-China Strategic Relationship". It has been conducted as a so-called "Track 2" effort, involving a mix of experts (including former senior officials) from both countries participating in their personal capacities. Under the overall lead of Dr. Lewis A. Dunn, this Joint Study has been organized and implemented cooperatively by Dr. Lewis A. Dunn of Science Applications International Corporation (SAIC), Mr. Ralph Cossa, Mr. Brad Glosserman, and Dr. David Santoro of the Pacific Forum CSIS, and Mr. Li Hong of the China Arms Control and Disarmament Association (CACDA). Overall support for the Joint Study was provided by the U.S. National Nuclear Security Administration. CACDA received support from the Ford Foundation. The results set out in this report are the responsibility of the various authors and not necessarily those of SAIC, the Pacific Forum CSIS, CACDA or any of their sponsoring organizations.

More specifically, as reflected in the papers that follow, the Joint Study involved the following steps:

- First, a set of paper topics or issue areas were identified broadly covering the dimensions of the overall U.S-China strategic relationship;
- Second, one U.S. and one Chinese expert each prepared an individual paper on a given issue area, from defining a vision of a stable and cooperative strategic relationship to opportunities to use Science and Technology (S&T) cooperation to build toward such a relationship;

- Third, the authors exchanged papers and were encouraged by comments from the project leader to address specific points raised by their counterpart paper-writer;
- Fourth, we held a two-day workshop in Beijing, China on July 25-26, 2012 to encourage further interaction among the paper-writers as well as a larger group of experts;
- Fifth, each of the paper writers prepared a revised paper based on comments at the workshop as well as from the project leader;
- Finally, based on the overall Joint Study, a set of concluding thoughts on "the way forward" was prepared and comprises the final section of this report.

Building Habits of Cooperation

Taken together, the papers produced for the Joint Study project and presented in the report that follows offer a serious, thoughtful, and forward-looking discussion on building a stable and cooperative long-term China-U.S. strategic relationship. Both the papers and the associated workshop involved a frank discussion—and revealed important areas of agreement as well as some continuing disagreements on important issues among the persons involved in the joint study project. In so doing, this limited project also demonstrated the value of joint or parallel analysis by American and Chinese experts—and provides a possible model to be followed at the right time in official-level joint studies of such issues.

More specifically, there was agreement among the authors and other project participants that building a stable and cooperative strategic relationship would serve both of our countries' near- and long-term political, security, and economic interests. It also would help us both to work together to help meet the global challenges of the 21st century. At the same time, the paper writers and workshop discussion frankly considered the challenges and tough issues that our countries' leaders need to address in pursuit of that goal. Even as they did so, the Joint Study participants emphasized the pursuit of "Win-Win" approaches. Thus, the papers as well as the results of the workshop discussion offer many promising new ideas and possible initiatives for building toward a stable and cooperative strategic relationship.

Regarding more specific next steps from the Joint Study, suffice it here to emphasize only three areas for dialogue and action. A top priority in the overall dialogue process between China and the United States should be to put in place a robust and continuing set of exchanges and other types of official interaction between our two countries' militaries and defense establishments. Beginning a multi-part process of mutual strategic reassurance also is essential between our two countries. To that end, the time is ripe to explore, first at the Track 1 ½ level and then officially, principles, dialogue, and confidence-building actions that would help to build habits of cooperation, lessen the mutual uncertainties and suspicions on both sides, and address in a mutually satisfactory way key strategic challenges facing the two countries. Finally, despite important areas of cooperation, the two countries' assessments of non-proliferation challenges as well as their basic approaches to meet those challenges often differ. A better mutual understanding of these differences—and identification of areas of complementarity—would serve the interests of both the United States and China as well as contribute to peace and stability across the globe.

Introduction

Dr. Lewis A. Dunn

By way of introduction, the following provides a brief description of each of the papers. The concluding section at the end of this report offers some judgments about areas of agreement and disagreement among the U.S. and Chinese experts as well as about promising opportunities to explore further to build toward a stable and cooperative strategic relationship. In providing this introduction, every effort has been made to reflect accurately the papers that follow, though given the richness of those papers I have had to be selective and I apologize in advance to the authors if I have failed to highlight specifically one or another of their points. I, alone, am responsible for the content that follows.

Topic 1: Elements of a Cooperative and Stable Long-Term U.S.-China Strategic Relationship

Beginning the discussion, Michael Nacht and Pan Zhenqiang in their respective chapters offer perspectives on what long-term vision should guide future strategic interaction between the United States and China. For his part, Michael Nacht proposes that "[t]he overarching goal should be for U.S.-China relations to be marked by a complex web of interactions that are often mutually beneficial, cooperative and respectful of each other's core national interests, while sometime highly competitive, but never close to conflict." Pan Zhenqiang argues that strategic cooperation between China and the United States should be "dramatically different" from U.S.-Soviet cooperation which was only part of the "rules of [the] game of competition." Instead, both countries' goal should be ". . . cooperation . . . based on greater common interests, mutual respect, mutual trust, and mutual benefit." Both Nacht and Pan agree that both countries have a strong security interest in building a stable and cooperative strategic relationship.

Michael Nacht's paper goes on to set out different approaches to building cooperation, with an emphasis on a deductive-inductive approach that would combine "searching for guiding principles while continuing to identify and enlarge areas of common ground." Among key principles he suggests are assurance ("building the belief of another party in one's positions or claim") and reassurance ("removing the doubt of another party about one's positions or claims")—and for both

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Topic 1: Elements of a Cooperative Long-Term China-U.S. Relationship
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Mr. Toby Dalton

countries, not seeking "hegemony in the Asia-Pacific region", as called for in the Shanghai Communique of 1972. Nacht's paper explores various challenges to reassurance and assurance, highlighting the differences between U.S. and Chinese perspectives on a set of security issues. Here, he cautions against the possibility that a Chinese pursuit of what Pan Zhenqiang in his paper calls "voice through strength" likely would result in what Nacht fears would be "intense U.S.-China arms competition . . . to no one's benefit."

Possible next steps for assurance and reassurance in a deductive-inductive approach are then considered by Michael Nacht. For differing reasons, he is skeptical about making progress on transparency, nuclear safety and security, or non-proliferation (excepting thinking about how China's self-ascribed role as a mediator could support non-proliferation). While noting the different U.S. and Chinese perspectives on missile defenses, he proposes: "In short, a candid exchange on what each side wants, and what it is willing to give up, could begin to bridge the gap." He also briefly touches on the possibility of mutual no-first-use of nuclear weapons policies between China and the United States. Perhaps most important, as he concludes, "[t]he very commitment by both sides to find common ground for assurances and reassurances through a sustained dialogue at multiple and high levels of government would itself be a 'confidence-building measure' indicating that we were both on the right track."

For his part, Pan Zhenqiang sets out four basic elements or prerequisites to shape a cooperative longer-term relationship. These include: "a propitious balance of force. . . between the two powers because the right of voice come, first of all, from strength [both military strength but also soft power and overall status and influence]"; "developing compatible interests, threat perception, and strategic goals and intentions"; "building norms and habits for strategic cooperation"; and "fostering a favorable domestic environment."

In his specific discussion of building norms, Pan stresses the importance of mutual respect and mutual trust, with each country respecting the legitimate interests and choices of the other. He also emphasizes the importance of "[i]nstitutionalization . . . as a strong tool to promote and regulate cooperation between the two countries", including "strengthening military-to-military relations." In this discussion of norms, Pan Zhenqiang also emphasizes, as well, the need for a "two-way", "evolutionary" process of transparency—but a process built on "strengthens[ed] political relations. . . [and focused] first at the macro-strategic level, including for example, regarding their threat perceptions, strategic goals and intentions, military strategies and doctrines." Warning of "the eternal trap of the 'security dilemma'" and the risk of "aggravating the trust deficit crisis," he highlights the importance of "mutual restraint in each country's military buildup and its regional security arrangements . . . ." Critical of "polarized" U.S. public debates about China, his discussion goes on to call on both countries to "foster a more favorable domestic environment of public opinion." Pan concludes with a mix of optimism and realism: "No doubt, the prospect is bright for China-U.S. relations. But the evolution of this relationship will be a long process, full of zigzags."

Topic 2: Challenges and Opportunities for Building a Stable and Cooperative China-U.S. Strategic Relationship

Building toward a stable and cooperative strategic relationship, as the papers by Li Hong and Christopher Twomey make clear, confronts significant challenges. Among those challenges, Li Hong's paper highlights a rising "mutual trust deficit," the "politicization of economic problems," an "uneven

development of bilateral relations" (including especially the lag in military-to-military exchanges), and "differences in U.S.-Chinese foreign policy ideas and practices." Discussing specifically the "uneven development in bilateral relations," he calls on the one hand, for the United States to be ". . . more tolerant, generous, and confident in dealing with China's military development" and on the other hand, for the Chinese military to "boldly and self-confidently engage in dialogue and exchanges with the U.S. military . . . ." (including on transparency measures). Differences over Taiwan, Tibet, and human rights are highlighted among different U.S. and Chinese views on foreign policy. In his counter-part paper, Christopher Twomey singles out "fundamentally divergent interests on Taiwan" as the core challenge, while also reviewing other regional conflicts of interest. He goes on to emphasize the danger of "emerging arms race dynamics, both with regard to high intensity conventional capabilities and nuclear and other strategic weapons". Twomey's discussion also points to a particular challenge: the development of each side's military capabilities "reifies" the intrinsic adversarial elements of the relationship.

Balanced against these challenges, both Li Hong and Twomey also identify opportunities or foundations for building toward a stable and cooperative strategic relationship. Though putting it differently, both papers agree that there are common interests in managing, as Li Hong puts it, "maintaining global security and building a sustained peace" or in Twomey's words, "some similar interests on a few global issues." In Twomey's view, there also is "no overarching competing worldview or model of international relations between the two [countries]." Instead, as Li Hong argues, "each of the countries attaches great importance to the other." Not least, both papers emphasize the importance of economics as a foundation for addressing the issues that divide the two countries and building strategic cooperation. "For both countries," as Twomey puts it, "maintaining economic prosperity is more important than the security issues that divide the two, with the singular exception of Taiwan (and only there under some very narrow conditions." Li Hong agrees on the importance of China's pursuit of "prosperity and development" and goes on to call this economic dimension the "ballast stone" of the overall relationship.

Both papers combine pessimism and optimism in judging the prospects for building toward a more cooperative strategic relationship between China and the United States. "The potential development of aligned interests with regard to the global commons", Twomey's paper states, "may over time provide increased opportunities for a cooperative strategic relationship" as could "a deep recognition by both that stability in the bilateral relationship is an important goal . . . ." But differences will persist on non-proliferation as well as on Taiwan and other Asian security concerns, all of which ". . . will continue to engender tension in the near term that will complicate the development of substantive and broad strategic cooperation . . . . " For his part, Li Hong concludes by emphasizing the opportunities for building cooperation based on agreed rules and international law but also by reminding us again that "the U.S.-China relationship is more complex and vulnerable than most people would imagine."

Topic 3: Elements and Roles of Enhanced Dialogue for Strategic Reassurance

In their respective papers, both Ambassador Linton Brooks and Mr. Gu Guoliang emphasize the importance of a strengthened strategic dialogue between the United States and China (including the two countries' militaries) with the goal of mutual strategic reassurance. For Brooks, "strategic reassurance aims at eliminating misunderstanding." For Gu Guoliang, the purpose of that reassurance dialogue is "to enhance mutual understanding and cooperation, to expand trust and dispel suspicion, to avoid misunderstandings and misjudgments, and especially to avoid misjudgments leading to a military conflict

which neither country desires." He continues that: "Under present circumstances, the crucial issue for the two countries is to avoid falling into the so-called 'Thucydides' trap' [in which] . . . a rising power is bound to challenge the established power, and to meet in turn with the response of the established power, thus leading inevitably to a military competition and confrontation if not conflict."

Linton Brooks continues on to set out ". . . issues between China and the United States requiring reassurance" before proposing an approach that he characterizes as "incremental steps" and "guided by a common vision of the importance of reassurance and the forms it might take." Toward that end, China and the United States could seek agreement on "principles of reassurance," a number of which he sets out as a basis for further discussion.

Brooks' paper then goes on to explore the possible "elements of a program" of strategic reassurance that would be "progressive, both building on past steps and being sensitive to the overall political relationship." His three-part program "focus[es] on what can be done immediately without political difficulty," "move[s] next to confidence-building measures. . . and more robust discussion on more sensitive topics," and finally, to "government to government (including military to military) discussions on more difficult topics." Following that approach, improved exchanges and dialogue are highlighted as essential. Brooks' paper then explores in greater detail confidence-building measures that would involve "actions not simply rhetoric" and entail "government action, usually involving both military and civilian officials." Specific confidence-building measures are discussed that deal with missile defense, prompt global strike, nuclear test sites, nuclear operations and strategy, and nuclear weapons and materials security. He closes by reaffirming the importance of government-level discussions because "ultimately strategic reassurance operates between states."

Gu Guoliang's paper begins by reviewing the historic experience over the past decades of what he notes has been a "deepen[ing] . . . and more wide-ranging" process of strategic dialogue between China and the United States across multiple areas, from economics to security, and at the official, Track 1 ½, and Track 2 levels. He notes various accomplishments from that process. At the same time, Gu's paper also highlights important challenges and constraints facing the U.S.-China mutual assurance dialogues and the relationship more broadly. "Traditional perceptions" of each other persist, including "view[ing] each other as rivals." Differences over core national interests such as Taiwan and the South China Sea and the East China Sea also are a constraint, reflecting different approaches to foreign policy.

Against this backdrop, Gu's paper then sets out a series of ideas to strengthen the process of strategic dialogue. Here, for example, he points to steps by both countries "to work harder to perceive each other objectively and to change their old perceptions about each other, and about the world." Gu goes on to state that "[e]nhancing the military relationship should be one of the most important parts in strategic reassurance and reducing strategic suspicions . . ." and to identify specific issues for in-depth dialogues to help avoid "basing their military preparations on 'worst case scenarios.'" Citing actions by Presidents Bush and Obama as well as by President Hu Jintao, he also reminds us that "it is an important element of strategic reassurance when the government leaders of China and the United States do the right thing at the key moment." Finally, Gu Guoliang concludes that both countries "need to invest more resources in that [dialogue] process as well as to have more strategic patience."

Topic 4: Conditions, Opportunities, and Limits for Coordinated and Cooperative Nuclear Evolution

Both Dr. Li Bin and Dr. Eric Heginbotham address the interaction of U.S. and Chinese nuclear forces. For Li Bin, "nuclear weapons could become important if the overall relation of the two countries becomes very bad or if we cannot manage the nuclear issue appropriately." For Eric Heginbotham, U.S.-China nuclear interaction is part of the "nested and overlapping security dynamics between the United States and Russia, China and the United States, China and India, and India and Pakistan". Given those tightly interconnected security dynamics and the prospects of new (or expanded) deployments of military systems, he warns of a danger of ". . . destabilizing nuclear dynamics between existing nuclear states (to include China and the United States)."

In exploring the possible evolution of interaction between Chinese and American nuclear policy and postures, Li Bin begins by describing the domestic debate in China on nuclear policy. He identifies three different schools: a first of "minimum deterrence", a second of "counter nuclear coercion", and a third of "deterrence against conventional conflicts." "None of the three schools," he argues, "suggests a large nuclear arsenal in China unless China's retaliatory force is undermined by new [U.S.] military approaches, for example, missile defense." Li Bin goes on to elaborate two different ways that U.S. policy across the domains of nuclear offenses, missile defenses, and conventional strike can impact Chinese nuclear policy and posture decisions: by "chang[ing] China's threat perception" and by a "demonstration effect", that is, demonstrating a technical or policy model for China's nuclear development.

In his analysis, Eric Heginbotham begins by discussing the "mixed record" of U.S.-China cooperation in support of the non-proliferation regime even as he identifies some areas for strengthened cooperation, including universalizing the IAEA Additional Protocol. He also warns, however, that "emergent dynamics among the existing nuclear powers could undermine broader non-proliferation efforts." With regard specifically to the U.S.-China nuclear dynamic and the risk of arms competition, his paper addresses the potential adverse impacts due to ". . . the possible introduction of destabilizing systems, or their deployment on a larger scale) . . . [to] include ballistic missile defenses and Multiple Independently Re-Targetable Vehicles (MIRVs) . . . ." In turn, he explores how ". . . the nested and highly interconnected nature of Asian nuclear security dynamics. . . ."—not least involving India and Pakistan and India and China—could spillback to impact U.S.-China as well as U.S.-Russia nuclear interactions.

Against this backdrop, Eric Heginbotham argues that "the parties should consider a multilateral dialogue on arms control earlier, rather than later." Acknowledging the argument of other experts that the time is not yet ripe for formal negotiations, he emphasizes multilateral and dialogue. Specifically, a formalized arms control dialogue could serve the following goals: "identify areas where unilateral, bilateral, or mutual restraint might prevent full-scale arms racing", "begin to build (or rebuild) an understanding of nuclear stability issue," "provide a useful international check on the thinking of nuclear strategists and planners from all sides", and "begin to discuss what kinds of controls future formal negotiations might address." One possible forum would be P-5 plus 2 (India and Pakistan). For our discussion, here, he also continues, "[t]he United States and China clearly have much to discuss bilaterally." For these two countries, Heginbotham asks: "Can the two work together and with others to restrain their own strategic behavior. Can they [the United States and China] consider limiting the future

development and deployment of systems that currently have substantial bureaucratic and political momentum?"

For his part, Li Bin similarly stresses that "[i]t is time for China and the United States to develop healthy and stable nuclear relations through constructive dialogues." But he also places a greater burden on the United States: "However, if the United States carefully manages the configurations of its new strategic and nuclear capabilities, it could avoid some threatening effects on China and therefore, mitigate the security dilemma between the two countries."

Topic 5: The Role of Mutual and Cooperative Strategic Restraint

Both Dr. Wu Chunsi and Dr. Lewis A. Dunn agree that the time is not ripe for more formal, treaty-based arms control between China and the United States. Instead, their papers address mutual and cooperative strategic restraint as a complement to enhanced dialogue. Such mutual restraint could be another means of strategic reassurance, in Wu Chunsi's phrase, ". . . to build up a stabilizing strategic relationship between China and the United States . . ." or Lewis Dunn's words to reduce "U.S.-China mutual uncertainties about each country's activities in the strategic offenses-defenses, space, and cyber domains [that] are a cause for joint concern. . . ."

After reviewing the mutual uncertainties of the U.S.-China strategic relationship, Dunn's paper first touches briefly on the continuing differences between China and the United States on transparency as a means of reassurance. He argues for a ". . . a frank exchange of each country's thinking and concerns." He then goes on to propose a concept of "reciprocal but equivalent transparency", which would not require one-for-one information exchanges and would be more flexibly implemented.

Dunn's paper continues to set out a concept of mutual strategic restraint involving: a mix of "discussions and negotiations"; leading to "agreed restraints" on military plans, capabilities, doctrine, and postures across the different strategic domains; as "reciprocal or parallel political commitments"; and with "complementary measures to build confidence and enhance credibility". Mutual restraint would build on existing unilateral restraints. Regarding possible next steps, he proposes that China and the United States begin "to explore the concept . . . first at the Track 1 ½ level and then at the official level." If these initial discussions are promising, the two countries could seek agreement on "first principles" to govern a process of mutual restraint. Dunn discusses in turn some possible examples of mutual strategic restraint warranting exploration, including agreement on mutual restraint in a limited area (e.g., crisis avoidance measures), a bilateral no-first-use of nuclear weapons agreement as a confidence building breakthrough, and U.S. restraint in the areas of missile defenses and conventional global strike reciprocated by Chinese restraint in nuclear modernization. At this stage he argues, specific agreements are less critical than beginning to engage on the concept of mutual restraint.

Wu Chunsi's paper begins by discussing the acceptability in principle to China of such a concept of mutual restraint. Her judgment is that "[a]s a concept emphasizing restraint, a stabilizing relationship, and reciprocity, mutual strategic restraint politically should be acceptable to China." She then discusses how the concept is "consistent with a number of China's core values and concepts." At the same time, Wu's paper goes on to set out a number of "practical obstacles." In particular, she highlights three scenarios in which China worries about "its survival environment", specifically, "a military conflict over the Taiwan Strait, an attack on China's strategic nuclear weapon arsenal, and a military intervention into Chinese

territory." Her judgment then is that in practice: "Given these considerations, it will not be surprising if China shows reluctance about proposals for strategic restraint." Despite this cautionary note, Wu goes on to state that ". . . the real question is not whether China and the U.S. need to consider mutual restraint but how to work out a mutual strategic restraint in the current strategic context."

In considering mutual strategic restraint, Wu continues, a starting point should be ". . . common understandings to reduce China's survival concerns." In addition, measures of mutual restraint ". . . should be designed . . . to strengthen their deterrence relationship in the strategic nuclear area." To do so, specific proposals for mutual restraint need to reflect "the asymmetry of Chinese and U.S. military capabilities" as well as the asymmetry of their respective approaches to deterrence. In turn, while arguing that it is "not realistic to pursue simultaneously restraint in the nuclear, outer space, and cyber areas," her paper states it is time ". . . to begin dialogues" on space and cyber. Wu concludes by proposing several ways that the two countries could "strengthen their cooperation on crisis management."

Topic 6: Building Cooperative Engagement on Regional Proliferation Crisis Management

The two papers by Dr. Lora Saalman and Dr. Shen Dingli offer stark assessments of the impediments to greater cooperation between China and the United States on regional non-proliferation challenges. As such, their respective papers provide a counterpoint to the argument in some of the other papers in the joint study—as well as more widely among experts and officials—that non-proliferation is an area in which the two countries can build habits of cooperation.

In discussing the impediments to non-proliferation cooperation, Lora Saalman begins by arguing that the problem is not lack of mutual trust between China and the United States. Rather she argues the impediment to greater cooperation is "divergent U.S. and Chinese perspectives on proliferation." In part, those divergent perspectives reflect different Chinese and U.S. interests. With regard to North Korea, for instance, she argues that ". . . while citing denuclearization as one of China's aims, much more emphasis is placed by Chinese analysts on stability and security." The United States also "is cited within China as either triggering or exacerbating proliferation", again impeding cooperation. Moreover, Saalman goes on to argue that these divergent perspectives result as well from how China defines its overall role as a "mediator" or as "the honest broker". Specifically, "China's self-identification as both a P-5 country among the 'haves' and as a developing country among the 'have-nots' places it in a position to traverse dividing lines and to play its cultivated role of a go-between." In so doing, Lora Saalman contends, China often is reluctant to become involved until concern about U.S. actions leads it to do so—and then as "balancing out destabilizing moves on the part of the United States."

Shen Dingli's paper explores the growth but also the significant limits of non-proliferation cooperation between China and the United States in Northeast Asia, South Asia, and the Middle East. In his assessment, "their co-work isn't and can't be deep . . . . For America, nonproliferation, along with anti-terrorism has been its topmost national interest; whereas for China its core interests are national integration, economic development, and party's leadership." More specific divergences of interest also are said to impede cooperation. Shen points, for example, to "the U.S. defense of Taiwan [which] has kept the mainland wary and hedging, undermining China's interest in working with the U.S. on various strategic issues;" U.S. links to India seen as "strategically driven to check and balance China's rise;" and "China's energy security interest" in the Middle East. Both the United States and China, he also argues, place "national interests above principle-based [non-proliferation] cooperation." In contrast with Lora

Saalman's paper, Shen Dingli emphasizes as well the interaction of a lack of mutual trust and divergent interests when he refers to "the lack of mutual trust among major powers to forge common interests and build effectiveness in curbing proliferation."

Looking ahead, Lora Saalman concludes that "the lynchpin of building cooperation needs to be finding mutual interests." That said, she cautions, "[i]f proliferation is [seen as] fundamentally a greater harm to the United States than to China, this reduces the incentive to find an enduring solution." Indeed, as the title of her paper puts it: "is greater cooperation a good thing?" Rather, she argues, closer alignment with U.S. policies is likely to reduce Chinese influence among other states and undermine China's mediator role. At best, the basis of cooperation, therefore, may need to be found in a "symbiotic [China-U.S.] relationship as mediator and enforcer." By contrast, Shen Dingli concludes that "[as] major powers of the world, China and the U.S. have to lead global efforts to combat nuclear proliferation. . . ." This will require them to overcome the impediments his paper has described. It also calls for new approaches, as in his statement that "[w]hen both China and the United States jointly commit to Pyongyang's security, the latter would have less need to further its nuclear path." Overall, both building trust and identifying overlapping interests are needed: "While mutual trust would pave the foundation for nonproliferation cooperation, such collaboration itself should nurture trust and confidence."

Topic 7: Cooperative Actions to Meet Nuclear Security and Proliferation Challenges

The papers by Dr. Fan Jishe and Mr. William Tobey also address possibilities for non-proliferation cooperation, with a particular focus on Northeast Asia. Recognizing the constraints, both authors identify areas for building habits of cooperation.

Fan Jishe's paper begins by setting out what he argues are important differences between China and the United States on nonproliferation. In his view, these differences include different perceptions of non-proliferation's importance, with it "not a top priority issue yet" for China; China's reliance on "reports from the International Atomic Energy Agency's (IAEA) inspections and verification as the authoritative source of evidence" vice reliance on national intelligence; China's focus on an "integrated approach" that addresses both "the symptoms and the root causes" unlike what he regards as a U.S. neglect of root causes; and China's emphasis on the IAEA and the United Nations Security Council compared to a U.S. readiness to explore "all channels," not excluding the IAEA and the UN but also including a "coalition of the willing" and "to take actions unilaterally."

Fan Jishe goes on, however, to caution against "incorrectly interpret[ing] our two countries' differences in nonproliferation approaches as differences over objective." Rather, cooperation is necessary and should be based on a recognition that the "respective approaches [of China and the United States] are not in conflict, but complementary." In that regard, like Lora Saalman's reference to China's self-ascribed mediator role, Fan argues that "China's traditional ties with developing countries could serve as a source of strength rather than a barrier when addressing proliferation concerns. He also suggests that the two countries could cooperate in putting together the right package of political incentives and disincentives to influence countries of concern.

Turning specifically to the Korean Peninsula, Fan Jishe proposes a number of areas for China-U.S. cooperation in pursuit of stability and denuclearization, especially that "China could continue persuading North Korea to open up and reform, while the United States should adopt concrete measures to show

North Korea that it is possible to establish diplomatic relations with the United States if it decides to give up its nuclear option." He also strongly supports resuming the Six Party Talks as well as holding bilateral negotiations—"any form of negotiation that may lead to progress should be explored." Finally, Fan Jishe concludes by identifying specific steps by China and the United States to "cooperate under the umbrella of the Global Initiative to Combat Nuclear Terrorism" to enhance nuclear security in Northeast Asia.

By contrast, William Tobey begins his paper with a pessimistic assessment of the prospects for rolling back North Korea's nuclear weapons: "Despite extensive efforts to curtail and reverse Pyongyang's nuclear weapons programs, there is little reason to believe that the threat has abated, or even ceased to grow, and little prospect that the possible resumption of Six Party Talks will lead to a better outcome than the previous two decades of fitful negotiations." Against that backdrop, he argues instead that the key question today is "what cooperative steps can be undertaken to lessen the risks to the international community from onward proliferation, theft, diversion, or loss of control of North Korean nuclear weapons or material?" He continues that a number of conditions that could result in such onward proliferation from North Korea, whether by "sale to fund regime coffers", "insiders might divert," or "political instability [that] might undermine physical and personnel security systems and practices . . . ." Faced with this danger, Tobey posits that "China and the United States are perhaps best suited of all nations to deal with such contingencies in the North Korea case and acting together, they will be far more effective than either could be on its own."

Tobey then puts forward specific options for U.S.-China cooperation in three broad areas: "greater use of the Global Initiative to Combat Nuclear Terrorism," "increased cooperation on detecting and preventing illicit trafficking," and "coordinated emergency response in the event of loss of control of nuclear or radiological material in Northeast Asia." He recognizes that pursuit of these options may be constrained ". . . by reluctance [in Beijing] to appear to be acting against Pyongyang . . . ." Thus, he proposes that such cooperation be pursued at the technical level under GICINT (making it less politically sensitive) as well as sequentially. He also cautions that the alternative would be ". . . unilateral U.S. responses [that] are likely to be even more problematic" to Beijing. Plus, he notes, these options could be pursued sequentially. He concludes by proposing that a U.S.-China working group be created at the deputy assistant level on such cooperation.

Topic 8: Some Possibilities for Science and Technology Cooperation

Mr. Toby Dalton and Dr. Liu Chong agree that despite constraints, science and technology (S&T) cooperation between the United States and China offers promising opportunities for building habits of cooperation. Such cooperation, as Toby Dalton, puts it, ". . . remains a mechanism with great potential . . . as a means toward building a stable strategic relationship" or in Liu Chong's words as a ". . . field of cooperation [that] is significant for bilateral strategic stability, has considerable political sensitivity . . . and is worth trying to facilitate."

For Toby Dalton, "the value of S&T cooperation probably lies more in the process than in the outcome as such . . . ." Bringing together technical experts can help " transcend the cultural or political barriers that otherwise impede trust building . . . ," "form a constituency with a vested interest in continued cooperation," " help[s] build confidence in the dialogue process in other organizations ," and " creat[e] some 'breathing room,' to allow for an expansion of dialogue into more sensitive areas." But there are difficult "structural barriers to deeper U.S.-Chinese government-to-government cooperation on

more sensitive nuclear issues . . . .” These include: bureaucratic factors (including U.S.-Chinese differences over the 1999 Cox Commission Report); different “strategic cultures” (including views on transparency); a perceived technology gap (making two-way information flow more difficult); and “the asymmetry in military capabilities” (with each country concerned about revealing vulnerabilities).

Liu Chong begins by reviewing the characteristics and lessons learned of past China-U.S. S&T cooperation in the nuclear field, focusing especially on the growth of cooperation in the 1980s and 1990s and the “large setback . . . due to the Cox Report by the U.S. Congress in 1999 . . . .” Against this background, he discusses potential benefits of strengthened cooperation. He highlights the potential role of scientist-to-scientist exchanges in “contribut[ing] to strategic mutual trust . . . .” Exchanges also can “. . . play an important promotional role,” as his discussion suggests occurred in the 1990s as China’s arms control community emerged. Such exchanges, he continues, also can “increase the breadth and forward-looking scope of the discussion.” Nonetheless, Liu Chong goes on to argue that “. . . some practices on the U.S. side still pose a serious obstacle [to enhanced S&T cooperation] . . . .” Citing the Cox Report, he specifically argues that “. . . some politicians in the United States cannot completely give up cold war thinking and seek to make China an imagined enemy.” He also questions U.S. mechanisms and procedures, particularly a perceived lack of reciprocity.

Going forward, both papers argue for a progressive approach to enhanced S&T cooperation, moving from less to more sensitive topics and entities, and from the civilian to the government sectors. Regarding specific possibilities, Liu Chong proposes that “. . . how to build strategic stability and how to treat the developing changes affecting strategic stability are both worth investigating in exchanges between U.S. and Chinese scientists.” He also suggests “arms control experts of the United States and China should carry out in-depth studies and exchanges on the question of transparency . . . .” Here, he calls for greater U.S. transparency on its strategic programs and plans as well as a focus on the relationship between the transparency of intentions and the transparency of capabilities. Still other possibilities that Liu Chong sets out include assessment of the international non-proliferation situation, technical cooperation in the field of nuclear materials security, and cooperation in nuclear safety. Possible cooperation on safeguards and verification technology also is mentioned. Finally, Liu Chong’s paper proposes some initiatives to mitigate the structural obstacles to exchanges (including agreed “risk control measures”) as well as concludes by proposing greater attention to exchanges between young nuclear scientists.

For his part, Toby Dalton acknowledges that “[i]t may not be possible to overcome the Cox Report episode, at least in the near term.” That said, he argues that focusing specifically on cooperation between the nuclear weapon laboratories in both countries “is not critical” given the many qualified scientists, with the right knowledge and skills, at non-weapon laboratories. Instead, U.S. and Chinese officials “. . . should define a shared vision [for S&T cooperation] built on the integration of broad objectives, cooperative process, and specific topics.” Among the specific topics he proposes for consideration are: commercial nuclear emergency planning and preparedness, use [of nuclear] test sites as the subject of informal consultations, perhaps linked to the Comprehensive Test Ban Organization; a broadening of the dialogue between scientists about potential security capabilities, nuclear security; new verification measures for disposition of excess fissile materials or for building confidence in the reduced operational status of nuclear weapons; and longer-term scientific exchange programs, including those aimed at younger scientists that later will play key roles in both countries as well as for more senior scientists.

Building Mutual Reassurance in U.S.-China Relations

Dr. Michael Nacht

Students of international relations have often observed that when a "rising power" confronts an "established power," this condition can be a recipe for conflict. The 1930s emergence of fascist regimes in Japan and Germany against the European democracies led by Britain and France that produced World War II is the most graphic 20th century example. It is vitally important, therefore, to visualize the most plausible scenario in 2030: the United States and China as the world's two dominant economic and military powers (acknowledging the formidable Russian nuclear force). China is the "rising power," the United States the "established power." It is incumbent on the leadership of both nations to do everything possible to ensure that this pattern of conflict is not repeated in the 21st century, as the consequences would be cataclysmic for both societies, for the East Asian region, and potentially for the entire globe.

At the same time, it is unrealistic to expect a strong convergence in the political and economic systems and foreign policies of Washington and Beijing in the next two decades. The starting points and histories are simply too dissimilar. The political traditions, strategic cultures, and geo-strategic interests are too divergent to produce deep cooperation of the type marked by genuine alliance relationships.

But between deep adversaries on the one hand and close allies on the other, there is still much room for constructive engagement. The overarching goal should be for U.S.-China relations to be marked by a complex web of interactions that are often mutually beneficial, cooperative and respectful of each other's core national interests, while sometimes highly competitive, but never close to conflict. This is a future probably most Americans would accept; it is much less clear that it is a world that China's leaders would find satisfactory. Perhaps the formulation proposed by one Chinese participant in this project of maximizing cooperation while minimizing competition is the best recipe to avoid conflict.

A Deductive-Inductive Approach

Some observers—Henry Kissinger in his book "On China," for example—have called for an effort to articulate a common future acceptable to both governments. This agreed future could then be used to develop many shared policy preferences. But this "deductive" approach, while congenial to many Chinese methods of problem solving, may simply be beyond reach from the present situation.

An alternative is to reason "inductively," find specific areas of agreement and then broaden and generalize from them toward basic principles to govern the overall relationship. This more American style of negotiation is advocated by former U.S. Chairman of the Joint Chiefs Mike Mullen, among others.

Still a third approach would be to pursue simultaneously or in alternating stages deductive and inductive levels of analysis, searching for guiding principles while continuing to identify and enlarge areas of common ground.

Organizing concepts useful in this quest for a deductive-inductive approach are "assurance," defined as the process of *building the belief* of another party in one's positions or claim, through actions, signals, engagement, or messages; and "reassurance," defined as the process of *removing the doubt* of another party about one's positions or claims. (Note the subtle but important distinction). These concepts can be

buttressed by understanding crisis management (suggested by Linton Brooks in his paper), how each side worked its way through difficult periods in the bi-lateral relationship (e.g., the April 2001 Hainan Island incident). They can also be strengthened by concrete demonstrations of mutual restraint (suggested by Lewis Dunn in his paper), where even small steps by each side might generate momentum for significant movement on larger issues.

It will take a concerted effort at multiple levels for many years to break down the barriers of mistrust and the goals of achieving unilateral advantage that are pervasive in the military planning by both governments. It is not feasible to articulate a priori what measures of assurance and reassurance will prove most fruitful. One must allow for diplomatic entrepreneurship to produce perhaps unexpected results, although a table later in this paper identifies a set of key issues that could be the focal point for inductive and deductive efforts.

U.S. strategy, especially nuclear strategy, has since World War II rested on finely tuned considerations of how to deter a specific peer adversary, while reassuring allies. Although social psychologists and political theorists have viewed deterrence of adversaries and reassurance of allies as two complementary hands of foreign policy, the vast majority of rigorous analysis and debate has focused on deterrence. In contrast, much less attention has centered on how to calibrate and refine the reassurance of allies and partners, as though delivering reassurance was an intuitive, common sense matter that did not require serious thought.

The web of economic and strategic considerations in U.S.-China relations is far more complex and interwoven and, frankly, more hopeful than the U.S.–Soviet Cold War competition. Thus, it is far more amenable to measures of assurance and reassurance. Beijing and Washington have deep economic interdependence as the world's two largest economies. Economic interdependencies could and should serve as a brake toward conditions of conflict, but this has not always been the case. The pre-World War I great European powers were deeply entwined culturally, economically, and even by marriage, but these interconnections did not prevent war. So the strong U.S.-China economic relationship may be a necessary, but is not a sufficient, condition to forestall armed competition, with all its attendant dangers.

Looking At Tomorrow From Today—Challenges to Assurance and Reassurance

Current conditions and trends offer a starting point for thinking about the challenges of assurance and reassurance in the U.S.-China strategic relationship. The 2010 U.S. Nuclear Posture Review (NPR) called for a U.S.-China strategic stability dialogue to "provide a venue and mechanism for each side to communicate its views about the other's strategies, policies and programs on nuclear weapons and other strategic capabilities…to enhance confidence, improve transparency and reduce mistrust." In other words, "assurance" is already a cornerstone of U.S. strategic policy toward China. The United States seeks to engage China on subjects ranging from the North Korean nuclear weapons program to cyber security. The United States clearly places great importance on China's cooperation in addressing both the North Korean and Iranian nuclear weapons challenges.

The Chinese government, reluctant to enter into such dialogue, is driven by other concerns. U.S. support for a world of zero nuclear weapons has been greeted warily by Chinese leaders who apparently do not wish to engage in formal arms control discussions or negotiations until U.S. levels drop to those of China (thought to be several hundred, but with wide bands of uncertainty). Like Russia, China has also

raised concerns about U.S. nuclear forces coupled with the eventual deployment of conventional prompt global strike systems. China claims, moreover, that deployments to East Asia of the European phased adaptive approach for ballistic missile defenses could, by 2020, pose a threat to its nuclear deterrent.

China has relied on other strategic domains in addition to nuclear weapons—including anti-satellite capabilities and cyber weapons—to strengthen anti-access and area denial capabilities against possible U.S. conventional force intervention in East Asia.

Some Chinese experts (General Pan Zhenqiang in his paper prepared for this joint study project, for example) call for China to gain "voice through strength." This view appears to reflect the judgment that China remains far behind the U.S. and Russia in military might and will only be listened to once it gains considerable military and other muscle This approach will be seen as threatening, certainly in Washington and Tokyo, and would only serve to stimulate efforts by the United States to counter China's actions. An intense U.S.-China arms competition would likely result, to no one's benefit, with a heightening of tensions and a stimulus of Japanese nationalism, in the end a substantial net negative effect.

At times it also appears China seeks assurance and reassurance from the United States but does not appear to believe that Chinese reciprocity is required because of overall U.S. military superiority. China, for example, has long called for the United States to adopt a "no first use" of nuclear weapons declaratory policy. But there is no public evidence of China's willingness to offer compensatory measures if the United States acquiesces to this request.

A core element of the Shanghai Communiqué in 1972 that led to the normalization of relations between the U.S. and China reads:

> "Neither [side] should seek hegemony in the Asia-Pacific region and each is opposed to efforts by any other country or group of countries to establish such hegemony."

The central challenge for Beijing and Washington in adopting strategies and implementing tactics is to further their own national interests without violating, or being perceived to violate, this principle of the Shanghai Communique. This perspective was evident in the Chinese response to President Obama's statements in January 2012 about a shift toward a "leaner" military with a focus on Asia and the Pacific given at a Department of Defense press conference. A follow-up editorial by China's Xinhua news agency warned the United States against becoming a "bull in a China shop" and cautioned against Cold War era approaches but then also said:

> "The U.S. role, if fulfilled with a positive attitude and free from a Cold War-style zero-sum mentality, will not only be conducive to regional stability and prosperity, but be good for China, which needs a peaceful environment to continue its economic development."

The U.S. has historically sought transparency as a means of reassurance in relationships with nuclear powers. By contrast, China apparently seeks to develop greater trust prior to promoting transparency, since many Chinese leaders see transparency as an increase in their vulnerability and a potential

constraint on their freedom to maneuver. As a result, today's U.S. efforts to build transparency into Chinese nuclear regimes have so far failed.

From a different perspective, it has been suggested (for example, by David Gompert and Philip Saunders in "the Paradox of Power") that a mutual U.S.-China pledge not to threaten or attack each other's strategic assets—nuclear, space, cyber—might be a productive framework upon which to build assurance and reassurance. This hypothesis is worth testing, although it would appear to run counter to China's asymmetric, anti-access military strategy to thwart U.S. power projection in the event of an East Asian crisis.

On process, in the evolution of U.S.-Soviet strategic relations, scientific groups such as Pugwash and formal arms control negotiations starting with the Strategic Arms Limitation Talks—each extending for more than four decades—have been highly useful forums for both sides to conduct sustained discussions about each other's strategic concepts and concerns. In the process, much learning has taken place and convergence on some issues has occurred. Nothing analogous has been carried out in U.S.-China relations despite a number of Track 1.5 and Track 2.0 dialogues and some "lab-to-lab" and "mil-to-mil" consultations during the past fifteen years. Is it possible that it will take another twenty years or more of high-level dialogue and negotiation for similar convergence to occur between Washington and Beijing?

The cyber domain is especially challenging as it is the judgment of senior U.S. officials (such as National Security Agency Director U.S. General Keith Alexander) that China's ex-filtration of U.S. economic and defense information and intellectual property is so vast that it amounts to an unprecedented transfer of wealth never before achieved. These activities, if unabated, pose a threat to the conduct of peaceful bilateral relations.

Finally, the difficult challenges confronting efforts at assurance and reassurance—as well as the breadth of the agenda for such efforts—are strikingly shown by the snapshot in **Table 1** below of current security issues in U.S.-China relations and the differences in perspectives of the two governments:

Table 1: Comparison of U.S. and China Positions

Topic	United States	China
Transparency of Nuclear Force Modernization/ Deployments	» Builds confidence » Allows for intelligence gains	» Reduces freedom of action » Increases vulnerability » Exposes strengths and weaknesses
China's Anti-Satellite (ASAT) Tests	» Threatens to degrade U.S. capability to intervene with conventional forces in East Asian crisis or conflict	» Demonstrates anti-access intelligence/command and control assets » Showcases prestige of advanced military technology
U.S. Ballistic Missile Defenses	» Targets DPRK, not China » Essential to maintain security agreements	» Could degrade China's nuclear deterrent » Reduces potential to coerce Taiwan
China's Cyber Offensive Operations	» Demonstrates anti-access threat in an effort to deny U.S. ability to inject conventional forces in Taiwan Straits » Creates an intelligence threat	» Can be considered comparable to U.S. actions » Creates intelligence asset » Demonstrates anti-access capability » Showcases prestige of advanced military technology
Bilateral Cooperation on DPRK	» Seeks to channel China's influence to alter DPRK behavior	» Does not seek to undermine DPRK regime, reduce China's influence with DPRK, or increase the U.S. role in East Asia
Bilateral Cooperation on Iran	» Seeks support for sanctions to delay Iranian nuclear weapons development	» Does not seek to enhance U.S. Middle East/Persian Gulf influence » Seeks to protect its significant supply of oil from Iran » Opposes international actions against a sovereign state that could in the future be applied to China » Does not consider Iranian nuclear weapons a threat to China
South China Sea Disputes	» Seeks to avoid East Asian instability/conflict » Reinforces U.S. conflict resolution role in Asia/Pacific	» Seeks to dominate dispute and constrain U.S. influence in East Asia

Note: This table explicitly excludes the Taiwan issue, where we have had a stalemate essentially since the establishment of the People' Republic in 1949. The U.S. position has consistently been to support any agreement that the two sides can reach peacefully, while providing modern weaponry for Taiwan's security as specified in the 1978 Taiwan Relations Act. The Chinese position has been that Taiwan is a "wayward province" of China whose incorporation into the Chinese state is fully justified by any means.

As noted above, senior U.S. figures have called for greater mutual assurance to move the relationship in a positive direction. While in office, then Chairman of the Joint Chiefs Mike Mullen urged Chinese and American leaders to keep talking, focus on things we have in common, and "work toward more transparency, establish more pragmatic expectations of each other, and focus more on common challenges." In his 2011 book "On China," Henry Kissinger noted that "the future of Asia will be shaped

to a significant degree by how China and America envision it, and by the extent to which each entity is able to achieve some congruence with the other's historic regional role." But as the preceding review of many of the multiple points of difference between the two countries suggests, reaching that congruence will require significant efforts on both sides.

Pursuing an Assurance-Based Analysis

An assurance-based analysis—designed for building the belief of another party in one's positions or claims—can likely play a role in resolving key questions and seeking to build such congruence:

- How can the United States provide assurance more effectively to China without compromising core U.S. strategic interests?
- How can the United States provide assurances about intent concerning nuclear weapon use that address crisis stability and give confidence that the United States is not seeking to threaten or constrain China? On a related point, for example, it has been claimed that China would consider an attack on U.S. satellites in an East Asian confrontation as a demonstration to deescalate the crisis, seemingly unaware that Washington officials would consider such an attack highly escalatory. How can this perception gap be bridged?
- How can an assurance framework illuminate steps China can take to reciprocate? For example, how might China increase U.S. confidence in the safety and security of the Chinese stockpile without jeopardizing the opacity that China values?

With respect specifically to assurance respecting the nuclear arsenals of the two states, a U.S. scholar (Lora Saalman) has sought to identify how to bridge the gap between the two sides. After studying China's reactions to the 2010 U.S. Nuclear Posture Review, she offered that the following conditions must be met to enable productive strategic stability talks:

1. The United States and China must clarify and reach a common understanding of the meaning of strategic stability and what bilateral nuclear cooperation will entail.
2. The United States must define and develop concrete confidence-building measures to encourage China to take part in detailed discussions on nuclear issues. For example, the Chinese have suggested that U.S. adoption of a no first use pledge would enhance stability and serve as a starting point for further cooperation in arms reductions. Even if an explicit no first use policy is unacceptable to the United States, identifying measures that provide similar assurances could yield benefits.
3. The NPR opens the door to greater U.S. engagement with China and gives China the chance to shape new strategic trends in the relationship, an opportunity that China should seize.
4. Beijing and Washington should resume and expand cooperative measures to deepen their interaction, including reciprocal visits, projects between their nuclear laboratories, and sharing of ballistic missile defense performance data.

Saalman's conditions could provide an agenda for informal but official U.S.-China discussions of how to energize strategic stability talks.

The different perceptions on core issues set out in the table above also call for assurance-based analysis. Here, it would be valuable for both Chinese and American officials and other experts to review each element in this table, discuss its accuracy and needs for modification, and address whether there are means to bridge the perception differences between the two sides that both would find constructive. Moreover, elements could be added by either side if they could lead to clarification of differences and the paths to convergence of these differences.

Consider next nuclear safety and security. Over the past two decades, the United States has emphasized its nuclear assurance concerns about security. For example, the U.S. worked closely with Russia under the auspices of the Nuclear Weapons Safety and Security Exchange agreement to develop and share technologies that improved the security of nuclear weapons and material stockpiles. The United States seeks similar assurances that Chinese nuclear stockpiles are safe and secure from accidents, theft, or illicit movement.

Like transparency generally, transparency about the safety and security of China's nuclear stockpiles appear to run counter to the Chinese belief system. But discussions in some Track 1.5 sessions suggest that there may be the start of a modest shift in the Chinese position and a greater appreciation of the U.S. need for assurance regarding the safety and security of the Chinese stockpile. Moreover, knowledge of U.S. nuclear safety and security procedures may be of growing Chinese interest.

It appears most likely that China will make no moves in the short term toward stockpile reductions, citing the disparity between its stockpile size and those of the United States and Russia and a skeptical perception of U.S. intent. Could the U.S. provision of some of the safety and security measures employed in its nuclear weapons complex be a measure of assurance that could lead to greater Chinese transparency?

Non-proliferation policy is another bone of contention. The United States seeks assurances that Chinese nuclear weapons, technology, and materials are not being transferred to other states, with the potential for China to share sensitive national security technology with others in the forefront of U.S. concerns. For example, while the United States and other NPT signatory countries sanction and attempt to prevent Iran from seeking nuclear weapons, China, despite its NPT status, continues to blunt these actions. It appears that political considerations and economic interests are weighing more heavily on the Chinese government than are nonproliferation motivations.

In turn, the Chinese may be suspicious of U.S. intent, given apparent inconsistencies in U.S. foreign policies concerning nuclear technology and agreements. For example, although India remained outside the NPT, the U.S. entered into agreements to share nuclear energy technology and resources with New Delhi in 2006. According to some Chinese sources, these agreements were seen as a U.S. effort to contain China. Further, the United States treatment of Iran is obviously far different than its approach to India. While treating India and Iran so differently makes perfect sense from the U.S. perspective, China perceives U.S. actions as at least inconsistent, if not disingenuous.

Thus, the United States may need to assure China on other issues, such as energy (oil) security, before Beijing can be persuaded to cooperate on nuclear non-proliferation regarding Iran or regional stability with North Korea.

Scholars have pointed out China's desire to be a mediator between the U.S. and developing countries on nuclear non-proliferation. Could this aim be exploited to strengthen non-proliferation by using China's influence to gain Brazil's accession to the NPT Additional Protocol or to strengthen Pakistan (an ally of China) security of its nuclear materials? The latter would clearly support China's aim to avoid nuclear weapon use in South Asia.

Missile defense is still another issue with asymmetric perspectives in Washington and Beijing. The United States has plans to deploy theater ballistic missile systems in Northeast Asia to deter or defeat the growing North Korean missile threat. Though aware of Chinese concerns, the United States considers these deployments as a key element not only of deterring North Korea but of assuring its allies so that Tokyo and Seoul will continue to consider U.S. security guarantees credible even as U.S. strategic weapons, including the intercontinental ballistic missile (ICBM) leg of the nuclear triad, are reduced.

China, as cited earlier, is concerned that the U.S. missile deployments in East Asia will undermine China's efforts to maintain a reliable and credible second-strike capability, as required by their long-held minimum nuclear deterrence posture. Concern about missile defenses also is a factor in China's decisions about nuclear modernization. Could the gulf between Beijing and Washington on missile defense be bridged by interweaving assurances across policy issues? To assure China that missile defenses would not seriously degrade second-strike capability, could the United States reverse its current position and consider a carefully crafted no first use policy with China? In this case, China would have to assure the United States that it would not view U.S. missile defenses in the Pacific as a threat to its security, but rather as a U.S. strategy to maintain its security commitments to its Pacific allies. It would have to take meaningful steps in response to such a pledge. In short, a candid exchange on what each side wants, and what it is willing to give up, could begin to bridge the gap.

Skeptics would assert that adoption of a no-first-use policy toward China is unsustainable because it would require the U.S. to make a similar pledge to others or that it is easily reversible or that it would undermine alliance relationships. But recall the Cuban missile crisis resolution. The United States made explicit (though secret) commitments to the Soviet Union in return for the withdrawal of the missiles from Cuba, commitments that were not replicated elsewhere but were tailored to the specific requirements to achieve the policy goal of ending the crisis. Significantly, the United States made these assurances at the height of the Cold War against its prime adversary.

The contemporary U.S.–China relationship is far more hopeful, with many cooperative elements already in place. If the United States seeks to place this relationship on a more solid foundation by identifying areas of cooperation and agreement—as Kissinger and Mullen have argued and as some Chinese observers have called for—then it is incumbent on Washington and Beijing to think through new approaches and to challenge existing policy assumptions to at least partially accommodate each other's concerns. Indeed, a productive dialogue on these issues could perhaps lead to progress on both space and cyber policy—emerging areas of great strategic significance where the U.S.-China perception and policy gap is especially wide.

The very commitment by both sides to find common ground for assurances and reassurances through a sustained dialogue at multiple and high levels of government would itself be a "confidence building measure" indicating that we were both on the right track.

Elements of A Long-Term Stable and Cooperative China-U.S. Strategic Relationship

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This short paper is part of a China-U.S. joint research project on "building a long-term cooperative and stable China-U.S. strategic relationship", which aims at enhancing mutual understanding of each other's thinking, identifying areas of agreement and disagreement, and building habits of cooperation between the two countries. To facilitate the exploration on the subject, the project specifies that there should be some initial discussion on an overall vision as to what should conceptually be included in the definition of a long-term cooperative and stable China-U.S. strategic relationship before getting into details. The paper serves that purpose. The focus of the paper, therefore, is solely on defining the basic elements for this relationship, and suggesting ways to move up to these elements in order to have a truly long-term stable and meaningful strategic cooperative relationship between the two great nations.

The paper only states pertinent facts and raises provocative questions so as to provide food for reflection and kick off academic interaction. It is the hope of the author that through reading those facts and questions, readers may have their own answers as how to build a sustained and stable cooperative bilateral relationship.

Four basic elements can be defined, in the author's view, to shape a long-term China-U.S. cooperative relationship. These are: reaching a propitious balance of force between the two powers; developing compatible interests, threat perceptions, and strategic goals and intentions; building norms and habits for strategic cooperation; and fostering a favorable domestic environment.

Reaching a Propitious Balance of Force between the Two Powers

Turning to the first element, reaching a propitious balance of force should be viewed as the material basis for a desired cooperative relationship between the two major powers because the right of voice comes, first of all, from strength. But here, do not be mistaken with the concept of balance of force as the old Western theory of playing one major power against the other, the concept evidenced in Europe before the World War I. Balance of force used in the context of this paper simply implies a conviction that the constructive and stable relationship between China and the United States would be more secure if the two countries are relatively matching in terms of strength. Of course, strength refers not only to military strength although it is one of the most significant power indicators. Strength should also include what is called the soft power and the status and influence that a country enjoys in the world and regional security architecture.

Balance of force is important because a tilted balance of power invariably affects the width, depth, and the sustainability of strategic cooperation. True, with the rapid development of world multi-polarization, the rise of China has been an irresistible trend; China has become a regional power with growing influence on world and regional affairs. In the economic field in particular, China has become the second largest economy in the world. This beginning of the shift of the balance of power between the two countries is compelling Washington to attach increasing importance to the role of China, and, hopefully, this shift may also give impetus to the healthy development of China-U.S. cooperation.

But for all this progress, China and the United States are still far from being at the same level in terms of strength. This imbalance of force will continue to determine an unequal China-U.S. state-to-state relationship in its nature. Washington is the stronger side, chiefly the initiator in the progress of the relations, for better or worse. Built on its unmatched powers, U.S. policy is often tinged with a superpower mindset that the country is always an exception among nations. Thus, Washington can often act without caring much about the implications of its actions to others, while Beijing most of the time can only watch closely U.S. behavior, carefully calculate the impact on its security, and respond accordingly. It is for this reason that it can be argued that this imbalance of the force between the two countries has constituted the primary cause of the instability as well as unpredictability, the ups and downs, and sometimes even the retrogress, of China-U.S. relations in the past. And it will be so for quite a long time to come in the future.

It is in this sense that the key to an eventual stable and cooperative relationship lies in China rather in the United States. That is to say, only when China continues to grow and in the meantime promotes social development and progress domestically, while also pursuing successfully a wise foreign and security policy to maintain good relations with the outside world, could Beijing find a more solid basis for good cooperative relations with the United States.

Developing Compatible Interests, Threat Perceptions, and Strategic Goals and Intentions

A healthy and productive state-to-state relationship also depends on the joint recognition of its benign nature, ideally, based on the parties' perceived common national interests, threat perceptions, and strategic goals and intentions. Owing to the huge gap in their status in the world, demands for security, and strategic cultures, China and the United States have divergent threat perceptions and strategic intentions. The two countries cannot be as close as allies to each other. But the good news is that the top leaders of the two countries both have seemed to try to narrow the gap of perceptions, repeatedly stressing that for all their national differences, the strategic intentions of the two countries need not necessarily always be in conflict. On the contrary, they could be compatible.

Specifically, both countries believe that they are economically highly complementary and are determined to strengthen economic and trade ties as true partners for their sustainable development. Both countries also are seeking to build more rational and effective international economic, political, and security mechanisms. In turn, both China and the United States are taking as the top priority maintaining world and regional strategic stability so as to concentrate on their domestic issues. Further, both countries wish to work together to address the newly arising security threats that no power or power groups can do single-handedly, particularly in the non-traditional security fields. All of these factors provide great incentives for China and the United States to promote strategic cooperation. Nonetheless, all of these assumptions have so far looked more like rhetoric expressing good intentions than actions in good faith in reality. The current true state of the China-U.S. relations has seemed still plagued increasingly by strategic mistrust, exchanges of emotionally acrimonious accusations, threatened to head for confrontation. As is agreed by all the pundits on China-U.S. relations, a trust deficit has almost permeated all their differences, disputes, and conflicts.

Amidst this persistent mutual suspicion, the two countries have yet to resolve a more fundamental question about the nature of the China-U.S. relationship, a question which has perplexed both capitals for the whole five decades since President Nixon's visit to Beijing in 1972. The question is if China and the

United States are truly partners, strategic rivals, or even enemies at the end of the day? Clearly, there has been no consensus on the answer to this question in both countries before, and it looks unlikely that there will be an answer in the foreseeable future.

It does not mean that strategic competitors are unable to cooperate or coordinate. But evidently, the different nature of relationships determines different forms and core elements of such strategic cooperation or collaboration. In the Cold War, the United States and the Soviet Union did succeed in achieving some form of cooperation or collaboration with the aim of stabilizing their fierce struggle for world domination so as to prevent the resultant arms race from getting out of control. Also, the two superpowers found it in their common interests to maintain their nuclear monopoly by working together to prevent the spread of nuclear weapons. The course of development has amply proved that these forms of cooperation were no more than part of the rules of the game of their competition. One may argue that cooperation between the two superpowers succeeded in preventing a major military conflict in the Cold War. But obviously, cooperation was precarious, and the situation ultimately proved unsustainable.

Unfortunately, regarding cooperation with another major power that happens to have different interests or values, many of our American friends seem to be familiar only with the U.S. experience with the former Soviet Union. China-U.S. cooperation in their mind is no more than an updated version of American-Soviet cooperation, as basically they see the China-U.S. relationship through the prism of competition and confrontation. China hopes that the strategic cooperation between the two countries in the post-Cold War era should be something dramatically different. This cooperation should be based on greater common interests, mutual respect, mutual trust, and mutual benefit. But again, that seems a goal that will take a lot more effort by both sides to achieve.

Building Norms and Habits for Strategic Cooperation

A long-term stable and cooperative relationship, based on increasing common interests and compatible strategic goals and intentions, must first be built on agreed norms and habits of interaction. Such norms and habits of strategic interaction should at least include the following, among others:

Mutual Respect and Mutual Trust

Against the backdrop of the great divergence in terms of social system, cultural heritage, and historical experience of China and the United States, mutual respect and mutual trust should serve as the spiritual core of a sound bilateral relationship. Only with mutual respect and trust can the two sides truly rise above differences in ideology, political system, and development model and take into consideration each other's core interests as well as their major security concerns. Mutual respect and mutual trust will also allow the two countries to demonstrate greater understanding of each other's positions and to embrace different views or approaches.

In this regard, China should respect legitimate U.S. world and regional interests and demonstrate that it has no interest in challenging the U.S. leadership role in the world affairs (believing that leadership role and world hegemony are two different concepts). At the same time, China hopes that the United States should respect the choices of the Chinese people, and China's core interests, which include, among others, "state sovereignty, national security, territorial integrity and national reunification, China's political system established by the Constitution and overall social stability, and the basic safeguards for

ensuring sustainable economic and social development".[1] This definition of its core interests fully demonstrates the defensive nature of China's national strategy, which is not meant to threaten the U.S. interests. In particular, the United States should reflect on the impact of its Taiwan policy, which has been blatantly violating China's core interests of sovereignty and territorial integrity. How can Washington win the full trust of the Chinese people that in good faith it pursues a cooperative strategic relationship with China? The answer is that the Taiwan question cannot be bypassed in China-U.S. relations, and it could become the litmus test of U.S. sincerity in developing long-term, stable strategic cooperation between the two countries.

Institutionalization

Institutionalization also should be regarded as a strong tool to promote and regulate the cooperation between the two countries. One of the great advantages of institutionalization is that it can ensure smooth communication. Such communication is so essential for a better understanding of each other and for strategic cooperation to unfold in a more orderly manner where the two countries work together where they share common interests, manage their disputes where they differ in interests, and prevent escalation where their interests are in serious conflict.

Institutionalization of cooperation should be viewed as one of the indications of the maturity of any major bilateral relationship. In the China-U.S. relationship, over 40 major bilateral mechanisms have now been set up different purposes, including various mechanisms to ensure that the top leaders meet on a regular basis. The challenge, however, is that for all of the progress that has been made, institutionalization still seems precarious and vulnerable to the politicization of any major differences or confrontations occurring between the two countries particularly in the military field. Strengthening military-to-military relations has become the common pursuit. In the meantime, second track exchanges should be encouraged to make up for the inefficiency of the official communication.

Transparency

As a most important confidence building measure, transparency should be regarded an indispensable step for building greater trust and reducing suspicion in strategic cooperation so as to ensure predictability, and prevent miscalculation and overreaction. To that end, efforts should be made by both sides for greater transparency, including transparency in the military field. The question is how. Common sense suggests that no military is totally transparent. Different state-to-state relationships determine different degrees to which transparency is afforded. Thus, transparency is both the cause of confidence desired and the effect of the confidence so far achieved. To put it another way, the existing confidence any two countries have achieved should serve as a political basis for the transparency that these two countries can afford to each other. China and the United States for the foreseeable future, for example, no matter how hard they strive, may never be able to afford as much transparency between each other as the level of transparency between Japan and the United States.

At the same time, this relationship between confidence and transparency should not be taken as an excuse for either China or the United States to adopt an evasive attitude. China should realize that adequate and reasonable transparency is also in its own interests. But it does suggest that when China and

[1] "China's Peaceful Development", Press Office of the State Council, PRC, Beijing, September 6, 2011. http://www.china.org.cn/government/whitepaper/node_7126562.htm

the United States have low mutual confidence and trust in each other, one must be realistic about transparency. In addition, it is also important to bear in mind, in the case of China-U.S. relations, that promoting greater transparence does not involve commitments of only one side. Rather, it is a two-way street exercise, an evolutionary process requiring efforts by both sides. In China's view, the two countries should first of all strengthen political relations so as to put transparency on a more solid and propitious political basis so that neither country fears that greater openness may jeopardize its security interests. Second, the two sides should strive for greater transparency first at the macro-strategic level, including, for example, regarding their threat perceptions, strategic goals and intentions, military strategies and doctrines, etc. Last but not least, when it comes to the technical and tactical level, a new set of principles for transparency should be worked out, featuring balanced but not equal commitments by the two sides in light of the disparities in strength between them. There is no parity in strength between China and the United States, nor should there be in transparency.

Mutual Restraints in Military Build-Up, and Regional Security Arrangements

Facing a complex and volatile international environment, both China and the United States have ample reasons to enhance their military and defense strength for national security. This finds particular expression in their greater investment in developing new military capabilities in the fields of nuclear weapons, missile defense, outer space, cyberspace, and non-traditional conventional forces among others. Rapid development of advanced technology offers all of the major powers unprecedented opportunities enhance their capabilities. But the United States has been the driving force in this current spree of arms development, thanks to its comprehensive supremacy in military science and technology. In the Asia-Pacific, Washington has been singing loud and clear that it wants to return to the region, strengthening its military deployment, and reenergizing various security and military alliances. All of these actions have been spearheaded, directly or indirectly, against China. China, for its part, has also taken steps to respond. Each country claims to be acting in the name of hedging, using the acts of the other side as the justification for its own action. Hedging is essentially legitimate. But hedging in an excessive manner is bound to be looked upon as entailing unacceptable provocations by the other side, generating a vicious cycle of action and reaction. The two countries are running a risk of falling into the eternal trap of "the security dilemma" and aggravating the trust deficit crisis. Only a calm and rational attitude, which calls for mutual restraint in each country's military buildup and its regional security arrangements, could help the two powers get out of it. Whether China and the United States are able to exercise true mutual restraint thus becomes a new challenge to achieving a long-term stable and cooperative relationship between the two countries.

Fostering a Favorable Domestic Environment

The success of a sustainable foreign and security policy stems not only from the fact that it brings a nation physical security benefits; it is also because the policy enjoys understanding and back-up at home, thus becoming the consensus of the mainstream public opinion. Unfortunately, the China-U.S. relationship has never been able to have that luxury.

As said above, U.S. China policy has consistently been a controversial topic in Washington. Fighting among different interest groups as well as various regional forces, partisan politics, the peculiar, American-style election campaigns plus the role of heavily ideologically-biased media and research institutions that are only too glad to fan up the flames of hate-China sentiments all combine to contribute

often to the irrationality of U.S.-China policy. In this distorted policy-making process in Washington. As a result, U.S. policy towards China seems to aim at cooperation at best only for the pursuit of short-term, ad hoc U.S. interests. Then, when the situation changes, U.S. policy would invariably vacillate and reverse its pursuit of cooperation. This pattern becomes even worse when the United States happens to be in a presidential election year, particularly as in this past year, when the United States was embroiled in economic difficulties at home and its leading position was eroding abroad. Indeed, China-bashing has now almost become a vogue within the American domestic situation, as if all the troubles for the United States today had come from China. It is almost unimaginable to expect a sober-minded and rational China policy amidst such a poisoned and polarized domestic atmosphere in the United States.

In turn, U.S. behavior has greatly offended the friendly feeling of the Chinese people, stimulating the already rising nationalistic sentiments in China and adding great constraints on the Chinese leadership for its U.S. policy. In short, one of the great challenges for both countries is how to foster a more favorable domestic environment of public opinion, conducive to the long-term stable and cooperative China-U.S. relationship.

Conclusion

If one compares the China-U.S. long-term stable and cooperative relationship to a steamer sailing in the rough sea, the four elements discussed above can be viewed as the sturdy ballast to ensure that the ship will not be running a risk of being capsized when braving fierce storms and monstrous waves. All of them are needed to ensure that the relationship on the right track and that it bears fruits for the strategic benefit of the two great nations. At least three prerequisites are necessary to strengthen these basic elements.

First, both China and the United States need a new vision that is in keeping with the fast changing situation of today. Both countries need to come to terms with the rapid development of multi-polarization as each of them finds its proper place in the new world power structure and the international economic and political order. In the process, the two countries will find that state-to-state relations need not be a zero-sum game. Instead, only through working together to build a long-term stable and cooperative relationship will China and the United States be able to best ensure their security interests.

Second, both China and the United States need far-sighted and brave state leaders. They should not be politicians, hijacked by an obsession with short-term interests for their personal benefits. They should be statesmen who not only have political wisdom to guide this most complex relationship, but more importantly, have the great political courage needed to shake off the constraints of various intervening forces, the yoke of ideological biases, and the inertia or complacency, to upgrade the relationship to a higher level. There is never lack of great foresight or a bright vision. But foresight and vision cannot automatically be translated into a sound policy. Only wise men with great courage can do the job. Obviously, the need of an excellent relationship calls for a decisive role by future leaders in the two countries.

Finally, both China and the United States need more time. The China-U.S. relationship is, at the end of the day, a reflection of the balance of force between the two countries. Only when China becomes more developed and grows in strength, can one expect a more equitable relationship with the United States. This is not to suggest that China then will become an assertive strategic competitor against

Washington. Rather, only that not until China grows stronger can China expect to cooperate with the United States on a truly equal footing and with mutual respect. But that takes time. And it will equally take time for the two countries finally to determine the nature of their relationship, define their norms in cooperation, and develop a more propitious domestic environment. Imagining that the China-U.S. relationship could be stabilized by some magic recipe over a short period of time is itself naive, and worse, that approach could backfire because unrealistic expectations could easily lead to bitter frustration when they fall apart. No doubt, the prospect is bright for China-U.S. relations. But the evolution of this relationship will be a long process, full of zigzags.

Challenges and Opportunities Facing the Building of a Stable and Cooperative U.S.-China Strategic Relationship

Mr. Li Hong

Building a stable and cooperative U.S.-China strategic relationship is the aspiration of the politicians and the people of both countries. That aspiration is in line with the fundamental interests of both China and the United States. It also serves the purpose of regional and global peace and stability. There are many opportunities for achieving this goal, but its pursuit also faces many challenges.

Main Opportunities

Common Expectations on the Bilateral Relationship

Since the beginning of its reform and opening-up period, China has given primacy in its foreign affairs to the U.S.-China relationship. The abundant capital, advanced technology, developed education, and modern enterprise management system of the United States have consistently been the goal and learning model that China has followed. As the United States and China have become closer on overall economic issues, the glamour of the United States may have decreased in some fields. But in the next 30-50 years, the United States will remain the basic model for China's economic reform and opening up. This means that the fundamental position of the U.S.-China bilateral relationship in Chinese foreign affairs will not be disturbed.

Similarly for the United States over the past 30 years, the role of the China factor in U.S. foreign affairs has been on the rise. In 1989, the first President Bush stated, "The U.S.-China relationship is one of the United States' most important foreign relationships." Entering the 21st century, the potential narrowing of the U.S.-China balance of power and the gradual strengthening of China have enhanced the importance of China in U.S. foreign policy. After taking office, President Obama repeatedly emphasized the importance of the U.S.-China relationship. He said, "The U.S.-China relationship has the ability to shape the 21st century, it is as important as any bilateral relationship in the world." He continued: "An improved successful U.S.-China relationship is important to both the United States and the world."

In January 2011, China and the United States released a joint statement which is considered a guiding document for the bilateral relations in the coming decades. Both countries committed to "working toward a partnership that advances common interests, addresses shared concerns and highlights international responsibility". A positive, cooperative, and comprehensive relationship plus shared responsibility comprises the basic nature of the U.S.-China relationship in the 21st century. The consensus of the two countries' leaders on that perspective and the importance attached by each of the two countries to the other set the basic framework and political foundation for a generally controllable and predictable China-U.S. bilateral relationship.

Common Interests on Major International Issues Require Convergence

Peace and Security. In today's world, challenges and threats to international peace and security are endless. Maintaining global security and building a sustained peace are common goals of the United States and China, and both countries bear a special responsibility. Regional conflicts may lead to regional power imbalances, which would not be conducive to maintaining the U.S. global leadership position. Also, China requires a stable global security environment to provide a stable energy, resource, and market

environment for its economic development. Therefore, preventing war and armed conflict is more and more becoming an important part of U.S.-China security cooperation. From North-East Asia to the Persian Gulf and Africa, the demands of such cooperation are increasing.

As China comes to bear greater international responsibilities, the issues and demands of the China-U.S. relationship will gradually change to encompass more activities. Arms control, disarmament, and nonproliferation are all important means of preventing war and armed conflict, and they have a prominent place in the U.S.-China security cooperation framework. Nuclear modernization, missile defense, outer space, and newly emerged cyberspace have been listed as potential agenda items for China-U.S. Strategic and Economic Dialogue (ES&ED). The increase in Chinese military power has further expanded the space for arms control and disarmament dialogues. As two NPT recognized nuclear weapon states, China and the United States share much more in common on preventing nuclear weapons proliferation than differences. In anti-terrorism, cracking down on trans-national crime, cracking down on piracy and other nontraditional security fields, China and the United States have extensive common interests. Cooperation in these fields is becoming a propelling factor in law-enforcement cooperation and developing military relations between the two countries.

Prosperity and Development. On the bilateral level, the U.S.-China economic structure is very complementary, producing intrinsic requirements for cooperation and at the same time providing huge benefits. The deepening development of globalization will further increase economic dependence on each other. Demands on the other's markets, capital, technology, and human resources will increasingly become a two-way trend, providing possibilities for economic cooperation on both sides at higher and deeper levels. On the multi-lateral level, addressing the international economic and financial crisis and promoting sustainable economic growth is currently the most urgent global task. As the world's two largest economies, it is essential that China and the United States work together and overcome difficulties in order to promote global economic recovery. It could be said that the prosperity and development of the 21st century is calling on China and the United States to build a stable and comprehensively cooperative bilateral relationship.

Global Governance. Globalization entails global challenges. Judging from the trends, global challenges are becoming more and more diverse. They include energy, resources, the environment, climate change, disease, public security and still other problems, that produce increasingly far reaching impacts on each country's vital interests and the welfare of each country's people. As global challenges require global responses, China and the United States cannot stand aside and their cooperation is indispensable. For example, U.S.-China cooperation on global governance could include: communication and cooperation on the rules and institutions of global governance to make them more in line with the common interests of the two countries; bilateral cooperation on specific matters of international governance, such as information reporting, policy exchanges, and daily cooperation between departments; jointly providing public goods for global governance. As global governance develops in depth, the common interests and the space for cooperation between the China and the United States will expand. Meanwhile, as China's increases in comprehensive national strength, it will play an increasingly large role in global governance.

China’s Peaceful Development

China's declared strategy of peaceful development has laid an important political foundation for the stability of U.S.-China relations. Peaceful development is derived from Chinese tradition, philosophy, history, and culture. It has already become the national will. China is pursing it as a long-term national strategy. The peaceful development strategy means that China has no intention to compete for hegemony or superiority with the United States, and will respect the U.S. leadership position in the world. It also means that China will take a moderate approach to disputes with other countries and seek solutions through peaceful means.

There is no doubt that the development of China with its 1.3 billion people will have a great impact across the world. But such development is the will and expectation of all Chinese people. It is already underway and is unstoppable. Adapting positively to this reality positively will provide a broader space for U.S.-China cooperation. On the bilateral level, the issues concerning China will be broader. As a result, there will be more and more fields in which China and the United States can cooperate, including the areas of the economy, technology, education, culture possibly even including the military. This cannot harm and can only to help promote the prosperity of both countries, advance the development of shared technology, and increase societal harmony. On an international level, as China's interests expand outward, China's national strategy and policies will tend to look outward as well. This promises that the principles of and capabilities for taking international responsibility will increase at the same time. It can be predicted that China's development will gradually entail domestic and foreign policies that include but also transcend narrowly-defined national interests. China will be more concerned with providing international public goods, will be more concerned with improving its international image, and will shoulder more international responsibility. Such views are getting more and more recognition in the elites and will continue to be strengthened. Those sorts of prospects are clearly the gospel of U.S.-China cooperation.

In summary, past history as well as current and future trends all argue that cooperation is and will continue to be at the core of U.S.-China relations. The blending of interests between China and the United States is increasingly close. Mutually beneficial cooperation between the two is irreversible. Looking at the high level exchanges, communication mechanisms, economic cooperation, cultural exchanges, and personnel exchanges between the two countries, there are sufficient grounds to believe that there are many opportunities or foundations on which to build a closer U.S.-China relationship. Building such a stable and cooperative strategic relationship, moreover, will benefit not only the two peoples of China and the United States, but also will contribute to the prosperity and peace of the world. Wise politicians in both countries should try every means to take advantage of such opportunities.

Main Challenges

Mutual Trust Deficit is Rising

The extent of mutual trust between China and the United States has long lagged behind in the development of bilateral relations. This trust deficit has seriously hampered that development of relations between the two countries.

In China, many officials and scholars believe that the United States does not truly wish to see a strong China. Instead, the United States is seen as having used every possible means to obstruct China's development. Specifically, the U.S. strengthening of its presence in the Asia-Pacific region, playing up

the "China threat theory", encircling China with a "C" shaped ring, and limiting high-tech exports to China, are all looked upon as evidence supporting the above ideas.

In the United States, many people think that an increasingly powerful China is rapidly expanding into Asia, that its behavior clearly tends towards being tough and arrogant, and that in the future it is very possible that it will become a challenger for U.S. hegemony on a global scale. The relative decline of U.S. influence on global affairs has increased the sense of crisis for U.S. elites and so doubts and fears of China are increasing.

This lack of mutual trust is a result of two-way interactions, in which one side's policies or actions are misinterpreted by the other, and therefore, policy decisions and actions by the other side are impacted by that misreading. The result thereby becomes a mutually reinforcing vicious cycle. Mutual suspicion and prevention are constantly adding to the "trust deficit", resulting in serious constraints on efforts to build a U.S.-China comprehensive partnership.

Politicization of Economic Problems

Politicization of economic problems is another major problem in U.S.-China relations. In the long-term, China has always advocated the principle of separating politics and economics in developing its cooperative economic and trade activities. This pragmatic approach is very effective when there is a large difference in the comprehensive strength of the two sides and has promoted the rapid development of U.S.-China economic and trade relations for almost 40 years. But as the gap between the economic strength of the two countries narrowed, the long-term accumulation of issues has become increasingly prominent, constraining the development of bilateral economic relations. In turn, differences in the economics, trade and financial fields have become political issues, making it much more difficult to solve them. Problems of RMB exchange rates, balance of trade, intellectual property, subsidies and dumping all have become classic examples of such politicized economic problems. They have been difficult to resolve through bilateral agreements and arrangements or through multilateral trade rules.

Compounding the challenge, members of the U.S. Congress and candidates for the presidency use these issues as convenient weapons in their domestic political struggles or in seeking election. As we have recently seen, attacking China and criticizing U.S. policy on China has become one of the indispensable parts of the political debate in U.S. presidential elections. Such actions and charges serve the needs of political forces but they bring serious damage to economic and trade cooperation between China and the United States. More broadly, they are especially detrimental to the mutual trust in general.

Apart from these problems, there are some economic practices pursued by the United States which, from China's point of view, not only violate principles of free trade, but have the flavor of discrimination or even a cold war mentality. These include not recognizing China's market economy status, continuing limits on high-tech exports to China, and restrictions on investment in the United States by Chinese enterprises.

The stakes here are high. Economic and trade cooperation is the most important tie to the U.S.-China relationship's economic "ballast stone". If this tie were to be weakened, then that "ballast stone" might be shaken and the damage to the U.S.-China relationship would be difficult to measure. To avoid such a scenario, both countries have to take steps at the technical level to solve these problems or limit them.

Dialogue and international law are the best options for doing so. By contrast, many reports by the U.S. congress are regarded by Chinese officials, businessmen, and experts as a means of politicizing technical issues for market or political benefits. Those reports should not be the basis for solving China-U.S. disputes. In particular, using so called unproved "security concerns" to intervene against market activities has the potential to sow the seeds for hostility and cause confrontation between the two peoples. It is dangerous and should not be accepted.

Uneven Development of Bilateral Relations

There is an anomalous situation in the development of U.S.-Chinese relations. Bilateral exchanges in the areas of politics, diplomacy, economics and trade, and education are very close. However, bilateral military relations lag much behind compared to the other areas in a manner that is not compatible with a strengthening the overall relations. Such a serious imbalance in a field of cooperation is bound to impact the overall development of bilateral relations.

There are several reasons for this imbalance between the level of military exchanges and those in other areas of the U.S.-China relationship. China and the United States have not clearly defined how to regard each other and describe their relationship. Instead, they treat each other as neither a friend nor as an opponent. This leads to the lack of enthusiasm for military exchanges. Moreover, the confrontation between the two countries positions over Taiwan makes the two countries' militaries view each other as potential opponents and raises the level of tension between them. As a result, in recent years, the competitiveness of the two armies has been rapidly rising. Besides, the gap in respective military capabilities is also an important reason for the slow development in military relations.

Both U.S. willingness to engage the PLA and the PLA's capacity for international exchanges is increasing. Although the pace is slow, the tendency is to move towards more visits at different levels and more frequent dialogues with broader subjects being discussed. Joint drills have also been started in the area of anti- piracy cooperation. However, the obstacles for developing military relations are still prominent. The U.S. sale of weapons to Taiwan, the adjacent reconnaissance of U.S. spy planes around China, and the U.S. Congress' resolution which constricted military to military communication after the 1989 Tiananmen Square are considered as the three biggest obstacles in Chinese view.

Transparency is a particular area of uneven bilateral development. While transparency is always the area of greatest interest for the United States, the Chinese often feel uncomfortable about transparency for different reasons, including military tradition and capability gaps. Over concentration on the issue of transparency should be avoided. Closely related, U.S. missile defense system development and deployment in Asia and accusations about each other's activities in cyberspace also create troubles for the mil-mil dialogue between U.S. and China. Thus, while dialogue is the first step for developing military relations, so far, dialogue between China and the United States has been hard and vulnerable, let alone a step to substantive military cooperation.

To change this uneven relationship between the state of military exchanges and those in other areas requires a multi-pronged approach. Most importantly, both sides should give up their cold war way of thinking. One country's military development does not necessarily mean a threat to the other. Instead, enhanced capability could be converted into capability for sharing responsibility if cooperation and coordination are well conducted. With the China's peaceful development strategy and the U.S. support for

global rules and law, it should be possible to find a cooperative solution with responsibility sharing. Specific actions are needed from both the United States and China.

Regarding the United States, as the world's number one military power, the United States should be more tolerant, generous, and confident in dealing with China's military development. Over-emphasizing and playing up the Chinese military threat as is done by some U.S. hawks is seen in China as part of a strategy of containing China. Meanwhile, as long as the United States is pursuing new military capability in advanced fields like outer space, cyberspace, missile defense, and global prompt strike, it should not be a surprise for the United States if China tries to undertake similar experiments. China will never participate in any arms race with the United States, but it has its own reasonable security concerns and has to keep an eye on the frontiers of advanced military technology development.

The United States and China also should work together to establish new rules and international law in areas like outer space and cyberspace. Breaking out of existing rules or a refusal to discuss new rules until other countries acquire the equivalent capability would be risky for stable U.S.-China bilateral relations as well as for the world strategic stability.

Actually, almost all current international mechanisms in the field of security were established under the leadership of the United States. So the United States should stick to those rules. Any fundamental deviation from these accepted principles by the United States might cause confusion for the world and it would only bring more trouble for the United States in the long run. For example, the U.S.-India nuclear deal and the latest revision of U.S.-South Korea missile pact to allow the ROK to develop more capable ballistic missiles are clearly such a fundamental deviation from the spirit and principles of the U.S.-led nonproliferation multilateral regime. The consequence might be limited at the moment. But what kind of example will such revisions set for China and other rising powers? Rules can evolve, but countries should be very cautious about selectively applying or even ignoring established international rules.

Regarding China, the Chinese army, on the other hand, should boldly and self-confidently engage in dialogue and exchange with the U.S. military. Transparency is one of the major concerns from the U.S. side. Although there are variety of reasons for China to defend its opacity in its modernization process, more transparency measures have to be taken by the PLA in the long-run on issues like nuclear arsenal size, new capability development, military spending, and other related areas. Such measures might help to eliminate U.S. doubts about the intentions and directions of Chinese military development while not necessarily reducing the military deterrence of China.

Differences in U.S.-Chinese Foreign Policy Ideas and Practices

It is undeniable that there exist differences between Chinese and U.S. ideas and practices about foreign policy. Under certain conditions and on certain issues, such differences can become very prominent.

The Five Principle of Peaceful Coexistence is the basic principle of Chinese foreign policy and has been consistently viewed as a model by China. The specific policy initiatives China uses to deal with bilateral and multilateral affairs all take this principle as a guide. Therefore, China usually expects other countries to adopt the same policy toward it. As the world's number one power, the United States is more

concerned with spreading democracy, the rule of law, human rights, freedom and other so called universal values. The United States also is convinced that it bears "responsibility to protect" global citizens.

This gap between Chinese and U.S. values and foreign policy ideas will inevitably lead to a clash of foreign policy ideas and behavior. For example, the Taiwan, Tibet, and Xinjiang issues are, from China's point of view, naturally issues of sovereignty, so that any remarks or actions on these issues by the U.S. side are likely to stimulate a sensitive nerve on the Chinese side. The United States has always stressed its particular responsibility in Asia, and China's operational preparations to maintain its "core interests" in Asia are seen by the United States as a challenge to its leadership in the region. Therefore, we often see the United States and China giving each other severe tongue-lashings over human rights, arms sales to Taiwan, and the Tibet question. This difference in ideas is an important source of bilateral "trouble" between the two countries and to a certain extent it limits U.S.-China coordination and cooperation in international affairs. It is hard to change the ideas of the other. But those ideas, their origins, and their implications could be better understood by frank dialogue and mutual respect.

Conclusions and Recommendations

Examining the opportunities and the challenges facing the U.S.-China relationship, it seems we can make the following judgments: Firstly, opportunities and challenges coexist. However, compared to challenges, opportunities remain in the dominant position. Next, the opportunities are global, while the challenges are localized. Thirdly, opportunities are hard to reverse, while challenges can be resolved. As time passes, this trend will be more and more obvious. The experience of history shows that the U.S.-China relationship is more complex and vulnerable than most people would imagine. If the challenges are not taken seriously, or if a laissez-faire attitude is adopted, it could make the process of establishing a stable and cooperative strategic relationship much more difficult for the two countries, drawing out the process or requiring the process to be repeated in the future. Fourthly, China and the United States should commit themselves to solve their disputes and to sharing responsibility based on agreed rules and international law. To do so would set an important framework for building a stable and cooperative strategic bilateral relationship.

Challenges and Opportunities for Building a Cooperative U.S.-China Strategic Relationship

Dr. Christopher P. Twomey[1]

This author takes a cooperative U.S.-China strategic relationship to be one in which the two sides' interaction on strategic issues is predominately cooperative and minimally directly competitive. Cooperation does not mean uniform alignment of behavior and interests, although some alignment would be a prerequisite. Since strategic capabilities will always have the potential to trump other elements of competitive behavior, competition at that level is particularly dangerous. But beyond that, if other aspects of the relationship become competitive, they too can lead to a deterioration of the strategic relationship and impede cooperation.

Although discussed more fully in the Nacht and Pan chapters, to me a cooperative strategic relationship would have to include:

- Avoidance of strategic arms racing of any kind, even at a slow pace. This might well come from tacit restraint rather than overt arms control.
  - Missile defense systems that affect the bilateral strategic nuclear balance would have to be included.
  - Given the interaction between some advanced conventional weapons and the bilateral strategic nuclear balance, they too would have to be included.
  - Cyber and space "weapons" would have to be included, and here a cooperative relationship would have to begin with the creation—between the two at first, with active attempts to spread to others later—of norms regarding the existence and use of such weapons.
- Joint work to solidify a non-proliferation regime. This is not necessarily the current NPT regime but something that serves to manage this problem set.
- Joint work to roll back emerging cases of proliferation (i.e., Iran and North Korea).
- Managing, security conflicts that have the potential to lead to significant conventional conflict.

Unfortunately, there are substantial challenges in Sino-American cooperative relations in the strategic arena. This short essay will outline the grounds for such pessimism, looking at potential problem areas with regard to Taiwan, other regional conflicts of interests, and emerging security dilemmas and uncertainties about each other's intentions and capabilities. There are, nonetheless, broad potentially common interests that might develop, grow, and eventually serve to align behaviors and tamp down competitive strategic behavior. These will be discussed in the second half of the essay.

[1] This paper represents the author's personal views, and not those of any element of the U.S. government.

Taiwan—Still the Core Challenge

In this author's personal opinion, Beijing and Washington have fundamentally divergent interests on Taiwan. While this may change in the future, and indeed due to current political dynamics there is a refreshing degree of stability across the Taiwan Straits, in the long run, there are substantial grounds for pessimism.

Beijing has long made clear that reunification with Taiwan is a central—at times a declaratory "core"—interest. While use of force to achieve such reunification is recognized to have great costs, it is also an approach that Beijing reserves the right to use. Early in the Jiang Zemin era, there was a particular impetus to advance the cause of reunification. More generally, Chinese propaganda and educational materials have emphasized the importance of reunification to China's national identity over the past two decades.

Washington's position is much more ambiguous, only in part by design. What is clear is that for decades the United States has viewed the peace and stability of the Taiwan Strait as an important interest. There are certainly some within the U.S. political spectrum that view reunification on any terms as dangerous for reasons of realpolitik. However, in this author's view, that is a minority perspective. Rather, the more common view is one that emphasizes the importance of Taiwan deciding its own future, whatever that might be. The resonance of a former military ally, a thriving market economy, and a vibrant political democracy all predispose Americans to view Taiwan favorably.

Each side in the Sino-U.S. dyad blames the other for the perpetuation of the Taiwan issue. Beijing believes that if the United States would just stop interfering, Taiwanese leaders would have to accommodate to their inevitable future with Beijing. Washington argues that if China would just take force off the table, convergent political evolution would be more likely in the long run.

Recent political events on both sides of the Taiwan Strait have tamped down concerns compared to the early 2000s but have not addressed growing underlying tensions. The underlying shift in national identity in Taiwan is substantial. When asked about their core political attitude in a long running National Chengchi University poll,[2] about 40 percent of the population in Taiwan responded both Chinese and Taiwanese, only a modest drop from 1992 to today. However, in 1992, 25 percent viewed themselves as Chinese, today, that figure is under four percent. Conversely, in 1992, only 17 percent viewed themselves as only Taiwanese; today that figure stands around 52-3 percent. This is a decisive shift in identity. Nationalism remains a powerful force in international affairs,[3] and this shift in identity suggests that Taiwanese nationalism will not readily be assimilated.

These contrasting views are well understood on both sides of the Pacific. But they create a tension in the political relationship that raises potential militarization of the relationship. Any militarization would raise the potential for nuclearization of the conflict. Neither side sees nuclear weapons as a usable weapon in a Taiwan Straits context, as best one can discern. Still, both want to ensure that the other's nuclear weapons do not provide it with strategic advantages in a potential Taiwan crisis. This generates some

[2] Election Study Center, N.C.C.U., important political attitude trend distribution, http://esc.nccu.edu.tw/english/modules/tinyd2/index.php?id=6

[3] See, for instance, Michael E Brown, *Nationalism and Ethnic Conflict* (Cambridge, Mass.: MIT Press, 2001).

tension and grounds for potentially escalatory dynamics within a crisis, and more broadly it leads to pressure for modernization of strategic systems. China had been subject to nuclear coercion in the early history of the P.R.C., and avoiding any repeat of this is viewed as critical.

As long as Taiwan remains the primary issue for China, and an area of significant divergence between China and the United States, it is hard to expect significant strategic cooperation in that context, to say nothing of beyond it. Both sides will continue modernization—of nuclear arsenals as well as related and unrelated conventional systems—that in the context of underlying disagreements on Taiwan will pose potential risks.

Other Regional Conflicts of Interest

There are other issues that divide China and the United States in tangible, security terms. China holds views on sovereign rights in its littoral areas that are at odds with the dominant—although not universal—interpretation of rights under the UN Convention on the Law of the Sea (UNCLOS). This has led to repeated clashes with U.S. forces operating outside of Chinese territorial waters. Furthermore, Chinese ambiguous claims to the South China Sea in particular are problematic: "China has indisputable sovereignty over the Spratly Islands (or South China Sea islands) and adjacent waters."[4] Additionally, China has a number of maritime territorial claims that are contested by Japan, South Korea, the Philippines, Malaysia, and Vietnam. While the United States takes no stance on the claims per se, it has alliance relationships with three of these neighbors, and good relations with the other two.

Beyond that, although at times intermixed, there are increasing tensions between China and South Korea and between China and Japan. In part these tensions are derivative of China's close and supportive relationship with the North Korean regime. These are major U.S. allies and these tensions have led to a tightening of those alliances in ways that raise adversarial perceptions and, as in the Taiwan case, amplify the importance of robust nuclear postures for both the United States and China.

Finally, there are concerns regarding China's aspirations playing an increased role in shaping the Asian security environment. China's rise is not viewed as inherently problematic by mainstream American views. Still, a China that engages in provocative statecraft about territorial disputes, that attempts to dominate emerging and existing Asian institutions, and that coddles regional troublemakers like North Korea will be increasingly viewed as a country to be checked. On the other hand, a China that recognizes such steps to be inherently counterproductive, leading as they generally to do to the establishment of countervailing alliances, will avoid such policies, reducing tension with the United States on this score.[5] If Chinese public diplomacy emphasizing "peaceful development" is an accurate representation of priorities, then avoiding negative outcomes in this area is possible.

In each of these cases, the issues are less compelling for both Beijing and Washington than over Taiwan. Yet all do raise the potential for military conflict. As such, they drive military deployments that necessitate each side to aspire for "escalation dominance" and/or avoidance of the other side having such.

[4] M. Taylor Fravel, "China's Strategy in the South China Sea," *Contemporary Southeast Asia 33*, no. 3 (2011): 292-319. As Fravel emphasizes, what "indisputable sovereignty" means is actually quite disputable.

[5] For an evaluation of whether or not China is in fact doing this today, see Andrew Scobell, "Learning to Rise Peacefully? China and the Security Dilemma," *Journal of Contemporary China 21*, no. 76 (May, 2012): 713–721.

This has a nuclear dynamic only at the end of a very long escalatory ladder, to be sure. But a conflict that erupted between treaty-borne allies of the United States and China would develop under the shadow of the nuclear arsenals of each side. As such, both sides are likely to keep an eye on that military balance.

Military Spirals, Security Dilemmas, and Uncertainties

These conflicts of interest in various geographies are certainly problematic, and highlight grounds for concern. Exacerbating these are emerging arms race dynamics, both with regard to high intensity conventional capabilities and nuclear and other strategic weapons. China is working on advancing a counter-intervention (反介入) strategy that includes a range of asymmetric capabilities that are often bundled together in a western term: "anti-access/area denial" (A2/AD). These were developed primarily in response to the American military reactions to the 1995-96 Taiwan Straits Missile crisis when the PLA was able to do little to deter a major American deployment of military forces. These center on missile capabilities: advanced high speed anti-ship cruise missiles, accurate ballistic missiles to target U.S. bases in the region, and most recently the much ballyhooed, possibly operational anti-ship ballistic missile (DF-21D). The cruise missiles can be launched from a variety of naval and land platforms, most dangerously from quiet diesel submarines, which pose problems in and of themselves.

In response, over the past three years, the United States has begun to operationalize a set of strategic concepts it refers to as Air-Sea Battle (ASB). As the heads of the Air Force and Navy describe ASB, its "central idea is embodied in the construct of 'Networked, Integrated Attack-in-Depth.' This construct is used to pursue three lines of effort to disrupt, destroy and defeat adversary anti-access and area-denial capabilities."[6] It is tactically offensive, explicitly aimed at anti-access technologies, and requires early attacks on the full range of military infrastructure of an adversary. ASB appears to center on attacks on an adversary's command and control (C2) and intelligence, surveillance, and reconnaissance (ISR) assets. Deep strikes will be an important part of that.

In contrast to a CSBA study of the same name,[7] the Pentagon's evolving version of ASB does not explicitly target China nor does it limit its focus to Chinese capabilities. Military technology in the missile age (and to a lesser and related extent, the development and proliferation of quiet diesel submarines and other advances) is a global phenomenon. Still, as seen in examples presented in the Gen. Schwartz and Adm. Greenert article (and in the bibliography to the Joint Operational Access Concept[8]), China possesses the military that most stresses these.

Thus, since 1995, the two militaries engaged in a cycle of committing substantial amounts of effort into deploying capabilities that are optimized to challenge the other. Clearly, there is an intrinsic adversarial element to this relationship, but the development of these capabilities reifies that adversarial element. Because the conventional capabilities involved are high intensity (i.e., their use would lead to large casualties and substantial destruction of the opponent's military capabilities), they are linked to the nuclear dimension.

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6 General Norton A. Schwartz and Admiral Jonathan W. Greenert, "Air-Sea Battle: Promoting Stability in An Era of Uncertainty," *The American Interest* (2012).

7 *AirSea Battle: A Point-of-Departure Operational Concept* (Washington, DC: Center for Strategic and Budgetary Assessments, 2010).

8 The JOAC (Washington: Department of Defense, January, 2012) is available here.

Worse yet, there are similar arms racing dynamics in the strategic nuclear arena. Salient American developments have included flirtations with developing new nuclear capabilities in the Bush Administration, plus an even longer-standing emphasis in American security policy on missile defenses. These were given impetus in the early post-cold war era by concerns over "rogue states" that continues today in other guises. But each set of capabilities (and the associated doctrine from the early Bush Administration that aimed to incorporate nuclear weapons into war plans more) was profoundly threatening to China.

China has responded by accelerating its nuclear modernization. It is now in the process of substantial qualitative improvements and significant quantitative increases. To some extent, China would have wanted to continue its steady rate of progress of nuclear modernization in any event. But as with the conventional case above, the challenger that most stresses the survivability of its 1990s and early 2000s nuclear arsenal was the United States. China has responded with some emphasis on countermeasures to overcome U.S. missile defenses, and apparently, an effort to weaponize MIRV capabilities.[9]

It is exceedingly hard to imaging tangible cooperative relations at the strategic level in this context.

Finding, or Constructing, Opportunities in the Long-Term

In the longer term there are potential grounds for some optimism—if conflict derived from the above-discussed issues can be avoided. There are shared interests and perspectives that over time will increasingly align strategic approaches of the two in several ways.

First, in contrast to the U.S.-Soviet conflict, there is no overarching competing worldview or model of international relations between the two. Certainly, there are disagreements about the sovereign right of states to set their own human rights policies. China frequently complains about American interference in some third parties' domestic affairs. Still, China's own position on issues such as "right to protect" or R2P are evolving.[10] Rather than such general criticisms being about principles of interference, they center on China's geopolitical interest in certain countries: Iran and North Korea, most prominently.[11] China has selectively argued this point, but there is nothing inherent in Chinese nationalism and foreign policy ideology today that suggests this will be an enduring area of conflict with the United States across the board. (However, if tensions arise in other areas, they are likely to play out here.) Furthermore, defense of the right to abuse your population is not an ordering principle that is likely to appeal to the increasingly democratic Asia of today.

Similarly, the "Beijing Consensus" does not lay out an alternate global economic model. There is little substance to the Beijing Consensus that is universally agreed upon, and the attractiveness of the overall model is limited.[12] The BRIC collection of nations (Brazil, Russia, India, and China) has limited

[9] As discussed in the 2012 DOD report.

[10] Sarah Teitt, "The Responsibility to Protect and China's Peacekeeping Policy," *International Peacekeeping* 18, no. 3 (June, 2011): 298-312; Bates Gill and Chin-Hao Huang, "China's Expanding Role in Peacekeeping: Prospects and Policy Implications," *SIPRI Policy Paper No. 25*, Stockholm, Sweden: Stockholm International Peace Research Institute, November, 2009.

[11] A small number and shifting range of other countries are also highlighted in this regard and are viewed as important to Beijing given oil or other natural resources trade.

[12] John Williamson, "Is the "Beijing Consensus" Now Dominant?" *Asia Policy 13* (2012): 1-16.

ability to coordinate policy in a meaningful fashion.[13] Even China's interests in resource diplomacy are not purely mercantile (which might put it at odds with the United States).[14] Instead of presenting an alternate model for international organization, China's rise has thrived due to its integration with the world economy through the World Trade Organization and related global governance bodies.

Second, the United States and China share substantially aligned economic interests given the deep integration of their economies. The United States is China's largest export market and overall trading partner. China is the U.S.'s third largest export market, and the fastest growing destination for trade over the last 10 years. The much maligned foreign exchange holdings by China are a sign of how vulnerable China is to the United States (and intertwined with), not the other way around.[15]

This robust economic and related global political-institutional relationship is an important foundation on which Chinese and U.S. security relations reside. For both countries, maintaining economic prosperity is more important than the security issues that divide the two, with the singular exception of Taiwan (and only there under some very narrow conditions).

Third, the two sides share some similar interests on a few global issues. In some cases, these are protections of "global commons": issue-areas where national sovereignty does not exist and whose health is vital to both China and the United States. Thus, to ensure the free flow of shipping through the globe's oceans, China has begun to cooperate with the West in anti-piracy patrols off the Gulf of Aden. This is a critical and underemphasized move by Beijing. It represents a major effort for the Chinese Navy and one that forces it to cooperate with the rest of the NATO-led Task Force 151.

Other examples of cooperation in the global commons are less advanced and clear cut, but several are likely to develop over time. On space issues, Chinese interests in avoiding large-scale degradation of low-earth orbital altitudes are increasing with every satellite launch. Beijing increasingly depends on these for military, as well as commercial, endeavors. It has been signaling a more forthcoming attitude on negotiations regarding codes of conduct and PAROS related treaties since approximately 2008 (when its PPWT draft noted verification as an issue, and the 2009 note supplementing that went even further, suggesting the need for more discussions on definitions and verification).

A minimally proliferated globe can also be viewed as a global commons: both the United States and China share an interest in non-proliferation in the abstract.[16] Proliferation anywhere undermines non-proliferation norms that have at least raised the costs that recent proliferants have to pay. These norms almost certainly have reduced the pace of proliferation over the past 60 years.[17] While the NPT and IAEA are under unprecedented stress, these institutions remain the most important sources of norm perpetuation and frameworks for political and economic pressure, to say nothing of information sharing. Maintaining

[13] E.g., "BRICS in Search of a Foundation," *Economist* (2011).
[14] Kevin Jianjun Tu, "Chinese Oil: An Evolving Strategy," *China Dialogue* (2012).
[15] Michael Pettis, "The China Capital Surge," *Wall Street Journal* (2010); Daniel W. Drezner, "The Myth of China's Financial Power," *Foreign Policy blog* (2011).
[16] On the acute dangers China will face, and indeed already faces given its proliferated neighborhood, see my "Asia's Complex Strategic Environment: Nuclear Multipolarity and Other Dangers," *Asia Policy , no. 11* (2011): 51-78.
[17] Erik Gartzke and Matthew Kroenig, "A Strategic Approach to Nuclear Proliferation," *Journal of Conflict Resolution* (2009); Scott D. Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* (1996): 54-86.

these institutional fora depends most centrally on permanent-5 cooperation. The United States and China will be the key players within the P-5 going forward.

While the two do have important differences about some proliferation issues, there are again emerging signs of cooperation. China has engaged in significant cooperation in the Nuclear Security Summit process.[18] The two are edging toward ratification of the Comprehensive Test Ban Treaty. If the two side's views continue to converge on non-proliferation that will be an important element of strategic cooperation in and of itself and will pave the way for broader interest alignment.

There are, of course, significant signs of continuing divergence with regard to nuclear nonproliferation, on Iran and North Korea in particular. China has deeper concerns about instability in North Korea and greater petroleum trade with Iran than the United States does. Still, particularly in its leadership of the six party talks and ongoing bilateral pressure on North Korea, there is some overlap. South Asia is more problematic; China's continued support for the Pakistani civilian program given its past history directly contributing to global proliferation networks is rather disconcerting. In all these cases, realpolitik interests compete for attention with non-proliferation interests. The latter are certainly there for both the U.S. and China; they just do not always dominate.

The potential development of aligned interests with regard to global commons (broadly conceived) may over time provide increased opportunities for a cooperative strategic relationship. Certainly any work directly on nonproliferation together would be in and of itself an element of such cooperation. Broader aligned views would help to temper the more conflictual elements found in some of Beijing's "near seas" regions.

The Future and the Need for Leadership

The leadership on both sides of the Pacific can affect these strategic pressures, of course. For the United States, it is important to avoiding chasing unachievable (given today's technology) absolute escalation dominance. The State Department's International Security Advisory Board is considering a recommendation that "mutual nuclear vulnerability should be considered as a fact of life for both sides" which would be constructive in this regard.[19] Already, the Obama Administration's emphasis on "strategic stability" and signaling that it does not aim to overthrow the existing "strategic balance" through its nuclear and missile defense programs are positive examples of that which have been welcomed in Beijing. In the future, U.S. policy on missile defense and other "advanced conventional weapons" will be compared to this declaratory policy. This will require some political difficult decisions by U.S. leaders.[20]

On the other hand, China claims to believe deterrence has much lower requirements. Further discussions by Beijing of its views of the foundation of deterrence, and open engagement on how ongoing

[18] Christopher P. Twomey, "After the Summit: Investing in Nuclear Materials Security" (NBR Issue Brief, National Bureau of Asian Research, Seattle, Wash., April, 2012).

[19] Christopher J. Castelli, "Draft Report Urges Accepting Mutual Nuclear Vulnerability with China," *Inside Defense*, July 25, 2012. Note this report is—as of October 2012—nearly 10 months late, emphasizing the political challenges of exactly that recommendation.

[20] On systems such as the SM-3 block IIb missile and overall GBI deployment rates.

Chinese modernization serves to advance those views would also help. But it is vital that these discussions reflect rather than conceal ongoing Chinese modernization and quantitative buildup. After the Cold War history of Soviet duplicity on policies like “no first use,” there will be little tolerance for a mismatch between Chinese rhetoric and actions in Washington and Omaha.

It is possible that these sorts of tacit, unilateral expression of restraint will limit the excesses highlight above. Indeed, the financial costs of a worsening of the strategic relationship are high in and of themselves. Major efforts will be needed, however, as the drivers for each side to modernize transcend the bilateral environment. A deep recognition by both that stability in the bilateral relationship is an important goal will bolster these efforts.

Beyond that, there are reasons why Beijing and Washington may see converging interests in some broad areas. And certainly the degree of economic integration and the role of U.S.-led institutions in supporting Chinese development bode well for international peace.

Still, on the issue of nonproliferation the differences on North Korea, Iran, and Pakistan are substantial. Only after those change (which is plausible only over the longer term), should broader progress be expected. Furthermore, the underlying issue of Taiwan, and other Asian security concerns, will continue to engender tension in the near term that will complicate the development of substantive and broad based strategic cooperation between the two.

Building Habits of Cooperation in Pursuit of the Vision: Elements and Roles of Enhanced Dialogue for Strategic Reassurance

Ambassador Linton Brooks[1]

Dialogue between states is important for managing international relations. This paper will discuss how such dialogue can be used for strategic reassurance, where "strategic" includes not only nuclear matters, but also broader political-military issues.

The Nature of Strategic Reassurance

Strategic reassurance is not intended to eliminate all sources of tension. Doing so is impossible, especially among states with global interests. Rather, strategic reassurance aims at eliminating misunderstanding. It can take many forms, including not only meetings but also visits, exchanges, tabletop exercises and ultimately field exercises. While there is an initial role for Track 1.5 or Track 2 discussions,[2] strategic reassurance is inherently a government function. Thus, to be truly valuable, a strategic reassurance dialogue ultimately must be implemented between governments.

Strategic reassurance cannot be viewed in isolation. Its effectiveness depends in part on the overall climate of the relations between two states. Actions which improve this relationship make strategic reassurance easier. Thus, for example, President George W. Bush attending the 2008 Beijing Olympics and President Hu Jintao attending the 2010 Nuclear Security Summit in Washington each contributed to an overall climate that facilitates strategic reassurance. State-to-state cooperation, especially in military areas such as anti-piracy, also contributes to such a climate.

At the same time, it is important not to overstate what strategic reassurance is intended to do. It is aimed at areas of ***misunderstanding***. Often the two sides may understand each other clearly but simply disagree. For example, the United States understands Chinese view that the Law of the Sea Treaty limits military reconnaissance efforts in the Exclusive Economic Zone. It simply disagrees with that view. In such cases, the parties need steps to accommodate to the realities of their disagreement, but these should not be characterized as strategic reassurance.

Why is a Sino-American Strategic Reassurance Dialogue Needed?

There are issues between China and the United States requiring reassurance. China needs reassurance that the United States accepts the existence of its strategic deterrent and does not seek to counter it. Chinese experts refer to this as accepting mutual vulnerability. The current U.S. administration appears to believe that mutual vulnerability with China is not a policy choice to be accepted or rejected, but an objective reality to be acknowledged and managed. It has, however, been unwilling to state this clearly and existing U.S. statements have not been enough to assuage Chinese concerns. More broadly, China needs reassurance that the United States does not seek to westernize it, dismember it, or prevent its rise as

[1] The thoughts in this paper are personal views and do not necessarily reflect the views of any component of the United States government or any other organization with which I am associated.

[2] The use of the terms "Track 1.5" and "Track 2" varies among U.S. experts and scholars. In this paper Track 1.5 discussions involve both government and non-government experts, with the government officials typically being relatively junior and speaking in a personal capacity. This paper uses the term Track 2 to refer to discussions that are essentially completely between non-government experts, frequently including former officials or retired military officers.

a major global power. China also seeks reassurance that U.S. extended deterrent relationships will not embolden U.S. allies to take reckless actions.

For the United States, a major area of concern is uncertainty about the future direction of China's nuclear programs. China has made its broad policy clear; it "consistently upholds the policy of no first use of nuclear weapons, adheres to a self-defensive nuclear strategy, and will never enter into a nuclear arms race with any other country."[3] American experts, however, read documents such as the 2004 volume *The Science of Second Artillery Campaigns*[4] as going beyond an approach of minimum deterrence. Americans also are unclear as to the role of the new *Jin* class Chinese ballistic missile submarine. Therefore, Americans need reassurance that China does not seek to gain numerical strategic nuclear parity with the United States or to develop a broad nuclear war fighting doctrine that could destabilize America's allies in the Asia Pacific region. More broadly, the United States needs reassurance that China does not seek to undermine the United States' global leadership position.

These are the most important, but not the only areas in which strategic reassurance may be useful. In non-nuclear areas, Americans are concerned that Chinese growing capability and assertiveness at sea are aimed at denying the U.S. Navy the access to the world's oceans that the United States has always regarded as an important component of its security. Chinese, in turn, note with concern U.S. plans to develop long-range conventional strategic weapons, fearing that these weapons could put its small nuclear deterrent at risk and could force it to reconsider the no first use policy. Both states worry about the growing capability for space and cyber warfare that they believe the other is acquiring. These and other narrower issues suggest that progressively detailed dialogues aimed at improving mutual understanding are both timely and appropriate.

Broad Principles versus Specific Practices

Many Americans seek to improve Sino-American relations through a series of small practical steps. They believe that the aggregate result of these steps will be better understanding and an improvement in the overall relationship. In contrast, many Chinese advocate reaching agreement on broad principles first, before moving to individual, concrete steps. They believe that only the existence of broad agreed principles can allow practical steps to be implemented. This paper takes a view that can be characterized as "incremental steps within a broader framework." In this approach, the sides would take a series of individually small practical steps. But they would be guided by a common vision of the importance of reassurance and the forms it might take. Such a common vision might be:

> A relationship between China and the United States in which nuclear weapons are no longer a central feature for their security, deterrence based on nuclear destruction is no longer necessary, and the likelihood of nuclear war is treated as remote because their relationship is free of major, core security issues and the benefits from peaceful

[3] *China's National* Defense *in 2010*, Information Office of the State Council of the People's Republic of China, March 2011, Beijing. Section II (accessed on line at http://www.gov.cn/english/official/2011-03/31/content_1835499.htm

[4] A document circulating among U.S. China experts, presumed to be authoritative, although not formally acknowledged as such by China.

integration in economic, political, and diplomatic spheres provide a counterbalance to the perceived advantages of conflict.[5]

One approach to moving toward this common vision would be for the sides to agree informally on a set of principles of reassurance. The very act of doing so could help improve relations because it would allow the sides to make clearer the mechanisms by which particular concerns are best addressed. Some concerns, for example, might be best addressed by political pledges not to take specific actions. Others might be addressed by technical analysis and demonstration to clarify what is and is not a threat. Examples of principles the sides might consider include:

- To avoid discussing historical concerns that cannot be changed (the bombing of the Chinese embassy or past U.S. concerns over Chinese espionage, for example). Strategic reassurance should be about the future and not about the past.[6]
- To pay attention to changes over time. If successive issues of the Chinese Defense White Paper each reveal slightly more information or successive descriptions of the U.S. Air-Sea Battle concept each have a less strident tone, the sides should recognize that these steps are reassuring and may make other strategic reassurance steps more feasible.
- To recognize differences in national style. Chinese often respond to foreign concerns through the press and other mass media, while the United States seldom uses this technique, preferring direct, often private, statements. Both practices can convey reassurance and the sides should help one another to understand their intent in each specific case.
- To avoid seeking the impossible. Chinese are—often justifiably—upset with how China is portrayed in the Western press. But the United States government has no control over the American press and therefore cannot alleviate China's concerns.
- To give preference to a series of steps rather than a single step. Issues that are important enough to require reassurance are unlikely to be effectively dealt with simply by a single meeting, statement or confidence building measure.

These principles are illustrative. An initial task in a program of strategic reassurance should be to discuss and expand upon them.

Possible Elements of a Program

States require strategic reassurance when they are not adversaries and do not seek to become adversaries, but have doubts about each other's plans and motivation. Because of these doubts, not all forms of strategic reassurance are politically possible immediately. Thus a program of strategic reassurance must be progressive, both building on past steps and being sensitive to the overall political relationship. One approach would be the following:

[5] Adapted from the State Department's International Security Advisory Board's report *Mutual Assured Stability: Essential Components and Near Term Actions*, August 2012

[6] For a discussion of how to deal with festering historical problems (in this case between Japan and the Republic of Korea) see Victor Cha, "Japan-ROK Relations: Antagonism over Alignment?" Pacific Forum, PacNet #58 Tuesday, Sept. 11, 2012.

- Initially, focus on what can be done immediately without political difficulty.
- Move next to confidence building measures and more robust discussions on more sensitive topics.
- Finally, move to government to government (including military to military) discussions on more difficult topics such as crisis management, ballistic missile defense,[7] space and cyber warfare, and similar topics

Steps That Involve Relatively Little Political Difficulty

Steps in this category, many of which are already being taken, have two objectives. First, of course, they are valuable in themselves. But they also serve to build habits of cooperation and allow the sides to practice strategic reassurance in areas of limited tension. Many of these initial cooperative steps can be conducted on a government to government basis, such as the May 10, 2012 agreement between Chinese Defense Minister Liang Guanglie and U.S. Defense Secretary Leon Panetta to conduct humanitarian assistance and disaster relief, and counter-piracy joint exercises.[8] They can also be implemented through Track 1.5/Track 2 discussions. Important functions of such unofficial discussions include deepening understanding of the two states' positions, identifying topics that might be ripe for official discussions, and laying the groundwork for ultimate dialogue between governments. For maximum benefit, participants in these discussions should have a firm understanding of the details of their own government's position and access to government officials so that they can share whatever insights arise during the dialogue.

Dialogue at this stage of the relationship should focus on topics where the two sides have common—or at least compatible—objectives. Nuclear security and combating nuclear terrorism are obvious topics. The Center of Excellence established in Beijing by a January 2011 memorandum of understanding between U.S. Secretary of Energy Steven Chu and China Atomic Energy Authority Chairman Chen Qiufa provides one possible venue. The sides should make extensive use of this center to exchange best practices, understand concerns, and look for opportunities to move beyond dialogue to actual cooperation. Although the Center was established to deal with cooperation in the civil sector, the sides should include officials (including military officers) with national security responsibilities in these discussions, even if only as observers. The point would be to broaden the number of people involved in dialogue and to prepare for more extensive discussions when overall political conditions permit.

Similar discussions, perhaps separate from those in the Center of Excellence, might be held in other non-contentious areas such as nuclear safety or export control. The existing agreement on Peaceful Uses of Nuclear Technology provides an appropriate umbrella for such discussions, which could focus on the exchange of best practices and might also seek to identify opportunities for more extensive cooperation.

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[7] It is important to distinguish between two types of ballistic missile defense. The United States has deployed 30 ground-based interceptors in Alaska and California designed to defend the U.S. homeland from ballistic missile attack. These interceptors are what some Chinese believe threaten (or are intended to threaten) the Chinese strategic deterrent. The United States also deploys theater ballistic missile defense to defend U.S. forces and allies in areas in Europe as well as in Asian areas near China. Theater ballistic missile defense is aimed at any state with the capability to threaten U.S. forces or allies, including China. This paper deals exclusively with national missile defense.

[8] "More Military Exchanges," *China Daily*, May 10, 2012, p. 8.

A final example of dialogue appropriate to the current stage of the relationship is a continuation of existing Track 1.5/Track 2 discussions on nuclear and ballistic missile defense issues as well as the expansion of discussion on broader military issues. For example, the recent agreement for joint exercises will help build the habits of cooperation that are a precondition for strategic reassurance. These exercises should be supplemented by unofficial exchanges involving academics and retired military officers discussing the two sides' approach toward the military dimension of security, including such topics as the U.S. concept of Air-Sea Battle and China's views on anti-access and area denial strategies. Separate exchanges might also discuss the military dimensions of space and the security issues associated with cyberspace.

Confidence Building Measures and More Robust Discussions

Confidence Building Measures

All of the discussions and dialogues listed above have value. Ultimately, however, more is needed. Resolving issues that raise suspicion and thus reduce stability requires something more than discussions but less than formal treaties. Confidence building measures can fill the gap.

Confidence building measures are concrete steps designed to deepen understanding and reduce mistrust. Unlike formal arms control, they do not seek to limit nuclear or other forces. Unlike discussions and seminars, they may include actions, not simply rhetoric. Because it is governments that must be reassured, confidence building measures imply government action, usually involving both military and civilian officials. Within this broad description, however, confidence building measures can take many forms. It is important to understand that confidence building measures are not simply another way of calling for transparency. Some forms of transparency (by both sides) may build confidence. Both the United States and China should embrace such measures. Discussion of which forms of transparency increase confidence and which do not would be an important precursor to agreeing on a broad range of confidence building measures.

The concept of confidence building can be applied to many areas, including maritime operations, military exercises and space operations. What follows is a set of possible confidence building measures in the strategic area, including nuclear security, offensive nuclear forces, ballistic missile defense and conventional weapons that can operate at strategic ranges.

Missile Defense. To help China understand the U.S. national ballistic missile defense system, government technical experts from both China and the United States (including from the U.S. Missile Defense Agency) should conduct a multi-day joint technical analysis of the U.S. program and its capabilities against Chinese systems.[9] Separately, the two sides should conduct a Joint Threat Analysis of the North Korean missile threat, similar to that recently completed by the United States and the Russian Federation concerning Iran.

[9] This suggestion is based on a proposal by Academician Hu Side during the fifth round of the U.S.-China Strategic Dialogue, held in Beijing, Nov 8-9, 2010. During a subsequent Strategic Dialogue, a Chinese participant suggested the importance of including technical parameters such as burnout velocity.

Following this analysis, China should be given the opportunity to observe U.S. national ballistic missile defense testing. As part of this observation, China should use its own equipment to conduct measurements in order to gain confidence that it understands the performance parameters of the system.

Prompt Global Strike. The two sides should develop a set of procedures for U.S. notification to China of future launches of Prompt Global Strike systems. These procedures should be used during future development launches, but should ultimately be available for operational launches. Once the preliminary procedures have been developed, they should be exercised through a joint U.S.—China tabletop exercise involving military staffs of both countries.[10]

To make these confidence building measures most valuable, it might be useful for China to provide the United States with ideas about the type of restraint in the deployment of national ballistic missile defense or Prompt Global Strike that would be most reassuring as well as suggestions about the type of information exchange that would be most reassuring.

Nuclear Test Sites. Some Americans are concerned that China might seek to improve its nuclear arsenal by conducting prohibited experiments once the Comprehensive Nuclear Test Ban Treaty enters into force. The two sides should conduct reciprocal visits to one another's nuclear test sites to understand experiments that might legally be conducted at those sites following the Treaty's entry into force and to set the scene for more extensive confidence building measures at a later date.[11]

These are only a few illustrations of possible confidence building measures in the strategic area. Similar measures are possible in other areas. The two sides should use the U.S.-China Strategic and Economic Dialogue to discuss which confidence building measures are the most promising and then commission appropriate groups to discuss how those measures might be implemented. While the strategic and military relationship between the United States and China will always reflect the overall political relationship, confidence building measures can provide predictability and stability and thus improve that relationship.

Confidence building measures are not the only form of strategic reassurance. Deeper dialogue can serve a similar function. Strategic reassurance requires reciprocity, but that reciprocity needs to be thought of in broad terms and not simply in terms of each side implementing a confidence measure. Instead the sides should use all available tools, with the overall mix adding to the goal of reassurance. Therefore, as confidence building measures are being implemented, the sides should move to deepen their dialogue on strategic topics and move from Track 1.5/Track 2 discussions to the formal government to government (including military to military) talks. (During the workshop for which this paper was initially prepared, several participants from both sides stressed the importance of military to military discussions. Given this importance, it is disconcerting that such discussions have been so difficult to implement and sustain. The sides need a joint examination of how to avoid interruptions in military-to-military dialogue.)

Four topics appear especially promising for formal discussion: nuclear strategy, nuclear weapons security, crisis management, and strategic restraint.

[10] Based on M. Elaine Bunn and Vincent A. Manzo, "Conventional Prompt Global Strike: Strategic Asset or Unusable Liability?," National Defense University, Strategic Forum, February 2011

[11] For a description of confidence building measures that might be possible in the future (though not today), see National Research Council, The Comprehensive Nuclear Test Ban Treaty: Technical Issues for the United States, 2012, pp. 74-75.

Nuclear Operations and Strategy. As part of the military-to-military exchanges between the United States Strategic Command and China's Second Artillery Corps, military experts should discuss current technical issues of a military-operational nature. This should include a seminar on the 2004 document *The Science of Second Artillery Campaigns* and on the implementation of the U.S. Nuclear Posture Review. The sides might also discuss the evolution of U.S. and Chinese nuclear doctrines, which some see as converging as U.S. Presidents of both parties seek to reduce the importance of nuclear weapons in U.S. defense strategy.

A separate seminar, with participation of experts from the U.S. submarine force and the People's Liberation Army (Navy) should consider issues associated with ballistic missile submarines. For China, this might include the role of the *Jin*-class submarine; for the United States, it should include discussion of the roles of those *Ohio*-class submarines converted to cruise missile carriers. Among other things, these seminars should be tasked with devising possible useful confidence building measures.

Nuclear Weapons and Materials Security. Consistent with the importance they attached to the 2010 and 2012 Nuclear Security Summits, China and the United States should resurrect the idea of regular exchanges between the U.S. National Nuclear Security Administration and appropriate Chinese military and security entities on a variety of topics, including the security of military materials in both countries.[12] The purpose would be to share best practices, increase confidence in each country of security of materials in the other and to jointly consider how to encourage best security practices by the national security organizations of other states. As part of this discussion, the sides should conduct a tabletop exercise on how they would respond to detection of an actual incidence of nuclear smuggling discovered in a third country.

Crisis Management. Crises bring tension and a great opportunity for mutual misunderstanding. To minimize this problem, the two sides should hold periodic discussions or workshops on how they might behave in crises. Initially, these might involve situations in which the two countries will be cooperating to defuse a crisis of common concern (for example a crisis on the Korean peninsula or a major environmental disaster). Ultimately, however, there should be Sino-American discussion on the management of incidents between them. For example, a joint analysis of the management of the 2001 collision between a Navy reconnaissance aircraft and a Chinese fighter might reveal valuable lessons for crisis management. Such an effort might be suitable for initial discussion in a Track 1.5 forum, but ultimately should involve government (including military) officials

Strategic Restraint. Much of the discussion in this paper has involved nuclear or related issues. But the growing importance of space and cyberspace to both China and the United States suggests a need for reassurance in these areas as well. In his paper prepared for this workshop, Dr. Lewis Dunn suggests a regime of mutual strategic restraint. The sides should discuss this concept, including whether there are possible confidence building measures that might be considered for future implementation.[13]

[12] These discussions were proposed several years ago, but the two sides were unable to agree on a formula for characterizing discussions held in the 1990s. The easiest and most appropriate resolution would be to ignore the past and focus on future interactions.

[13] Two respected U.S. analysts have recently published an argument for a comprehensive regime of U.S.-China strategic restraint in the nuclear, space and cyber domains. See David C. Gompert and Phillip C. Saunders, *The Paradox of Power: Sino-American Strategic Restraint in an Age of Vulnerability*, The Center for the Study of Chinese Military Affairs, Institute for

Government to Government Discussions on Major Strategic Issues

Such discussions would be the culmination of the process of building habits of cooperation. The goal of this paper has been to suggest an approach for building habits of cooperation and dialogue, thus facilitating strategic reassurance. Ultimately strategic reassurance operates between states. Therefore dialogue that seeks to provide strategic reassurance must take place between governments and must encompass any issue that either side wishes to raise. Because the most important aim of strategic reassurance is the prevention of conflict, it is important this dialogue include military representatives in some manner, ideally including separate discussions and exchanges between military organizations.

It is not possible to suggest in advance the topics for this high-level strategic reassurance dialogue. Indeed, that is the point: the agenda should be flexible, encompassing any topic the sides wish to discuss, from Chinese concern over U.S. reconnaissance to American fears of Chinese cyber-attack. The vision set forth in this paper is that through gradual increases in the depth and scope of unofficial and official dialogue, the two sides can reach the point where they can discuss all relevant issues with candor and a concern for solutions, whether those solutions involve a regime of mutual restraint, a set of confidence-building measures or a series of formal agreements. Such dialogue will not, of course, eliminate all points of tension between the two states. But it will avoid needless confrontations due to misunderstanding, imperfect communications and mutual suspicion.

Conclusion

The dominant geo-political fact of the 21st century will almost certainly be the relationship between the United States of America and the People's Republic of China. That relationship will be marked by both cooperation and competition. It is unlikely to reach the close collegiality that characterizes U.S. relations with the United Kingdom. But neither is it doomed to become a mirror image of the U.S.-Soviet confrontation at the height of the Cold War. The task of statesmen is to forge a new relationship appropriate to global powers. This will require strategic reassurance. While enhanced dialogue by itself cannot forge this new relationship, it is the best—perhaps the only—mechanism for beginning to move toward strategic reassurance. Therefore, the two sides should begin now to build habits of cooperation through a continuing, deepening and candid strategic reassurance dialogue based on the principle of incremental steps within a broader framework.

National Strategic Studies, National Defense University (Washington, D.C., 2011). The sides should discuss the ideas in both this document and Dr. Dunn's paper.

Important Role and Constraining Elements of Enhanced Dialogue for Strategic Reassurance between China and the United States

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Over the past years, the China-U.S. strategic dialogue has been a good platform for the two countries to promote their mutual strategic assurance and reduce their mutual strategic suspicion. China and the United States have recently experienced some new problems in their strategic assurance. U.S. Secretary of State, Hillary Clinton's declaration of a U.S. "pivot to Asia" has given rise to Chinese concerns. China's determination to safeguard its core strategic interests has also raised U.S. concerns. Under this new situation, both countries need to enhance their dialogue for strategic reassurance.

Important Role of Enhanced Dialogue for Strategic Reassurance

Since China and the United States established diplomatic relations, the two countries have established high level contacts and various working level dialogues between their leaders and officials. In the context of substantially increasing mutual cooperation, the two countries established the China-U.S. Strategic Dialogue in August 2005, and then opened the China-U.S. Strategic Economic Dialogue in December 2006. Based on these two major dialogue mechanisms, they established the China-U.S. Strategic and Economic Dialogue in July 2009.

After six rounds of the Strategic Dialogue and five rounds of the Strategic Economic Dialogue, China and the U.S. held four rounds of the China-U.S. Strategic and Economic Dialogue. These strategic dialogues have become the most authoritative platforms for the two governments to review comprehensively their bilateral relations from a global strategic perspective. The general objective of the China-U.S. strategic dialogue is, through dialogue, to enhance mutual understanding and cooperation, to expand trust and dispel suspicion, to avoid misunderstandings, misjudgments and especially to avoid misjudgments leading to a military conflict which neither country desires.

What are the main issues requiring efforts by the two countries to strategically reassure each other? Under present circumstance, the crucial issue for the two countries is to avoid falling into the so-called "Thucydides' trap". According to that "trap", a rising power is bound to challenge the established power, and to meet in turn with the response of the established power, thus leading inevitably to a military competition and confrontation if not conflict. China at present suspects that the strategic intentions of the U.S. "rebalance" to the Asia-Pacific is directed at containing China. The United States believes that a rising China is trying to replace the leading role of the United States in the Asia-Pacific. Therefore, China needs to reassure the United States that it will not challenge its leadership position in the Asian-Pacific region or globally. The United States needs to reassure China that it will not attempt to join hands with its allies to contain China and will not attempt to split apart or westernize China.

An enhanced dialogue of strategic reassurance can play an important role in helping the two countries better understand each country's strategic intentions, strategic objectives, and strategic plans as well as how they look upon the existing international order and their respective roles in the world. Furthermore, dialogue can further increase understanding of each country's strategic core interests, as well as understanding of their common interests and major differences. The China-U.S. strategic dialogue is thus a process that deepens understanding, increases mutual assurance, and promotes cooperation.

Fruitful Results Achieved by China-U.S. Strategic Dialogues

Since China and the United States embarked on a process of strategic dialogue, the content of the dialogue has deepened and become more wide-ranging, covering both bilateral political, economic and military relations and many aspects of international relations. Through these dialogues, China and the United States have confirmed that both sides should jointly work to establish a mutually beneficial, win-win, comprehensive and cooperative China-U.S. relationship. The two countries have confirmed in the China-U.S. Joint Declaration in 2011 that they should respect each other's core national interests, appropriately manage their differences and sensitive issues, and that they will strengthen coordination and cooperation on major international and regional issues.[1]

The strategic dialogues have promoted cooperation of the two countries in the fields of trade, investment and finances, science and technology, education, agriculture, health, energy, and environment. They have also enhanced their cooperation in the fields of counter-terrorism, nonproliferation, climate change, energy security, disaster prevention, anti-transnational crimes, and other global issues.

With the deepening of U.S.-China strategic dialogues, the results of the various rounds have become increasingly fruitful. The fourth round of U.S.-China Strategic and Economic Dialogue, held in May of 2012, achieved 67 concrete results, covering many aspects and fields of cooperation. More specifically, the most prominent results achieved have been in the area of the rapid development of their economic and trade relations. During his visit to the United States, Vice President Xi Jinping said, "In the 33 years since the United States and China established diplomatic relations, bilateral trade has increased 180 fold, and is expected to exceed $500 Billion USD in 2012. In the past decade, U.S. exports to China increased by 468 percent, and China has become the United States fastest growing export market."[2] The deepening interdependence of the trade relations has laid a solid foundation for stable and cooperative relations between the two countries.

Challenges and Constraints Facing China-U.S. Strategic Dialogues

China-U.S. strategic dialogues have increased the level of strategic assurance between the two countries, but they still face a number of challenges and constraints, which require active responses.

Challenge of Traditional Perceptions

For a long time, China and the United States have both been influenced by Cold War thinking and they often view each other as rivals. The U.S. government's National Security Strategy still regards China as the biggest potential threat and rival. China also views the United States as the greatest potential threat. Moreover, the Chinese government has periodically warned its people that hostile western powers are trying to split apart or westernize China.

In addition, the people of the two countries still lack a good understanding of each other. The American public still views post-"reform and opening Up" China as a Soviet style authoritarian state. A recent Gallup survey shows that the American public believes that of "the United States' greatest

[1] Joint Declaration of the People's Republic of China and the United States of America, 19 January 2011.
[2] "Building a Better Tomorrow's Cooperative U.S.-China Partnership" a speech given by Chinese Vice President Xi Jinping on 15 February 2012 at a welcome luncheon hosted by friendly organizations in the United States.

enemies" Iran ranks first and China ranks second.[3] Conversely, a survey taken by the Institute of American Studies of the Chinese Academy of Social Sciences shows that the Chinese people have "love and hate feelings" towards the United States. Specifically, 29.78% of the public views the United States as a "hostile country" or a "competitive rival"; 55.4% of the public views the United States as both a competitive rival and a partner; those that view the United States as a "friendly country" make up only 1.14%.[4]

Differences on Some Issues of Core National Interests

China views maintaining its sovereign integrity over Taiwan, Tibet, Xinjiang, as well as the South China Sea and East China Sea to be its core national interests. By contrast, the United States, while undertaking to respect China's sovereignty, oppose independence of Taiwan, and take China's core national interests into consideration, continues its arms sale to Taiwan and supports the separatist activities of Dalai Lama and Rebiya Kadeer in the name of supporting human rights and religious freedom. In response to recent intensifying disputes over the South China Sea and the Diaoyudao Islands in the East China Sea, the United States has declared that it will not take sides on the sovereign issues, but that it has the obligation to defend its allies. China believes that the United States has obviously taken partial positions and supported its Asian allies in challenging China's strategic interests. These behaviors have naturally increased strategic suspicion between the two countries.

Constraints of Domestic Politics

In the present information age, public opinion in both countries have increasingly influenced and constrained governments' policies. As the development of the China-U.S. relationship has a growing influence over the daily life of the people in both countries, the American public has become more concerned about the impact of China's rise on their employment and lives. The Chinese public, through the Internet, has expressed its dissatisfaction with U.S. policy towards China, as well as its dissatisfaction with the Chinese government over its weak position towards the United States. At the time of an event or an incident, urged on by the reports of the media in the two countries, the national sentiments of the public may be further intensified. Moreover, during the current U.S. presidential campaign, the candidates of both parties have again targeted China with unfair accusations, directly influencing the strategic trust between the two governments and two peoples.

Challenges from Their Different Relations with Other Countries

China and the United States take different policies and positions in dealing with international hot spots and issues, based on their different foreign relations, different strategic interests, and different diplomatic principles. Most important, China pursues an independent foreign policy of non-interference, while the United States acts as the world leader and strives to safeguard its strategic interests overseas and defend its allies' interests. These differences have naturally constrained strategic reassurance and cooperation between China and the United States.

Moreover, even when both countries share the same objective in opposing the acquisition of nuclear weapons by North Korea or Iran, the two counties take different approaches in handling the issues. Or

[3] 'Gallup poll says China ranks number 2 of the United States' "Greatest Enemy", *Global Times*, February 21, 2012.
[4] *The International Outlook of the Chinese People* (1st Series), China Social Sciences Publishing House, December 2009. p.30.

when dealing with the grave Syrian situation, the United States advocates external intervention in Syria's civil strife, while China maintains its traditional principle of non-interference in other countries' internal affairs. As for the territorial disputes over the South China Sea and the Diaoyudao Islands in the East China Sea, if its interference is not appropriate, the United States may be dragged into military conflict with China by its allies Japan and the Philippines.

Responding Actively to the Challenges and Constraints

China and the United States should join hands in actively responding to the above-mentioned challenges and constraints by taking the following steps.

Changing Their Traditional Perceptions About Each Other

The two countries need to work harder to perceive each other objectively and to should change their old perceptions about each other, and about the world. This should be a critical goal of strategic reassurance dialogues.

On the one hand, the United States needs to understand and judge China objectively. China has been undergoing remarkable changes since its reform and opening up, and is moving in the right direction. The Chinese government has recently emphasized the need to accelerate the pace of political reform. The People's Daily, in an editorial, states clearly that China, in accordance with the requirements of President Hu Jintao, "will continue to promote reforms on the economic system, political system, cultural system and societal system."[5] More generally, former U.S. Secretary of State Henry Kissinger has argued that "the increase in China's economic strength and political influence is an objective reality", and "the United States must adapt to this rather than demonizing China".[6]

On the other hand, China needs to look upon the U.S. leading role in the world objectively. Chinese Vice President Xi Jinping reaffirmed in a speech during his visit to the United States, "China welcomes the United States to play a constructive role in promoting peace, stability and prosperity in the Asia-Pacific region."[7] China also needs to better explain and demonstrate to the world its strategy of peaceful development. It also needs to continue to make the point to the United States that China is at a different level of development compared with the United States. Its overall national power, and military power in particular, is far behind that of the United States and poses no threat to the United States. China's main task in the many coming years will be focused on maintaining domestic political stability and sustained economic growth. China does not seek to challenge the leading role of the United States in the world.

Strengthening Military to Military Relations

Exchanges and dialogues between the U.S. and Chinese militaries lag behind exchanges and dialogues in other fields. Only in 2011 did the militaries for the first time take part in the China-U.S. Strategic and Economic Dialogue. Enhancing the military relationship should be one of the most important parts in strategic reassurance and reducing strategic suspicions between the two countries.

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5 Editorial Office, "Rather be critical than meet with crisis", *People's Daily*, 23 February, 2012, p.A8.
6 Henry Kissinger, "The future of U.S.-China relations: conflict is a choice, not a necessity," *Foreign Affairs*, March/April 2012.
7 Editorial, "The U.S.-China relationship has matured," *United Morning Post*, 20 February 2012.

To that end, the Chinese and U.S. militaries should strengthen their communication so as to have a better understanding of their respective threat perceptions, military strategies, and national defense planning, instead of basing their military preparations on "worst case scenarios". The military leaders and experts should have in-depth dialogues on specific issues such as nuclear doctrines and policies, nuclear security, ballistic missile defense, outer space, cyber security, military transparency, and related areas. The two militaries should enhance their cooperation in countering terrorism, anti-piracy, and peace-keeping. They should also have more regular exchanges of visits and joint exercises as well as restore their lab to lab projects.

Reassuring Each Other by Doing the Right Thing at the Key Moments

It is an important element of strategic reassurance when the government leaders of China and the United States do the right thing at the key moment. For example, China was reassured when President George Bush openly expressed U.S. opposition to Taiwan's independence as former Taiwan leader Chen Shuibian attempted to move towards independence. When President Bush attended the opening ceremony of Beijing Olympics at the time some Western leaders argued to boycott the Beijing Olympics, the Chinese people were much impressed by this friendly gesture towards China. It is also reassuring that President Obama reaffirmed that "The United States welcomes China's peaceful rise" during his meeting with Chinese Vice President Xi Jinping on 15 February, 2012. On the contrary, when Secretary of State Hilary Clinton talked about a U.S. pivot to the Asia Pacific, she only increased suspicion in China, raising questions whether it reflected a U.S. strategic intention to encircle or contain China.

Conversely, the United States should feel reassured when President Hu Jintao formally suggested during the fourth round of China-U.S. strategic and Economic Dialogue, that a new-type of major power relations should be established. That shows China's conviction that a rising power can co-exist peacefully with the established power. Chinese Vice President Xi Jinping also made reassuring remarks when he stated that "There is enough space on Pacific Ocean for China and the United States, the two major powers to coexist."

Handling Differences Properly

In the course of strategic dialogues, the two countries frankly exchange views and seek to deal in a reasonable way with their differences and frictions. China and the United States have conducted frank and in-depth discussions on thorny economic and trade issues such as the RMB exchange rate, trade imbalances, intellectual property rights protection, restrictions on exports of high-tech products to China, recognizing China's status as a market economy, as well as political issues such as human rights, religious freedom.

Across many areas, both sides have shown tolerant attitudes towards their differences. It is important to consider why this is possible. When the two governments recognize that such differences between the two countries should not undermine their general cooperative relations, the two countries can somehow tolerate their differences. For example, at the time when China vetoed the U.S. supported UNSC resolution on Syria, the United States did not let this prevent a successful visit by Chinese Vice-President Xi Jinping to the United States.

Enhancing Crisis Management Mechanisms

Past experiences have shown that in the event of sudden incidents, the China-U.S. relationship is likely to enter a low point. The incidents of the 1999 bombing by U.S. aircraft of the Chinese Embassy in Belgrade during the Kosovo War and the 2001 collision between a U.S. EP-3 aircraft and a PLA interceptor jet are examples in point. It is, therefore, important for both sides to take measures to prevent such incidents from happening again, and learn to handle such crises rationally in order to reduce the negative impact on the general China-U.S. relations.

Furthermore, both countries need to safeguard the continuity and effectiveness of their communications and dialogues, including the hot line communications between the heads of states and military leaders of the two countries particularly in the event of crisis. China-U.S. defense consultations were interrupted by both the embassy bombing and plane collision incidents. Military exchanges and dialogues also were suspended on several occasions, because of U.S. arms sale to Taiwan.

Promoting Understanding and Exchanges between Two Peoples

Enhancing strategic reassurance between China and the United States requires a solid foundation of good understanding and friendship between the people of the two countries. It is important to enable the people of the two countries personally to experience and benefit from the results of China-U.S. cooperation. Both government leaders, in the course of their strategic dialogues, have recognized the importance of enhancing China-U.S. people to people exchanges. To this end, China and the United States have launched humanities exchange mechanism between the two countries, to facilitate more exchanges of students, teachers and young people of the two countries.

Conclusion

Overall, the China-U.S. relationship is both a cooperative and competitive complex relationship. Having experienced over thirty years of gradual accommodation, the relationship is maturing day-by-day. Both sides recognize that expanding common grounds, properly handling differences, and safeguarding a stable and cooperative China-U.S. relationship matches both countries' fundamental interests.

The key question is whether China and the United States can adapt themselves to the new situation. The United States should learn to accept China's rise and development, and China should learn to deal with the world’s only superpower. Due to both domestic and external challenges and constraints, enhancing strategic reassurance between the two countries will be a long-term process. Both sides also will need to invest more resources in that process as well as to have more strategic patience.

However, the relationship today between China and the United States is not the same as between the Soviet Union and the United States during the time of the Cold War. Close China-U.S. economic and trade relations have laid a solid foundation. Enhanced dialogue for strategic reassurance and a sound crisis management mechanism will help support the stable development of China-U.S. relations.

China's Future Nuclear Policy and the U.S. Influences on It

Dr. Li Bin

Overview

China has followed a policy of restraint on its nuclear weapons since it began its nuclear program in the later 1950s. This restraint could come from a deliberate decision to limit the size of the program for strategic reasons and/or from China's economic realities. Its quickly growing economic capability gives China many more choices today than before, however, and the future development of China's nuclear weapon policy is becoming a noticeable issue for both Chinese and foreign security experts. This paper explores the possible future evolution of Chinese nuclear weapon policy in the next two decades, focusing on the size of Chinese nuclear force, a major dimension of nuclear policy. More specifically, the key factor that will shape China's future nuclear policy is how the Chinese security elite understands the roles of nuclear weapons. Therefore, this paper examines the debates in China about the roles of nuclear weapons and discusses how the debates will change China's future requirements for nuclear force.

The nuclear weapon policy of the United States has great influence on China in two ways. First, the evolution of U.S. nuclear capabilities has changed China's threat perception. Second, the United States is a model of strategic development through demonstration of some new directions. This paper also discusses, therefore, the impact of U.S. nuclear weapon policy on China and suggests cooperative solutions for avoiding competition between the two countries.

In the foreseeable future, China's major goals are its economic and social development. To serve these major goals, China needs to maintain a safe and stable domestic and international situation. Nuclear weapons as a military approach are useful only when China faces an extremely dangerous military situation, for example, nuclear coercion by foreign countries. Nuclear weapons are not useful when dealing with most traditional and nontraditional security threats.

The relation between China and United States has very rich content and the nuclear weapon issue usually is not as important as many other issues, for example, economy and trade. But nuclear weapons could become important if the overall relationship of the two countries becomes very bad or if we cannot manage the nuclear issue appropriately.

Domestic Debates on China's Nuclear Policy

There have been public debates in China about the roles of nuclear weapons and the nature of China's nuclear strategy. Many publications and statements are both descriptive and prescriptive. The scholars involved in the debates have made suggestions about how China should make use of the influence it derives from its nuclear weapons besides also explaining China's past and current nuclear weapon policy. The debates can help us understand not only Chinese nuclear strategy today but also the future trend of that strategy.

There are three major schools of thought present in the debates. The first school considers that minimum nuclear deterrence represents the nature of Chinese nuclear strategy. The second school believes that Chinese nuclear strategy focuses more on countering nuclear coercion. The third school pays

attention to the deterrent effects of nuclear weapons against conventional war. The advocates of the three schools all believe that their theories are most useful for China and should guide China's development of future nuclear strategy.

The first school (school of minimum deterrence) considers that deterring nuclear attack is the only appropriate role of nuclear weapons.[1] It includes four major arguments: (1) nuclear attack is a major nuclear threat to China; (2) China should deter nuclear attack with its nuclear weapons; (3) China should deter only nuclear attack with its nuclear weapons; and (4) a small amount of retaliatory nuclear weapons (much smaller than the so called McNamara Criterion)[2] are enough to deter a nuclear attack. The school suggests that China should modernize its nuclear force to raise its reliability, safety, survivability, and penetration capability against missile defense. The school does not suggest a big nuclear force in China (although China can afford a large one) because it is unnecessary to achieve these objectives.

The theory of this school can also be used to assess some more complicated details in future nuclear policy. For example, deploying multiple independently-targeting reentry vehicles (MIRVs) on land-based nuclear missiles may not be a good idea for China as this step would add more costs to the survivability and less benefits to the penetration capability of these missiles.[3] The school's theory leaves open the question of whether China should move toward a higher level of nuclear alert. If the theory of the minimum deterrence school becomes the dominant guideline in China in the future, significant growth in China's nuclear force will be unlikely unless some new military approaches (e.g., missile defense) in other nuclear armed countries would become very efficient in negating China's small nuclear deterrent.

The second school (school of counter nuclear coercion) believes that the role of nuclear weapons for China is to counter nuclear coercion.[4] It includes four major arguments: (1) nuclear coercion is a much more realistic threat to China than nuclear attack; (2) the major purpose of Chinese nuclear weapons

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[1] The arguments about minimum nuclear deterrence in Chinese nuclear policy, see, Li Bin, "China's Nuclear Disarmament Policy", in Harold A. Feiveson ed., "The Nuclear Turning Point, A Blueprint for Deep Cuts and De-alerting of Nuclear Weapons," Brookings Institution Press, Washington, D.C., 1999, pp.325-332; and Sun Xiangli, "China's Nuclear Strategy: Nature and Characteristics," *World Economics and Politics*, No 9, 2006. pp. 23-28. (孙向丽，"中国核战略性质与特点分析"，《世界经济与政治》，2006年第9期。23-28页。)

[2] McNamara Criterion is the number of nuclear weapons that can generate unacceptable damage in retaliatory nuclear strike (assured destruction) and creditably deter nuclear attack. The number is estimated as several hundred nuclear weapons with yield of million-ton TNT equivalent. See for example, Harold A. Feiveson ed., "The Nuclear Turning Point, A Blueprint for Deep Cuts and De-alerting of Nuclear Weapons," Brookings Institution Press, Washington, D.C., 1999. p. 52.

[3] MIRVs may add cost of the survivability of land-based nuclear missiles due to various reasons, for example, the mobility of a nuclear missile may be reduced if the payload is increased by carrying more than one warhead. MIRVs make missile defense more difficult, but the task could be done by much cheaper decoy warheads rather than real warheads. See, Andrew Sessler, et al., "Countermeasures: A Technical Evaluation of the Operational Effectiveness of the Planned U.S. National Missile Defense System," MIT/Union of Concerned Scientists, April 2000. So the benefits of MIRVs for countering missile defense are very limited.

[4] It has been believed that China's nuclear strategy is counter nuclear coercion（反核威慑）for a long time. Wu Zhan is probably the first scholar who mentioned the concept in publicly available publication. See Wu Zhan, "Nuclear Deterrence," *American Studies*, Vol. 2, No. 1, 1988. pp. 35-49. (吴展，"核威慑"，《美国研究》，1988年第1期。35-49页。) The author used to be part of the school of minimum deterrence. He changed to the second school in the early 2000s. See, Li Bin, "Identifying China's Nuclear Strategy," *World Economics and Politics*, No 9, 2006. pp. 16-22. (李彬，"中国核战略辨析"，《世界经济与政治》，2006年第9期。16-22页。) Xia Liping, however, believes that China had a nuclear strategy of counter nuclear coercion and the strategy was changed into minimum deterrence when China developed some long range retaliatory capability. See, Xia Liping, "On the Structure and Evolution of China's Nuclear Strategy," *Journal of Contemporary Asia Pacific Studies*, No. 4, 2010. pp. 113-127.（夏立平, "论中国核战略的演进与构成", 《当代亚太》2010年第4 期, 第113-127 页。）

should be to counter nuclear coercion; (3) a small amount of retaliatory nuclear weapons are enough to counter nuclear coercion; and (4) for the purpose of counter coercion, nuclear weapons can be off alert. The idea of "counter coercion" is to deny the effects of nuclear coercion rather than stopping any coercive signals from the enemy.

The school has a much longer history than the school of minimum deterrence and the two schools agree with each other on almost all detailed nuclear force development issues. For example, China should modernize its nuclear force to improve survivability, should maintain the small size of the force, and should not add complicated systems like MIRVs to add burdens to survivability. However, in contrast to the first school, the big difference is that the counter coercion school suggests China should maintain its nuclear weapons off alert in peacetime. The reason is that nuclear weapons on alert in peacetime add very little benefit for counter coercion and bring additional risk of accidental launch. If the counter coercion theory directs future Chinese nuclear strategy, the Chinese nuclear force will not grow significantly.

The third school (school of deterrence against conventional conflicts) expects to make use of the effects of Chinese nuclear weapons in deterring conventional conflicts.[5] This is not a unified school and the ideas of the school are scattered. People in the school have divergent views on the scope of conventional conflicts that should be deterred and on some other elements of deterrence.

Underlying this third school of thought is the belief that countries may be more cautious when they fight a conventional war with or confront a nuclear armed country than with a non-nuclear armed country. In other words, nuclear weapons may automatically generate some effects in deterring conventional conflicts. The advocates of the first two schools see more costs than benefits from these deterrent effects; by contrast, the advocates of the third school see more benefits than costs from these deterrent effects and suggest making use of them to help deter conventional war. In that regard, some people in the third school suggest that China should declare explicit exceptions from its No-First-Use policy to gain such deterrent effects, while some others do not have a position on this. None of the advocates of the third school argues for a large nuclear arsenal and the assumption is that a small and effective nuclear force can generate the effect of deterring conventional conflicts. If the third school becomes more influential in the future, China may invest more in the operational effectiveness of its nuclear force, for example, more deterrent patrols of nuclear submarines. But it will not significantly increase the size.

In summary, the school of counter coercion was the main thrust and was expressed in China's declared nuclear policy. It is still part of China's declared nuclear policy and an important nuclear philosophy. The school of minimum deterrence is becoming part of the declared policy today and may become more influential. By contrast, it remains to be determined whether the school of deterring conventional conflicts would become important in the future. None of the three schools suggests a large nuclear arsenal in China unless China's nuclear retaliatory force is undermined by new military approaches, for example, missile defense.

[5] See for example, Joseph Kahn, "Chinese General Threatens Use of A-Bombs if U.S. Intrudes," New York Times, July 15, 2005, http://www.nytimes.com/2005/07/15/international/asia/15china.html; and Shen Dingli, "Nuclear Deterrence in the 21st Century", *China Security*, Autumn 2005, Issue No. 1, pp.10-14.

Impact of U.S. Nuclear Policy on China – Perspective of Security Dilemma

When one country changes its military capability and another country perceives a change of military threat, the latter country will, therefore, change its own military capability as a response. The interactions sometimes lead to a competition of military buildups and the situation is referred to as a security dilemma.

U.S. strategic policy is changing in many aspects, including reassessment of threats, reduction in nuclear force, relocation of deployed nuclear weapons, and development of new strategic capabilities. The developments in U.S. strategic policy certainly change China's threat perception and China may make corresponding adjustments in its nuclear and strategic policy as responses.

The last two U.S. Nuclear Posture Reviews gave very different threat assessments for the Chinese nuclear weapon capability. According to public reports based on leaked documents, the one carried out in the Bush Administration listed China as one of seven scenarios for U.S. nuclear planning and the Taiwan Strait as one of the three nuclear contingences.[6] The recent one[7] formally published by the Obama Administration put China as a smaller nuclear threat than nuclear terrorism and nuclear proliferation. The different threat assessments about China in the two documents suggest that there is no consensus in the United States about how to view China's nuclear capability. The second document also suggests discussing strategic stability with China, which creates an opportunity for the two countries to develop constructive dialogues to manage their strategic and nuclear relations.

The United States is reducing its total nuclear force to the level of five thousand warheads[8] and its operational strategic nuclear force to the level of one thousand five hundred warheads.[9] However, the fraction of U.S. nuclear weapons targeting China has been increasing,[10] including both nuclear submarines in the Pacific Ocean and strategic bombers in Guam.[11] One nuclear submarine carries one hundred to two hundred warheads on average and any such moves significantly change the nuclear balance in East Asia. The survivability of Chinese nuclear weapons largely comes from concealment rather than from deploying a large number of systems to absorb nuclear attack. The increase of the numbers of U.S. nuclear weapons targeting China does not significantly change the retaliatory capability of the Chinese nuclear force if the Chinese weapons are not more exposed to U.S. intelligence. Politically, the U.S. relocation of its nuclear weapons toward East Asia sends a strong threatening signal to China.

The United States also is working on a missile defense capability, including missile defense deployments in the region of Northeast Asia. As China has a small nuclear retaliatory force, even a very small missile defense would be considered as a threat to deny Chinese retaliatory capability. Right now,

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[6] The reported leaked document, see, "Nuclear Posture Review [Excerpts]," http://www.stanford.edu/class/polisci211z/2.6/NPR2001leaked.pdf.

[7] U.S. Department of Defense, "Nuclear Posture Review Report," April 2010. http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf.

[8] U.S. Department of Defense, "Fact Sheet: Increasing Transparency in the U.S. Nuclear Weapons Stockpile," May 3, 2010. http://www.defense.gov/news/d20100503stockpile.pdf.

[9] "Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms," April 2010. http://www.state.gov/documents/organization/140035.pdf.

[10] Bruce Blair, "START III, Nuclear War Plans and the Cold War Mindset," The Defense Monitor, Vol XXIX Number 5, 2000. http://www.cdi.org/dm/2000/issue5/start.html.

[11] The data of the relocation of U.S. strategic nuclear weapons can be found in the serial nuclear notebooks prepared by Natural Resources Defense Council for the Bulletin of Atomic Scientists. See, for example, Natural Resources Defense Council, "U.S. nuclear forces, 2007," Bulletin of the Atomic Scientists, Vol. 63, No. 1, 2007, pp. 79-82.

the U.S. missile defense capability may still be preliminary and vulnerable to countermeasures; but it adds uncertainties for China to calculate its future need for nuclear weapons if some robust missile defense capabilities in the world are deployed.

The United States is making efforts to locate Chinese nuclear weapons. The efforts include development of space-based radar[12] and intelligence collection efforts in the South China Sea. U.S. space-based radar may be useful to track Chinese mobile missiles and U.S. intelligence on the sea may be useful to track Chinese nuclear submarines. If the precise locations of Chinese nuclear weapons are uncovered by these new efforts of U.S. intelligence, it would force China to think about revising its strategy of concealment and instead to rely more on quick launch. The quick launch idea could change China's current off-alert strategy.

The United States is considering the development of global conventional precise strike capability. If the United States goes along this line and the capability eventually becomes effective against nuclear targets, it would put China in a dilemma about its No-First-Use policy.

In summary, the development of U.S. nuclear policy may impact China in both positive and negative ways. The new emphasis on strategic stability in the 2010 NPR and the reduction in deployed U.S. strategic nuclear forces send positive signals to China and may encourage constructive interactions between the two countries. Some other developments, including missile defense, global conventional strike, the increase of U.S. nuclear targets in China, and intelligence aiming at identifying the locations of Chinese nuclear weapons may raise China's threat perception, add structural insecurity or destabilizing elements, and therefore, lead to negative interactions between the two countries. Some efforts are needed to avoid the security dilemma between the two counties in the nuclear area.

Impact of U.S. Nuclear Policy on China – Perspective of Demonstration Effect

Now China and United States do not view each other as deadly enemies, although they have security concerns about each other. The interactions between their military developments may not always be tit-for-tat. From the Chinese perspective, U.S. military development also represents a model of future advancement of military technology. Even more than with the security dilemma, U.S. nuclear policy impacts China largely through the demonstration effect.

A lesson China learned from its experiences being invaded by western powers over one and half centuries is that China would be beaten up if its military technology were much behind others. Since then, China has made a major effort to narrow the gap between the military technologies of China and the developed powers.

When the United States began its new missile defense project in the early 1980s, China realized that the Cultural Revolution had disturbed its effort in catching up with the developed countries and it launched Project 863 in March 1986 to promote scientific research in China. Project 863 includes work to understand U.S. missile defense. It was not China's purpose to build a Chinese missile defense to counter

[12] The development of space radar, see, Space Radar Integrated Program Office, "Fact Sheet: Space Radar," Posted 2/23/2011, http://www.losangeles.af.mil/library/factsheets/factsheet.asp?id=5308. The implication for China, see, Li Bin, "Tracking Chinese Strategic Mobile Missiles," Science & Global Security, Vol.15, No.1, 2007, pp.1-30.

a new U.S. threat for two reasons: (1) the United States was viewed as a friend rather than an enemy by China in 1980s; (2) it makes very little sense for China to build a missile defense to counter a big U.S. offensive nuclear force. Instead, the purpose was to understand this new development of military science and to avoid scientific surprise. U.S. missile defense development demonstrates that the technology for long range laser weapons is far from ready, while hit-to-kill technology is becoming workable today. China followed the same path of development and tested hit-to-kill technology in recent years.

When the United States has considered new projects for nuclear weapons in recent years, e.g., nuclear penetration warheads, such projects have always triggered discussions in China.[13] The Chinese worries are more about uncertainties in nuclear weapon development created by the new projects rather than the threat from possible new weapons.

In recent years, some of the arguments in China for changing its No-First-Use policy were induced by comments by some Americans. One such American comment was that the Chinese No-First-Use commitment is not credible as China would have to use its nuclear weapons if it were defeated by the United States in the Taiwan Strait. This American thinking was converted into its Chinese version, that is, China has to rely on nuclear deterrence against U.S. conventional involvement in the Taiwan Strait.

A seemingly hidden American nuclear philosophy is that U.S. nuclear weapons are a symbol of its leadership in the world, though the recent Nuclear Posture Review indicated that Washington seeks to reduce the prominence of nuclear weapons in U.S. strategy. For this reason, the United States wants to keep more nuclear weapons than Russia and many more than the other three nuclear weapon states. If the United States keeps using its nuclear arsenal to symbolize its status, a question is why China shouldn't do the same. China is rising in many aspects, while it still keeps a very small nuclear arsenal. If the Chinese security community eventually adopts the American nuclear philosophy and wants a nuclear arsenal compatible to its status in the world, it would become a new argument in China in the future for a larger nuclear force.

Toward A Stable Nuclear Relationship

U.S. nuclear policy may influence China in two ways. The first way is to change China's threat perception and nuclear policy. The second way is to demonstrate a model for China in nuclear development. Although there have been some debates in China about the roles of nuclear weapons, it is unlikely that China would significantly modify its nuclear doctrine. Some U.S. strategic developments including missile defense, global conventional strike capability and new intelligence locating Chinese nuclear weapons, pose new pressure on China. It seems that China is still able to manage the pressure with a small nuclear force if China chooses smart countermeasures. Some U.S. nuclear projects and philosophy heighten China's anxiety about its technical gap behind advanced countries. Some U.S. experiences may teach China not to make similar mistakes (for example, develop a large variety of nuclear weapons) and some others may encourage China to do more with its nuclear force.

[13] See, for example, Liu Huaqiu, "The Pros and Cons of U.S. Project of Nuclear Penetration Warhead," *Modern Military*, pp.26-28.（刘华秋，"美国核钻地弹计划的来龙去脉"，《现代军事》，2006年第1期。26-28页。）

While China learns from the United States in some aspects, a comparison with the United States also should rebuild confidence in China's Oriental wisdom, including its special nuclear philosophy. Nuclear weapons are not as useful and important as believed by the Americans in the Cold War. China does not need nuclear weapons to symbolize its national status. It is wise for China to develop moderate and asymmetrical countermeasures to respond to U.S. development of missile defense, new efforts in intelligence, and conventional strike capability. If China carefully manages its nuclear force, it does not have to increase its size, while the force can still be able to meet China's security need in the next two decades.

When the United States develops new strategic and nuclear capabilities, for example, missile defense, it sends threatening signals to China and may force China to develop more nuclear weapons to respond. However, if the United States carefully manages the configurations of its new strategic and nuclear capabilities, it could avoid some threatening effects on China and therefore, mitigate the security dilemma between the two countries. The United States should understand that when it pursues its nuclear philosophy and develops new strategic technologies, it is a model for China. By contrast, President Obama's pledge of support for a nuclear weapon free world initiated new thinking in U.S. nuclear philosophy. When the United States applies that new thinking in policy practice, it will generate positive demonstration effects.

Developments in China's nuclear policy and nuclear force always trigger negative comments in the American news media and in general American security circles, no matter what is the direction of the development. However, some American professional nuclear experts are very different on this. For instance, in discussions during the Joint Study workshop in Beijing in July 2012 of the security implications of China's development of MIRVs, several American experts presented a professional and pragmatic view of the security implications of China's taking that step. They argued that the key question concerns the implications for the overall survivability of China's retaliatory capability. This way of discussion is very constructive. If the two countries engage each other in this way, no matter at the governmental level or in a track one point five format, it is beneficial to the stability of the nuclear relationship between the two countries.

It is time for China and United States to develop healthy and stable nuclear relations through constructive dialogues. Strategic stability, meaning that the nuclear force structures of two countries do not encourage nuclear attack, is a useful principle for the dialogues. Some more efforts need to be made to reduce threat perceptions in the two countries about each other and to drive domestic debates toward positive interactions.

It will be natural to move from the U.S.-China nuclear dialogues to consultations among the five nuclear weapon states. The discussions among the five states on a nuclear disarmament glossary now would develop a basis for substantial nuclear disarmament negotiations among them in the future. However, the launch of such negotiations needs to await not only further quantitative nuclear reductions in the United States and Russia but also an extension of the scope of reductions from only deployed warheads to include all warheads in their nuclear arsenals.

U.S.-China Cooperation in the Nuclear Realm: From Non-Proliferation to Arms Control

Dr. Eric Heginbotham

U.S.-Chinese nuclear dynamics and the potential for collaboration on nuclear issues are timely topics. Global non-proliferation efforts have made modest headway in recent years, with many states' signing of International Atomic Energy Agency (IAEA) Additional Protocols for enhanced nuclear safeguards and moves by the United States and Russia to reduce their nuclear arsenals. Washington and Beijing also share a rocky partnership in the Six-Party Talks. And increasingly, the two cooperate on nuclear materials security issues.

However, future prospects are threatened by emergent nuclear dynamics. Of particular note are the nested and overlapping security dynamics between the United States and Russia, China and the United States, China and India, and India and Pakistan. Potentially exacerbating these already complex relationships is the possibility that new types of systems that further increase crisis instability and mutual insecurity will be deployed (or deployed in larger numbers). Realizing positive, cooperative outcomes on non-proliferation will therefore require parallel efforts to avoid destabilizing nuclear dynamics between existing nuclear states (to include China and the United States).

Cooperation in Support of the Non-Proliferation Regime

China and the United States have a mixed record of cooperation on non-proliferation issues.[1] On a variety of multilateral and technical issues, they have found common ground and established positive precedents, while national interests have obstructed cooperation on several specific problem areas.

Washington and Beijing have partnered on a variety of multilateral initiatives, such as the indefinite extension of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1995, associated IAEA technical agreements, the Comprehensive Nuclear Test Ban Treaty (CTBT), which both signed in 1996 (though neither has yet ratified), the Nuclear Security Summit process, and the Nuclear Supplier Group (NSG). And while both sides often have different interests within Asia, they have nevertheless been able to cooperate in some areas, such as the establishment of the Six-Party Talks mechanism in 2003.

More recently, new initiatives have focused on nuclear security issues. Cooperation has largely taken the form of U.S. technical assistance, with the return on investment magnified by Chinese efforts to use the expertise gained in training administrators from other Asian states. To take but one example, the National Nuclear Security Administration is working with the China Atomic Energy Authority to establish a Center of Excellence on Nuclear Security in China, which will ultimately provide training courses for specialists throughout Asia.[2]

Washington and Beijing take similar positions on at least some recent multilateral efforts to strengthen the NPT regime. One example is the two countries' support for the universal, but voluntary,

[1] For details on some of the historical achievements, see Evan S. Medeiros, "Rebuilding Bilateral Consensus: Assessing U.S.-China Arms Control and Nonproliferation Achievements," *Nonproliferation Review*, Spring 2001.

[2] For more on this agreement, "U.S., China Sign Agreement to Establish Center of Excellence on Nuclear Security," National Nuclear Security Administration, January 19, 2001.

adoption of the 1997 model Additional Protocol.[3] China's commitment to universal adoption of the Additional Protocol will provide moral weight to those in the non-aligned community who might otherwise more easily view the Additional Protocol as a Western imposition. For the many Asian states with minimal nuclear infrastructure, where non-accession is driven more by the administrative and financial burdens imposed by the agreement, China is now in a stronger position to assist them overcome these hurdles.[4]

States that have more substantial nuclear activity but oppose the Additional Protocols for ideological or national interest reasons present a more challenging test case for U.S.-China cooperation. In the case of Brazil and Argentina, for example, Washington and Beijing could use their deep economic and political ties with each to help bring them to the table. However, Washington and Beijing have sparred for political-economic advantage in their relations with these states, and it is unclear whether China and the United States will set aside their narrower national interests to cooperate.[5]

Divergence over Pakistan presents even greater challenges. By supplying nuclear reactors to Pakistan, which is not under full-scope safeguards and is pursuing nuclear weapons programs, many observers argue that China is in violation of guidelines for transfers by the NSG. Unlike in the case of the U.S.-India nuclear deal, no waiver was sought from the NSG, most likely because gaining such a waiver would have been far more difficult for Pakistan. China's opposition to the U.S.-India nuclear deal may help explain why Beijing moved forward even without a waiver. At the same time, the nuclear deal with India may also explain why the United States itself was reluctant to make a major issue of the Chinese deal with Pakistan. Had it done so, the appearance of favoritism towards India would have turned opinion in Pakistan more sharply against the United States.

Both China and the United States have made strategic decisions damaging to non-proliferation in South Asia. Nevertheless, the United States and China share many common interests in South Asia (and in nearby Afghanistan), and these common interests are increasing in relative importance. The risks of proliferation, especially from Pakistan, and the danger that local conflicts could lead to a nuclear exchange are arguably higher in South Asia than anywhere else. At a minimum, Washington and Beijing could work together productively on increasing communication—and confidence—between India and Pakistan on nuclear issues. In the early stages, this effort would largely occur in track 2 forums and expand on efforts undertaken by U.S. scholars to bring together experts and, potentially, retired officers and officials from both sides to discuss crisis communications; avoiding accidental nuclear launches and war; and command, control, and intelligence issues. Beyond this, the two could work together to ensure that India adheres to its commitments under its Additional Protocol and that Pakistan works towards signing such a document.

[3] Work on what became the model Additional Protocol was begun in 1993 to constrain illicit attempts by NPT member states from pursuing nuclear weapons programs. Iraqi and North Korean secret nuclear weapons programs motivated the effort. For the terms of the model Additional Protocol, labeled INFCIRC/540, see www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf.

[4] Among the ASEAN states, those that have not signed an Additional Protocol include Brunei, Cambodia, and Laos.

[5] Washington may give greater precedence to winning over Brazilian acquiescence for sanctions against Iran than it does to winning a Brazilian signature on an Additional Protocol, while Beijing may give greater weight to wooing a fellow BRICs member.

Because of their active rivalry with each other, as well as the fact that neither is yet satisfied with the scope or composition of its nuclear arsenal, India and Pakistan are among the largest obstacles to multilateral agreements currently under consideration (e.g., Fissile Material Cutoff Treaty or FMCT and the CTBT). However, many of the nuclear challenges related to South Asia are embedded in a larger international dynamic that also includes the United States, Russia, and China. Addressing this larger multilateral problem is the topic to which we turn for the remainder of this paper.

Threats to Future Reductions and Cooperation

Although Washington and Beijing have pursued some cooperative activities, there are serious threats to bilateral cooperation in the longer term. Many of these relate to nuclear security dilemmas and rivalries between existing nuclear states. Although security dilemmas are certainly not a new phenomenon, a tightly interconnected nuclear dynamic between multiple, non-aligned powers constitutes a highly problematic historical first.[6] Emergent dynamics among the existing nuclear powers could undermine broader non-proliferation efforts. In this context, the parties should consider a multilateral dialogue on arms control earlier, rather than later. This threat of a larger arms race beginning (and/or arms reductions ending) emanates from two sources: the deployment of potentially destabilizing systems and the growing complexity of interactions between multiple parties.

Potentially Destabilizing Systems

The first challenge is the possible introduction of destabilizing systems, or their deployment on a larger scale. Most prominently, these systems include ballistic missile defenses and Multiple-Independently Re-Targetable Vehicles (MIRVs), both of which were regarded as destabilizing during the Cold War and were therefore the subject of arms control between the United States and former Soviet Union. The specific capabilities and configurations of the deployed systems will ultimately determine whether or not they are destabilizing in today's context.

U.S. ballistic missile defenses would not necessarily be destabilizing if they could not be used against Chinese missiles (given technical limitations). But if they could be, even small-scale defenses may undermine Chinese confidence in their second strike capability. Faced with the potential that only a handful of its strategic weapons capable of hitting the United States might survive a U.S. first strike, China will have incentives to produce more warheads, improve the survivability of its warheads, or both. And the structural incentives for both sides to consider some type of first use in a crisis would arguably be higher than they would be if China's second strike capability were more secure.

The impact of MIRV deployment would similarly depend on modalities. MIRVing land-based ICBMs would increase the state's offensive power and could threaten the survivability of its adversaries' forces without appreciably increasing its own first strike survivability. MIRVed missiles would themselves remain highly vulnerable and could increase the incentives for others to strike them in a crisis (since a large number of warheads might be eliminated with a relatively small number of attacking warheads). If, however, MIRVs were mounted on SLBMs, especially ones with intercontinental ranges,

[6] Although there were five nuclear powers by 1964, the U.S. and Soviet inventories were orders of magnitude larger than the others, two of the other powers were allied with the United States, and the fifth, China, had an extremely small inventory. Although the U.S. and Russian inventories remain larger than all others, possible future reductions, combined with ongoing current and possibly future increases by some of the others, could narrow or eliminate this gap.

then they might theoretically enhance stability, since submarines at sea are regarded as relatively secure nuclear platforms. Putting MIRVs on SLBMs might therefore produce a large increase in the number of strategic systems expected to survive a first strike. However, in the U.S.-China context, the MIRVing of SLBMs may produce less benefit to China or structural stability, given that Chinese SSBNs are significantly more vulnerable than Soviet boomers were during the Cold War.

Admittedly, the Asian situation differs from that of the Cold War in other ways, and the lessons from Cold War may be difficult to apply strictly to the Asian context. Nevertheless, as Chinese and Indian nuclear forces equalize and Intelligence, Surveillance, and Reconnaissance (ISR) capabilities mature, the survivability of second strike forces and calculations about structural stability may become increasingly important to the Sino-Indian relationship, as well as to the U.S.-China one. Linking Chinese restraint in pursuing MIRVs and U.S. restraint in the field of strategic ASW might offer one interesting path for strategic dialogue between the two. From a unilateral Chinese perspective, raising the alert level of its forces, rather than MIRVing warheads, may improve its second strike prospects more, and with fewer negative secondary effects (assuming that security and command and control issues could be addressed). Perhaps the most important point with regard to MIRVs, however, is that their deployment and the consequent rapid increase in warhead numbers that would follow could dissuade the United States and Russia from any further bilateral efforts at arms reductions.

An Asian strategic dialogue also could discuss China's concerns about use of U.S. conventional prompt global strike capabilities against Chinese strategic assets, as well as about U.S. efforts to shadow and record its SSBNs. U.S. strategists worry about the Chinese use of dual-use systems (capable of both nuclear and conventional employment) in conventional operations, as well as about Chinese thinking on anti-satellite weapons and uses.

Multilateral Dynamics

A second element of Asian nuclear politics that could produce a more active multilateral arms race is the nested and highly interconnected nature of Asian nuclear security dynamics. Even absent open security competition, there is a high degree of mutual structural insecurity[7] in the relations between states at various levels. U.S. and Russian nuclear planners base their calculations largely on the maintenance of a sufficient second strike capability, measured against the possibility of a surprise attack by the other. China presumably measures sufficiency according to similar logic (if less explicitly articulated) against surprise by either the United States or Russia.

Although India is equally reluctant to discuss any standard measure of sufficiency, many Indian strategic thinkers appear to consider equality with China as a goal.[8] Indeed, when India became an overt

[7] I have used the phrase structural insecurity here to emphasize the fact that many of the current dynamics are driven more by concerns about capabilities than they are by concerns about intentions. The United States and Russia do not worry that the other would plan a nuclear war against itself, but strategic planners in those countries nevertheless consider what sorts of incentive structures might lead to escalation should the two of them ever find themselves in conflict.

[8] Because there is no mention of specific threats in official, public Indian strategic documents, there is much debate on the program's motivations and standards. Most observers agree, however, that whether deterrence against China is primary or secondary motive, it is certainly a significant planning factor. See, for example, George Perkovich, "The Nuclear and Security Balance," in Francine R. Frankel and Harry Harding, *The India-China Relationship: What the United States Needs to Know* (New York: Columbia University Press, 2004); or Manpreet Sethi, "India's Nuclear Strategy: An Assessment," in Kapil Kak, ed., *Comprehensive Security for an Emerging India* (New Delhi: Center for Air Power Studies, 2010).

nuclear power in 1998, Prime Minister Atal Vajpayee, Minister of Defense George Fernandes, and Vajpayee confidante (and soon to be Minister of External Affairs) Jaswant Singh all pointed to a latent Chinese nuclear threat alongside that of Pakistan in justifying the move.[9] Although some of those statements may have been made for an external audience, popular echoes of that language continue to be heard. A spokesperson for Indian Army's Eastern Command suggested with the Agni III missile (range 3,500 km), "India can even strike Shanghai…. This missile would help India form a credible defense from China."[10] And India's longest-range ballistic missile, the Agni V (range 5,000 km) has been widely hailed in the Indian media as India's "China Killer."[11]

Former Pakistan Prime Minister Zulfiqar Ali Bhutto famously declared that "if India develops nuclear weapons, Pakistan will eat grass or leaves, even go hungry" in order to develop one of its own.[12] At a minimum, Pakistan appears committed to matching India weapon-for-weapon, even at the risk of national bankruptcy. Arguably, with two new plutonium reactors in progress, Pakistan may even be leading India. Given the growing gap in conventional capabilities, Islamabad views nuclear weapons as the ultimate equalizer.

As a more powerful state than India and the victor in the 1962 war, China has paid far less attention to security developments in India than India has to China. Many Chinese media outlets and commentators have greeted Indian strategic weapons developments with something close to derision.[13] Yet given the speed of Indian advances in the nuclear field, as well as New Delhi's relationship with Washington, it is unlikely that China will ignore India's strategic programs for long. Reports from Xinhua quote Union of Concerned Scientists bulletins on the rapid growth in Indian capabilities.[14] Although China has been willing to maintain a minimum deterrent against the vastly larger inventories of the former superpowers, it is unclear whether it would it would accept losing its lead against India.

Within this interconnected structure of security concerns the onus is placed on Washington and Moscow to reduce the incentives for nuclear acquisitions among the rest. But as the United States and Russia contemplate future cuts, continued additions to the Chinese and Indian inventories will loom large in their calculations. This is particularly true in the context of possible moves to MIRV warheads by China, India, or both—a measure which could dramatically increase the offensive potential of those states. Moreover, even without Russia and the United States, the security dilemma and its attendant problems could nevertheless result in pressures among New Delhi, Islamabad, and Beijing for more robust nuclear forces.

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[9] Fernandes went so far as to suggest that China was India's "potential threat number one." See Strobe Talbott, *Engaging India: Diplomacy, Democracy, and the Bomb* (Washington, DC: The Brookings Institution, 2004) 53, and 82-84; and "India's New Defense Chief Sees Chinese Military Threat," *New York Times*, May 5, 1998.

[10] "Agni-III Not Targeted at any Particular Country: Army," *India Today*, May 8, 2008.

[11] See, for example, "Agni-V, India's China Killer," *Deccan Herald*, August 13, 2012.

[12] Adrian Levy and Catherine Scott-Clark, Deception: Pakistan, The United States, and the Secret Trade in Nuclear Weapons (Walker & Company, New York: 2007).

[13] "Chinese Media Mock India's 'Dwarf' Missile," *BBC News*, April 20, 2012.

[14] 美知名核科学家称印度有近百枚核弹头 ["Renown U.S. Nuclear Scientists Say India has Close to 100 Warheads"], Xinhua, July 27, 2012.

Starting a Multilateral Arms Control Dialogue

Despite the commitment of the NPT nuclear weapons states to eliminate nuclear weapons, international cooperation on non-proliferation has historically proceeded largely on a separate track from the nuclear dynamics among established nuclear powers. However, the intensification of nuclear concerns between existing nuclear states described above could challenge the two-track approach in five significant ways.

First, the dynamics involve two non-signatories to the NPT (India and Pakistan), and their ability to develop substantial nuclear arsenals already provides a perceived example (however mistaken) to others of the prestige and respect that a successful escape from the NPT regime could bring. Second, if the current momentum towards U.S.-Russian arms reductions is reversed, it will further increase the gap between international reality and the promises made by the nuclear powers under the NPT. Third, increasingly connected action-reaction dynamics between Asian nuclear actors could produce indefinite delays to progress on the FMCT, CTBT, and other international agreements, as the nuclear states of Asia (including the United States and Russia) hedge their bets against a full-blown arms race. Fourth, further expansion in the arsenals of existing nuclear states may prompt non-nuclear states in the region—especially South Korea and Japan—to reconsider their options. Finally, any intensification of the action-reaction dynamics that can already be seen between China and the United States could undermine whatever trust and cooperative impulses exist between the two (at least in the nuclear arena).

The world may be close to a tipping point, in which reductions in nuclear weapons numbers by the United States and Russia will no longer offset nuclear weapons increases by others. Given the stakes involved, a case could be made that a multilateral arms control dialogue should begin, ideally with the involvement of Russia, the United States, China, India, and Pakistan, and held under "P-5 plus" auspices. A number of participants in this joint study project have rightly observed that the conditions are not yet ripe for formal arms control negotiations. Although Chinese defense intellectuals show increased interest in studying specific arms control issues (e.g., verification methodology, etc.), Beijing is not yet ready to participate. Congressional and other domestic considerations constrain leaders in Washington. And the relatively weakest powers, especially Pakistan and India, will not want to be locked into positions of inferiority.

Given these challenges, my emphasis is on "multilateral" and "dialogue," rather than on formal arms control negotiation. Some objections to arms control may be answered fairly easily in the course of those discussions. Arms control need not lock the weaker players into positions of inferiority. Indeed, the most important topics may not concern weapons numbers. If the world's nuclear powers design their nuclear forces in ways that produce greater crisis stability, the larger nuclear powers will be more willing and able to reach agreements on continuing disproportionate cuts to their own nuclear stockpiles.

More to the point, an ongoing, formalized dialogue could identify areas where unilateral, bilateral, or mutual restraint might prevent full-scale arms racing. It also could begin to build (or rebuild) an understanding of nuclear stability issues (to include both crisis stability and arms race stability). It could provide a useful international check on the thinking of nuclear strategists and planners from all sides, one that is difficult to achieve in bilateral talks. And it could begin to discuss what kinds of controls future formal negotiations might address.

Arms control might be addressed through a number of different forums and formats, and preliminary dialogues should presumably mirror these. A "P-5 plus 2" (India and Pakistan) forum might arguably best serve to address issues specific to the Asian nuclear powers. This would have the benefit of taking other difficult problems, such as the North Korean nuclear issue (which could continue to be addressed through a six-party format) and Middle East nuclear questions, off the table, while drawing on the substantial experience of the P-5 group.[15] Within this P-5+2 group, the focus would be on how the United States, Russia, China, India, and Pakistan might agree to structure or limit their nuclear forces in ways that buttress stability and are most consistent with the FMCT, CTBT, and progress towards the global reduction of nuclear weapons.

Obviously, this need not and should not displace other existing multilateral or bilateral discussions. The United States and China clearly have much to discuss bilaterally. In the bilateral context, dialogue should focus on areas where agreement might be reached most easily, rather than on comprehensive solutions. But by introducing considerations raised in the multilateral context, a multilateral arms control dialogue might spotlight those areas of the bilateral strategic relationship that will have the most spillover into broader regional security dynamics.

Conclusions

There are a number of areas where the United States and China can pursue cooperative approaches to arms control. Most of the easiest involve regional and global non-proliferation efforts, and Washington and Beijing are already cooperating in a number of areas. However, emerging security dynamics between the existing nuclear powers in Asia—including Russia, the United States, China, India, and Pakistan—have the potential to undermine non-proliferation, as well as cooperative efforts between the nuclear states (including cooperation between the United States and China).

This situation puts U.S. and Chinese strategic imagination and flexibility to a severe test. Can the two work together and with others to restrain their own strategic behavior? Can they consider limiting the future development or deployment of systems that currently have substantial bureaucratic and political momentum? In the U.S. case, this might involve more significant and self-conscious limits to missile defense initiatives, while in the Chinese case, it might mean not deploying MIRVed warheads. To date, the United States and China have taken a relatively relaxed attitude in discussing their own nuclear relationship, even as they work together in some areas to prevent the spread of nuclear weapons to other states. Moving forward, it will be in the interest of both sides to begin more serious arms control discussions and to resist the appeals of those on both sides who will urge their respective national leaderships to take less cooperative approaches.

[15] The P-5 group has either had a leading or participatory role in a large number of initiatives. In March 2011, the P-5 met to discuss nuclear transparency issues and arms control verification issues. In October 2011, the P-5 states cosponsored a UN resolution on nuclear weapons free zones and met in November 2011 to discuss adherence to a Southeast Asian Nuclear Weapons Free Zone (SEANWFZ). The P-5 plus Germany are currently in discussions with Iran over its nuclear weapons programs. As these various examples suggest, the P-5 format is quite flexible and can be used to address a range of contentious and/or cooperative issues.

Exploring the Role of U.S.-China Mutual and Cooperative Strategic Restraint[1]

Dr. Lewis A. Dunn

As the 21st century unfolds, building habits of cooperation is one of the most important challenges facing the United States and China. Cooperation is needed to assure each country's own security and economic well-being as well as to meet successfully global threats. However, there are many obstacles to building a stable and cooperative longer-term U.S.-China relationship. Prominent obstacles include differences over Taiwan, lack of agreement on each country's role in Asia, a U.S. belief that China manipulates its economic dealings with other countries, and mutual uncertainties about each other's intentions, plans, programs, and posture across a spectrum of military domains from nuclear weapons and missile defenses to space and cyber weaponry.

Many inter-related approaches are needed build toward a cooperative U.S.-China strategic relationship. This paper briefly explores one concept: the role of mutual and cooperative strategic restraint in providing reassurance and lessening military uncertainties. Even if the time is not ripe for major breakthroughs in this area, it is timely to begin a more extensive discussion of this concept.[2]

Today's Mutual Military Uncertainties—and the Need for Mutual Reassurance

In both Beijing and Washington, mutual military uncertainties stand out. Focused on U.S. deployments of missile defenses and assessment of conventional prompt global strike capabilities, Chinese officials and experts express concerns that the United States is seeking a capability to neutralize China's nuclear deterrent capability. These concerns persist despite briefings on U.S. programs and in the 2010 Nuclear Posture Review, the stated U.S. commitment to pursuing strategic stability with China.[3] American officials and experts remain uncertain about China's longer-term nuclear modernization and about whether U.S.-Russian nuclear reductions provide an incentive to build-up of China's nuclear capabilities. Repeated affirmations of China's interest in only a limited nuclear deterrent and of no intention to "sprint to parity" have not resolved U.S. concerns. In both Washington and Beijing, there also are mutual uncertainties about each other's acquisition of capabilities to engage in space and cyber warfare. Here, each country's vulnerability to space and cyber-attack by the other in the event of confrontation or conflict drive the underlying concerns.

At one level, such U.S-China mutual uncertainties about each country's activities in the strategic offenses-defenses, space, and cyber domains are a cause for joint concern because they could fuel competitive and economically wasteful military procurements as each country responds to a perceived threat from the other. At another level, these mutual uncertainties hinder efforts to address the structural challenges to a stable strategic relationship between the United States and China. They increase as well

[1] The views herein are those of the author not necessarily those of Science Applications International Corporation or any of its sponsoring organizations.

[2] This paper draws on several years of discussions of the concept of mutual strategic restraint with Chinese experts and retired officials. Its argument parallels but also differs in some respects from the recent and more comprehensive analysis of U.S.-China strategic restraint in David C. Gompert and Phillip C. Saunders, The Paradox of Power: Sino-American Strategic Restraint in an Age of Vulnerability, The Center for the Study of Chinese Military Affairs, Institute for National Strategic Studies, National Defense University (Washington, D.C., 2011).

[3] One purpose of the reference in the 2010 Nuclear Posture Review to a dialogue on strategic stability with China appears to have been indirectly to reassure China about U.S. intentions vis-à-vis that country's nuclear deterrent.

the risk that a future military crisis or confrontation could result in a military clash or escalating conflict.[4] At a still different level, mutual military uncertainties contribute to a broader lack of political confidence. As such, they reinforce old differences over Taiwan as well as newer uncertainties over each country's self-defined role in Asia. The result is to make it even harder to build a desirable longer-term cooperative political-economic relationship between the United States and China—and to work cooperatively to meet global security threats.

An overall strategy of mutual reassurance is needed to lessen these mutual uncertainties of today's relationship. This is not a new idea, having been put forward explicitly by U.S. officials early in the Obama Administration but then fading from view. By building confidence, mutual reassurance also can make it easier to address the more structural challenges to strategic stability, especially linked to strategic vulnerabilities. Most broadly, there likely will be a two-way interaction between efforts at mutual reassurance of military intentions and capabilities and efforts to address the overarching political-strategic differences between the two countries.[5]

Toward Greater Mutual Reassurance—Bridging Differences on the Concept of Transparency

Dialogue is the main approach being pursued today for mutual reassurance. Official-level strategic dialogue remains limited. Over the past several years, however, there has been a steady strengthening in the participation, analytic rigor, and frankness of exchanges in the ongoing Track 1 ½ and Track 2 strategic dialogue. Other papers in this "joint study project" discuss promising opportunities to strengthen ongoing dialogue as a means to reassurance.[6]

Incremental pursuit of greater military transparency across the strategic domains as a means of mutual reassurance is a more controversial and difficult area. Calls by U.S. experts for increased transparency have usually been met by considerable Chinese caution and reluctance to go down this path. In explaining such reluctance, explicit references sometimes are made by Chinese experts to the dependence of China's nuclear forces on secrecy as the means of survivability as well as the overall asymmetrical military relationship between China and the United States. They rightly point out that the United States is not fully transparent and like all countries seeks to keep some secrets. Other Chinese experts argue that while the U.S. officials view transparency as a more "technical" matter, for China, greater transparency needs to be the by-product of greater mutual trust. Some Americans argue that this difference over transparency also is partly rooted in each country's respective strategic cultures, a point with which some but not all Chinese experts agree.[7] In that regard, U.S. thinking does tend to regard greater transparency as confidence-building step toward greater mutual trust. Plus the Cold War arms control experience has made U.S. officials and military relatively comfortable with extensive exchanges of strategic data.

Looking ahead, along with Russia, France, and the United Kingdom, China as well as the United States agreed in the Action Plan adopted by consensus at the 2010 Nuclear Non-Proliferation Treaty (NPT) Review Conference to "further enhance transparency and increase mutual confidence". Moreover,

[4] Gompert and Saunders emphasize the threat posed to both countries from their mutual vulnerability to nuclear, space, and cyber attack – and in turn, the potential role of mutual strategic restraint in reinforcing mutual deterrence.
[5] The counterpart paper to this analysis done by Dr. Wu Chunsi addresses some of the broader strategic differences in the China-U.S. relationship and puts forward some thoughts on how to reduce them.
[6] Mutual reassurance also is the topic of two other papers in this joint study, one by Linton Brooks and one by Gu Guoliang.
[7] See, for example, the discussion of transparency and culture in the paper for this joint study by Toby Dalton.

there are growing indications both in writings by Chinese experts and former officials as well as in statements in Track 1 ½ and Track 2 forums of at least some rethinking of this issue of transparency.[8] The time may be ripe, therefore, to explore ways first, in a Track 1 ½ dialogue, then more officially either between the United States and China bilaterally or in the P-5 context to begin to bridge the differences between American and Chinese thinking on transparency.

One starting point would be a frank exchange of each country's thinking and concerns on transparency. What is the relationship between strengthened political relations and steps toward transparency? What broad categories of military information are seen as too sensitive to exchange and why so? What types of transparency could serve the interests of both China and the United States? In addition, the distinction between transparency of capabilities and transparency of intention, goals, and threat perceptions as put forward by some Chinese experts, with the emphasis to be placed initially on the latter, may also be part of a way to bridge differences.[9] A different distinction would be between reciprocal and matching transparency on the one hand and reciprocal but equivalent transparency on the other hand. Traditionally, transparency has been defined by matching declarations of capabilities, by matching exchanges on planning, or by matching access to the similar sites. By contrast, reciprocal but equivalent transparency would not entail one-for-one matching declarations, exchanges, or access. Instead, it would entail a process whereby each country would choose on its own what specific information or access to provide, in which strategic domains, how to do so, at what point in the process, and in light of perceived sensitivities -- but with a commitment to the longer-term goal of a comprehensive reduction of mutual uncertainties. As long as each country judged the overall results to be broadly equivalent in providing windows into the other's strategic thinking, activities, plans, and programs, the process would continue. Over time, as the broader political-strategic relationship evolved, such a process of reciprocal but equivalent transparency could open up more and more areas.

Toward Greater Mutual Reassurance—Exploring the Role of Mutual Strategic Restraint

For both countries, treaty-based arms control is not now an attractive approach for mutual reassurance. In China, arms control is associated with the very adversarial, Cold War U.S.-Soviet relationship. In the United States, arms control has become increasingly controversial. For both countries, formal, treaty-based arms control likely would prove too inflexible, protracted, and possibly adversarial.

By contrast, the concept of less formal mutual and cooperative U.S.-China strategic restraint across the strategic offenses-defenses, space, and cyber domains may offer a more promising approach.[10] Mutual strategic restraint could serve both countries' interests, even against the backdrop of the differences that divide Beijing and Washington as well as of China's relatively weaker military position. For China, mutual restraint would help reduce the likelihood of U.S.-Chinese military competition if not confrontation that could make it harder for it to give priority to China's economic and social development. For the United States, mutual restraint also would help avoid the economic burdens of

[8] See, for example, the discussion of transparency in the papers done as part of this joint study by MG (ret.) Pan Zhenqiang and by Mr. Li Hong.

[9] In this regard, see the suggestion in the paper by Pan Zhenqiang.

[10] For a comprehensive and valuable discussion of all types of approaches to arms restraint, see Ronald F. Lehman II, "International Arms Restraint by Treaty, Law, and Policy," in John Norton Moore and Robert F. Turner (eds.), National Security Law (Durham, North Carolina: Carolina Academic Press, 2005), pp. 523-660. Mutual strategic restraint is used in this paper to refer to only one such approach.

growing competition in a time of budgetary stringency. For both countries, mutual restraint would facilitate cooperation to address global challenges of direct concern to each.

The core of mutual and cooperative strategic restraint would be agreement by the United States and China on steps that each would take to reassure the other, reduce uncertainties, and to address the specific concerns that each side has with regard to the other's strategic plans, capabilities, doctrine, and posture. Depending on specifics, commitments in both words and deeds could include pledges to limit the characteristics, numbers, and deployments of military capabilities; to limit or renounce particular military use; to provide advance notification of specific deployments; to engage in joint and cooperative military programs; and to eliminate specified capabilities. Agreement would not be reflected in a formal treaty but in parallel and reciprocal political commitments on the part of the senior-most leaders in each country. There would be no formal verification measures. As such, mutual restraint would be reminiscent of the U.S. and Soviet Presidential Nuclear Initiatives of 1991 under which Presidents George H. Bush and Mikhail Gorbachev respectively pledged to withdraw, consolidate, and destroy certain types of ground-launched and sea-based tactical nuclear weapons. However, to enhance the credibility of the undertakings made and build confidence in the overall process of strategic restraint, more limited complementary measures could be explored. Such complementary measures could include visits to sites; technical briefings; unilateral and joint measurements and experiments; provision of test information; and personnel exchanges and liaison.[11]

Pursuit of mutual and cooperative strategic restraint would need to be tailored to the asymmetrical nature of U.S.-Chinese capabilities as well as of the overall military relationship. Depending on the specifics, therefore, measures of restraint in principle might be applied asymmetrically between the two countries or entail compensating restraints across the different strategic domains as well as involve matching and symmetrical restraint.

Mutual and cooperative strategic restraint between China and the United States, moreover, would build on the unilateral restraint that both countries have and continue to show with regard to their strategic programs. From China's self-imposed limits on its nuclear weapon posture to the limits placed by the United States on it missile defense activities, there already are precedents of unilateral restraint. But their unilateral nature makes such restraints less assured and less certain as a basis for planning and making future military decisions in each country. Consider next some possible different approaches that the two countries could consider as ways ahead to build on, strengthen, and enhance the predictability of strategic restraint.

Mutual and Cooperative Strategic Restraint—Thinking About Possible Ways Ahead

Explore the Concept

A starting point would be to explore the concept of mutual and cooperative strategic restraint, first at the Track 1 ½ level and then at the official level. Such discussions would seek to familiarize each side with the concept, its elements, its pluses and minuses as viewed by each country, and the conditions

[11] Complementary measures would be one response to U.S. critics of the 1991 Presidential Nuclear Initiatives (PNIs) that have argued that Russia has followed through on its pledge to destroy the tactical nuclear weapons removed from forward deployments under the 1991 PNIs even though it did consolidate all such weapons in Russia as pledged.

needed to make possible mutual and cooperative strategic restraint. No attempt would be made at this stage to agree on specifics, let alone to initiate any negotiations on measures of restraint.

Seek Agreement on "First Principles" for Strategic Restraint

If initial discussions went well, the two countries' officials could seek to determine if agreement could be reached on first principles to guide a process of restraint. Among some of those first principles would be that: mutual strategic uncertainties in the strategic offenses-defenses, space, and cyber domains are a cause for mutual concern and insecurity; mutual and cooperative strategic restraint could offer a useful concept to address those uncertainties and build a more stable strategic relationship between the two countries; as with other approaches to building strategic cooperation, the two countries need to take a progressive, step by step approach; though successful application of the concept requires that restraint indeed be mutual, restraint also needs to take into account the asymmetrical military relationship; and that each side should be able to determine on its own that its restraint is being reciprocated and that restraint should not be subject to rapid, unexpected change. Such a focus on first principles would be consistent with the Chinese preference to agree on guiding principles from the start, discussed by both Pan Zhenqiang and Michael Nacht in their papers for this project.

Identify Some Limited Incremental Measures of Restraint

In light of the preceding discussions of the basic concept and first principles, a follow-on next step could be to pursue an agreement on mutual restraint in a given limited area. For example, building on preliminary discussions that have already taken place, China and the United States could agree on measures to reduce the risk of incidents at sea between their two naval forces. Though not an agreement in the "strategic" area per se, it would set a useful precedent in terms of regulating military activities, building engagement, and endorsing the concept of restraint. Agreement on crisis avoidance procedures also could be an initial restraint measure.

Mutual Nuclear No-First-Use and Information Exchanges as a Confidence-Building Breakthrough

A very different way forward that also warrants consideration would be to pursue a confidence-building breakthrough, in this case by a mutual no-first-use of nuclear weapons agreement—with reinforcing parallel measures. Given China's existing no-first-use posture, mutual agreement could take the form of an official Chinese reaffirmation of its policy paralleled by a U.S. presidential pledge not to use nuclear weapons first against China. This mutual commitment would be reinforced by the announced initiation of complementary official defense and military-to-military exchanges on topics such as nuclear doctrine, decision-making, and planning on a reciprocal but equivalent basis. The two countries also would affirm that such a mutual nuclear no-first-use agreement was only the first step in a process of mutual and cooperative strategic restraint in the strategic offenses-defenses, space, and cyber domains.[12]

For China, its officials and experts have long-argued that U.S. adoption of a no-first-use of nuclear weapons posture overall would be highly reassuring to China. A mutual no-first-use agreement would take that step vis-à-vis China. It also would signal U.S. de facto acceptance of China's nuclear deterrent. For the United States, a mutual no-first-use agreement clearly would be a major change of policy not to be taken without very compelling reasons. One reason for taking this step would be to reduce Chinese

[12] As noted below, Gompert and Saunders argue against using nuclear no-first-use (or for that matter, any other stand-alone, single-domain agreement) as an initial stepping-stone in a more comprehensive process. They call for a comprehensive approach from the start.

uncertainties, thereby removing a rationale for expanding Chinese nuclear modernization. In turn, the posited complementary exchanges on nuclear doctrine, decision-making, and planning associated with mutual agreement would provide valuable windows into Chinese thinking (and the reverse). Moreover, the United States still would retain an ability to rely partly on nuclear ambiguity to deter biological weapons use by a regional proliferator. Perhaps most important, for both the United States and China, a mutual nuclear no-first-use agreement may be the type of dramatic and highly-symbolic confidence-building breakthrough needed to energize a continuing and more comprehensive process of U.S.-China mutual and cooperative strategic restraint.

Missile Defenses-Conventional Strike-Nuclear Modernization Restraint

Again assuming promising initial discussions on the concept and on first principles, a different way forward would be to explore the role of mutual restraint in reducing on the one hand, Chinese uncertainties about U.S. missile defenses and conventional prompt global strike options and on the other hand, U.S. uncertainties about Chinese nuclear force modernization. U.S. actions to consider could include, for example, restraints on the numbers of ground-based missile defense interceptors deployed in Alaska and California, on the operational characteristics of U.S. sea-based interceptors, and on numbers and basing of any future longer-range conventional prompt global strike systems. Chinese restraints could include limits on the overall number of nuclear warheads to be deployed as well as on future deployments of land-based mobile missiles and sea-based ballistic missile submarines. Again, exchanges between defense and military officials as well as possible exchanges of technical data, joint experiments, and other technical cooperation would be complementary measures.

For both countries, an important payoff of a limited agreement along the lines set out here would be to lessen the risks of military competition and an ensuing worsening of the overall political-strategic relationship. Here, too, mutual restraints would be an important symbolic step, entailing agreement on first principles, providing an initial "proof of principle" for the concept, and thereby providing impetus to further pursuit of mutual and cooperative restraint in the space and cyber domains.

Comprehensive and Integrated Cross-Domain Strategic Restraint

Quite differently, in their discussion of mutual strategic restraint, Gompers and Saunders argue for pursuing an "integrated three-domain approach" across the nuclear, space, and cyber domains. They call for beginning U.S.-China discussions of the overall concept. But they would argue against the types of possible single-domain confidence-building first steps posited above. In particular, Gompers and Saunders fear that a disaggregated or stepping-stone approach would provide too little incentive for China to address the need for mutual restraint not only in the nuclear but also in the space and cyber domains. By implication, they also question the potential need or payoffs of finding ways to begin a process of mutual restraint and then to build on it. Their argument for a comprehensive and integrated approach toward the goal of U.S.-China mutual strategic restraint provides a different way forward that also warrants discussion as part of the "joint study" project. For that reason, it is so cited here.[13]

[13] Readers are encouraged to see Gompers and Saunders, *op. cit.*

One Bottom Line

A process of mutual and cooperative strategic restraint of U.S. and Chinese military plans, capabilities, doctrine, and posture across the offenses-defenses, space, and cyber domains would blend discussions and negotiations, agreed restraints in the form of reciprocal or parallel political commitments, and complementary measures to build confidence and enhance credibility. Pursuit of mutual and cooperative strategic restraint would represent a significant step beyond today's official and semi-official strategic dialogue. Indeed, even beginning official discussions of the basic concept—let alone reaching agreement—is unlikely to be an easy undertaking. In both China and the United States, there will be skeptics if not outright opponents of placing restrictions on future military capabilities and deployments. Nonetheless, successful pursuit of mutual and cooperative strategic restraint would serve both U.S. and Chinese interests. It would contribute to lessening the uncertainties and dealing with underlying structural concerns in both countries that could result in dangerous and wasteful military competition, heighten the risks of confrontation or conflict, and undermine prospects for cooperation on many issues. For that reason, the time is ripe to begin a U.S.-China dialogue on this concept and how it can contribute to building a stable and cooperative long-term U.S.-China political-strategic relationship.

China-U.S. Mutual Strategic Restraint and Arms Control: A Chinese Perspective[1]

Dr. Wu Chunsi

With more and more Chinese companies and individuals going abroad, the interests of China and the United States are becoming more intertwined. A good side of this intertwining is the growth of interdependence. But there is also a negative side for this intertwining of interests increases the possibility of frictions where the two countries' interests differ. How to prevent and avoid the relationship between these two big countries from evolving into a clash with each other is widely acknowledged to be an important issue in China-U.S. relations. This is not to suggest a comparison between China-U.S. relations and previous U.S. relations with the Soviet Union. It is just to say that since China and the United States have the capability to influence world peace and stability, they should deliberately pursue a safer structure for their strategic relationship.

In comparison with their competition in the economic, cultural and many other areas, the China-U.S. relationship in the military and especially the strategic military field is of even more concern for many people. Firstly, the two countries both have nuclear weapons and if they so decide, they have the capability, technology and resources to make their arsenals even bigger and more advanced. If it occurred, an out-of-control relationship would produce worse impacts on world peace and security. Secondly, the limited trust between China and the United States is even lower in the military field because this area by its nature is full of zero sum calculations. In accordance with the low trust, few institutional arrangements for communicating and exchanging views exist in China-U.S. military relations. Putting all these elements together, there are reasons to think that China and the United States could evolve into a spiral of military competition, which neither side would like to see. If such a spiral of competition were to happen, it also would bring about disastrous results for international society. Therefore, it is necessary to study the arrangements which can help China and the United States avoid such a spiral of competition.

Mutual Restraint as First Step to Manage Strategic Relations

To prevent the China-U.S. security and military relationship developing into a dangerous arms race, one immediate response of some experts could be to propose that the two countries should conduct arms control. In practice, however, the conditions for implementing arms control seem not to be ready.

Firstly, mutual trust between China and the United States is still low. At the current stage in the relationship, it is beyond imaging that the two countries can reach a formal arms control agreement with effective verification articles. Secondly, China to some extent is reluctant to accept the concept of arms control with the United States because arms control basically is seen as the type of measure carried out between the adversaries. China defines its desired relationship with the United States as a cooperative partnership and does not want to define the relationship in negative terms, which is what the concept of arms control suggests. Thirdly, different from the relatively balanced status between the Soviet and U.S. militaries, the Chinese and U.S. militaries are quite asymmetrical in their shape, scale, major weapon systems, advancement, and comparable elements. How to start an arm control negotiation between these

[1] The paper only reflects the personal views and judgments of the author. The author especially thanks Mr. Lewis Dunn for his generous help in commenting the paper and giving his advice. Also, sincere gratitude extends to participants of the Beijing meeting on July 25-26, 2012, for their valuable comments, questions, advice, and even criticism.

two very imbalanced militaries is still a question to be answered. Thus, arms control as a whole set of formal treaty-based measures seems premature at the moment.

Nonetheless, the fact that arms control seems premature does not mean that the two sides should do nothing on stabilizing their military relationship. A commitment of mutual restraint in the strategic field seems a good start to shape their relationship in a better and safer way. Mutual strategic restraint actually is the military implementation of a political commitment to self-restraint made by the two governments on a reciprocal basis. It shares the aim of arms control to manage the military relationship between them. But it seeks to provide a more realistic way to realize the aim. It puts emphasis on convincing the parties to accept the prospect of self-restraint and to give their commitments to it. Therefore, mutual strategic restraint can be regarded as an initial step to build up a stabilizing strategic relationship between China and the United States and deserves serious study.

Political Acceptance of Mutual Strategic Restraint

As a concept emphasizing restraint, a stabilizing relationship, and reciprocity, mutual strategic restraint politically should be acceptable to China. This concept is consistent with a number of China's core values and concepts.

Firstly, the concept is in accordance with China's overall strategy of peaceful development. China has confirmed several times to the world that the strategy it pursues is peaceful development. This strategy involves a two-part political commitment. On one side, China wants to see its military modernized to a level comparable with Chinese economic and international status. But on the other side, this strategy of peaceful development obviously sets a limit on Chinese military capability, that is, such capability needs to be for peaceful purposes or more strictly, for defense purposes. Therefore, as long as China sticks to the principle of political control of military affairs, there should be a roof on its future military development.

Secondly, from an economic perspective, restraint is also what China needs. China's economy developed fast and well in the past three decades, but it does not mean China has moved its central task from economic development to military modernization. China generally still regards itself as a developing country with a large population in poverty, a large imbalance between the coastal parts of China and the interior parts, and an underdeveloped system of social and health insurance. Against that background, no one believes that China should engage in an arms race, especially in a race with the United States. The fast development of the Chinese economy does not provide an unlimited blank check to the military. On the contrary, everyone, including the military, learned from the experience of the collapse of Soviet Union that keeping a healthy economic-military relationship is extremely important to a country.

Thirdly, China sticks to a defensive defense policy. Chinese military capabilities have developed quickly in the previous ten years and the Chinese military budget is increasing at a two digit pace. But these developments do not mean that China has changed the nature of its defense policy. On the contrary, the Chinese Government and Chinese military on every occasion reaffirm that China is pursuing a defensive policy. It is true that the Chinese military is projecting military power to farther places and will continue to do so. This shift reflects the fact that China has more and more overseas interests to protect. However, such actions to protect the Chinese people and China's interests abroad should not be taken to be a change of Chinese defense strategy toward aggressiveness. A strong person is not necessarily an

aggressive person. Therefore, the key point is not whether China wants to be strong. The key is whether China is willing to take measures to show its restraint in ways to reduce and even eliminate world and regional anxieties and concerns over the fast development of China's military strength.

Last but not least, culture is also an important element for China to accept the concept of mutual restraint. It may seem a little bit strange to mention culture here, but since military decisions are not made in a vacuum and they need public support, what the mainstream society believes is important. Some may argue that nationalism is increasing in China, or even worse, according to some persons, that an "aggressive realism" actually is becoming the strategic culture of China. But none can deny that the mainstream of Chinese society does support peace and stability and that this preference will even be enhanced in the future as Chinese society becomes richer and has more and more families that have only one child.

Therefore, mutual restraint is a concept that should be acceptable to the Chinese military and Chinese society politically, but the question is: Is it implementable practically?

Practical Obstacles—and a Basis for Going Forward

For a country to adopt a policy of military self-restraint, a necessary element is that the country does not perceive it will face a serious crisis of survival. But in the case of China, the situation is a little bit complicated. China actually worries about its survival environment, at least in three scenarios. They are a military conflict over the Taiwan Strait, an attack on China's strategic nuclear weapon arsenal, and a military intervention into Chinese mainland.

Taiwan is the indisputable core interest of China. An attempt by Taiwan to declare its independence from the China would be a fundamental threat to the integrity of China. Therefore, there will be no option for the Mainland but to go to war if it were to happen. The Mainland would consider every possible option to win such a war, because losing could endanger the survival of the government. In this situation, however, the possibility of use of nuclear weapons actually is low because China's aim would be winning not destruction. But because of a low possibility of use of nuclear weapons, it will be even harder to restrain Chinese use of other options.

The possibility of losing its nuclear arsenal is another scenario perceived by China as threatening its survival. Although the Chinese nuclear arsenal is widely believed to have improved, it is still much smaller and less advanced compared to that of the United States. Moreover, China believes that the further development of U.S. missile defenses, precision-guided munitions, and so-called bunker busters systems will reduce and could even eliminate China's strategic retaliatory capability. Thus, for China and the United States to be able to take restraint measures at the operational level, it would be necessary for the two countries to reach some consensus on their strategic nuclear relationship.

Thirdly, although the possibility is quite low, China still has to prepare for the scenario of military intervention in China. What happened recently in North Africa and Middle East proves that some important international principles conducive to safeguarding national security and maintaining international stability—including the principle of non-interference in the internal affairs of other countries—are challenged and even discarded. In that kind of situation, countries have reasons to consider leaving more leverage in their own hands in case they will need it.

Given these considerations, it will not be surprising if China shows reluctance about proposals for strategic restraint. As the weaker participant in China-U.S. relations, China faces more uncertainties in the interactions than does the U.S. side. Even so, the worrisome scenarios introduced above should not dominate China's strategic options, because the probability for them to happen actually is very low, especially the latter two which are rarely raised by U.S. analysts. In addition, it is just because of these strategic dangers that China and the United States need strategic restraint of some sort so that their relationship will be stable and secure. Therefore, the real question is not whether China and the United States need to consider mutual strategic restraint but how to work out such restraint in the current strategic context.

As a start, China and the U.S. should reach some common understandings to reduce China's survival concerns. Re-assuring China of the low probability of these issues would support pursuit of mutual strategic restraint. It also will be important, as discussed next, to take into account the asymmetric balance between the military capabilities of China and the United States.

Pursuing Mutual Restraints on the Basis of Asymmetric Balance

Another important element in China-U.S. military relationship is that their capacity is asymmetric, which was totally different from the situation between the United States and the Soviet Union in Cold War. One result of the asymmetry of Chinese and U.S. military capabilities is that mutual deterrence between China and the U.S., to the extent that it exists, is asymmetric too. In turn, asymmetric deterrence brings about two very important features in China-U.S. strategic relations.

The first is that China and the United States pursue different approaches to nuclear deterrence. While the United States pursues accurate targeting and rejects a strategy of counter-value retaliation, China, with a much smaller and less advanced nuclear arsenal, may not be able to pursue a comparable counter-force strategy. The different strategies adopted by the two countries mean that any proposal obviously benefiting one strategy but placing more restraints on the other strategy probably will not be accepted. For example, emphasizing the separation of civilian facilities from deterrence looks "moral," but this sort of proposal actually leaves little room for the country taking a strategy of counter-value and therefore, it would not provide a basis for the two countries to reach an agreement on strategic restraint.

The second asymmetric feature of China-U.S. deterrence is that because the two countries' strategic nuclear capabilities are imbalanced, China tries to make up for its weakness by seeking U.S. vulnerabilities in other areas, for example in the command and control system. It pursues a comprehensive approach to deterrence. This is so even though it is true that China also has vulnerabilities in the areas of outer space and cyber. But at current stage, the United States depends more on such information systems. Thus, given China's effort to maintain a comprehensive balance of deterrence with the United States, the Chinese side may find it difficult to agree to restraint simultaneously on the nuclear and information fronts.

The existence of mutual deterrence, nonetheless, provides the basis for China and the United States to pursue strategic restraint. China and the United States have to deliberately consider the features of their mutual deterrence when designing the roadmap to realize the goal of strategic restraint. Specifically, the measures pursued should be designed not to reduce but to strengthen their deterrence relationship in the

strategic nuclear area. A starting point would be use of restraint to address China's concern, discussed above, for the survival of its nuclear retaliatory capability.

At current stage, however, it is not realistic to pursue simultaneously restraint in the nuclear, outer space, and cyber areas, because of the complicated interactions of mutual deterrence across these three areas mentioned above. Moreover, China and the United States lack substantial contacts in the areas of outer space or cyber space, whether to carry out cooperation or to reach some consensus. In these two areas, the most urgent thing at the current stage is to begin dialogues to know each other. Through the process of exchanges, the two sides could move toward developing some common codes of conduct, starting perhaps with disclosing their practices on the making and enforcement of laws governing activities in the space and cyber areas.

Adopting a Principle of Preventing Escalation

In addition to preventing a spiral of arms competition, another important aspect of managing the military relationship between countries is to control the intensity of war if it happens. In this regard, China and the United States could consider to adopting a principle of avoiding escalation in military conflicts to help manage their relationship and prevent the situation from going out of control.

To embody the principle of preventing escalation, China and the United States should strengthen their cooperation on crisis management. The two sides have done some studies and have had some discussions on crisis management. Those steps can be built upon. Firstly, the two countries should institutionalize a crisis management mechanism so that organizations and individuals are responsible for that task. Secondly, they must ensure those measures are effective and reliable. And thirdly, the two countries should also set up some domestic processes as a counterpart to their crisis management arrangement to ensure that the messages of the other side will be accurately received and transmitted to decision-makers.

Conclusion

It is time for China and the United States seriously to make a plan for their military interactions. Since the level of mutual trust is still low between China and the U.S., mutual strategic restraint might be a good starting point. Through a series of political commitments and practical actions in mutual restraint, China and the U.S. may better manage their relationship and contribute more to world peace and international security.

To that end, the Chinese sides should update its defense strategy, explaining to the world that with more and more Chinese people and Chinese companies going abroad, China's defense responsibility is growing. China needs defense capabilities comparable to those growing demands, but the development of the Chinese military has a ceiling. China should reassure the word that it sticks to the principle of defense and will never undertake aggression. On the other side, the United States should reassure China that it recognizes its strategic concerns and wants to stabilize the strategic relationship with China. In fact, mutual strategic restraint is not just an arrangement between the two militaries, but a possible approach to manage and re-adjust the overall strategic relationship between these two important countries.

Building Cooperative Engagement on Regional Proliferation Crisis Management

Dr. Shen Dingli

Asia is prone to regional conflict and nuclear proliferation, from Northeast Asia to South Asia to the Near East (Middle East). As long as nations feel insecure, they tend, under extreme circumstance, to seek nuclear weaponry, either through membership in an alliance with a nuclear state or self-reliance. All those hot-spots in Asia are stricken by perennial regional rifts that propel those stakeholders to go nuclear.

Regional Proliferation Crises

In Northeast Asia, two sets of conflicts have remained for ages. The Democratic People's Republic of Korea (DPRK) and the Republic of Korea (ROK) have vied for over half a century for legitimacy and for dominance over their unification. Consequently, they incurred a massive war that ended with the South accommodating the U.S. force presence and nuclear umbrella, and the North developing its own nuclear deterrent. The other conflict set is across the Taiwan Strait. The United States helped bring Taiwan back to China but has since meddled in China's internal affairs, especially after the communists took power in Beijing. At the peak of the China-U.S. confrontation, the mainland received Soviet nuclear assistance and built its own atomic bomb, while the United States stationed troops and tactical nuclear weapons on Taiwan. In addition to Taipei and Seoul's attempt to acquire nuclear weapons, Tokyo tacitly permitted the U.S. nuclear presence on its territory despite its pledge of "three-noes".

In South Asia, the partition of British India has created a similarly perpetual rivalry over identity and sovereignty, which subsequently has led to three wars between India and Pakistan over Kashmir. India's support of East Pakistan's independence furthered Islamabad's sense of insecurity. The two sides eventually turned to acquiring a nuclear deterrent as a last resort of national security. Today, they are still engaging in a bilateral nuclear arms race, by refusing the NPT, staying outside of the CTBT, and in the case of Pakistan, even "vetoing" the international call for the negotiation of a verifiable fissile material production ban for weapons purposes. In fact, they incurred a serious crisis over Kargil in 1999, presenting the only case when two nuclear weapons states could have been driven by their own security dynamic to settle their dispute with all means including nuclear wherewithal.

In the Middle East, the seemingly perpetual difficulties of Israeli-Palestinian peaceful co-existence and repeated efforts by some Arabic countries to deny the legitimacy of Israel drove Tel Aviv to obtain its unannounced nuclear deterrent. Subsequently, a number of Moslem nations, Egypt, Iraq, Iran, Syria, Libya, Sandi Arabia etc., seem to have indicated their intention and even in some cases, taken steps to go nuclear, with Iran as the current main holdout. Though their purposes for nuclear interest vary, some have to do with Israel's nuclear weapons while others are related to inter-Arabic rivalry. Currently, the Iranian nuclear issue has raised the stakes higher for all countries: the United States and Israel would probably launch, at a cost, preemption against Teheran's nuclear weapons program. As a consequence, other oil-dependent countries are concerned about their energy security, either due to losing oil supply from Iran or the blocking of the Strait of Hormuz.

Engagement and Frustration

The aforementioned regional tensions have precipitated a number of nuclear proliferation crises. Due to external pressures and international cooperation, some of these crises have been resolved. However, it

has not always been so lucky, as some cases of proliferation have turned more serious. This often reflected the inadequacy of the international system to assure all countries' legitimate security, or the lack of trust among major powers to forge common interests and build effectiveness in curbing nuclear proliferation.

Northeast Asia

This region presents clear cases where nuclear proliferation crises are prone to occur. Since the end of the Cold War, the Korean Peninsula has witnessed two rounds of nuclear crises. In 1993 Pyongyang threatened to quit the NPT but "postponed" doing so due to the efforts of former U.S. president Jimmy Carter. The DPRK and the United States struck a Nuclear Framework Agreement the following year that started their swap—America committed to helping build two light water reactors for the DPRK in exchange for shutting down all of the hermit kingdom's own nuclear reactors, existing, under construction and being planned, in Yongbyon. In 2003 the DPRK eventually honored its threat to quit the NPT, and conducted two nuclear tests in 2006 and 2009, subsequently.

More specifically, cooperative efforts were attempted initially to thwart the DPRK's nuclear development. In 1993, former U.S. president Carter went to Pyongyang and successfully persuaded Kim Il-sung not to quit the NPT, right before the North Korean leader passed away. The United States and the DPRK made a grand bargain to exchange their trust and hedge against any failure in implementing their Framework Agreement. Meantime, a China-DPRK-ROK-U.S. four-party-talk was convened to build further momentum. However, by the time President George W. Bush came to power in 2001, this process collapsed, as the White House started to brand Pyongyang as part of the "axis of evil", while North Korea found that the United States had not delivered its promise of light water reactors.

Another wave of cooperative nuclear threat reduction was offered by China. In the spring of 2003, Beijing hosted a China-DPRK-U.S. trilateral talk to assure that the United States and the DPRK would meet and talk one-on-one within the trilateral process. Then, a Six-Party-Talk mechanism was built to engage additional stakeholders and garner their cooperation. This approach resulted in a renewed hope of cooperative nuclear nonproliferation efforts: while the United States would offer heavy oil for energy compensation, the DPRK would incrementally freeze and demolish its nuclear assets. However, it seems that the DPRK has used the talks to bide its time for nuclear weapons development—it carried out two tests since 2006 and publicly revealed its centrifuges for uranium enrichment in 2010.

As the preceding indicates, there is no lack of China-U.S. nonproliferation cooperation in Northeast Asia. In fact, Beijing and Washington have collaborated over the past two decades to defuse the nuclear tensions on the peninsula. Nevertheless, their co-work is not and cannot be deep because of their different strategic calculus, as nonproliferation is at different levels of their national interest. For America, nonproliferation, along with anti-terrorism, has been its topmost national interest; whereas for China, its core interests are national integration, economic development and party's leadership. Proliferation indeed poses a threat to China, but not as serious as to the United States. In addition, the U.S. defense of Taiwan has kept the mainland wary and hedging, undermining China's interest in working with the United States on various strategic issues.

Then, could China and the U.S. re-prioritize their national security to allow nuclear nonproliferation precedence? This is not impossible but requires the efforts of both Washington and Beijing. As

international security is linked to national security, both countries should manage to improve their bilateral relationship so as not to challenge each other's legitimate core interests. As stated above, the key is the nexus between Korean Peninsula and Taiwan. For America, it needs to end weapons sales to Taiwan, so mainland China would not need the DPRK or anyone else to help hedge against the U.S. military presence in East Asia, in the ROK, and in Japan in particular. For China, it needs to work with the United States, through bilateral or multilateral approaches, to engineer a security assurance mechanism for the DPRK. When both China and the United States jointly commit to Pyongyang's security, the latter would have less need to further its nuclear path.

South Asia

China and the United States have had a complicated relationship in their positions toward nuclear weapons development in South Asia. During the Cold War, the United States launched the Nuclear Suppliers Group (NSG) to sanction India and other countries that would keep their nuclear weapons option open by remaining outside of the NPT. China and the United States collaborated to condemn the nuclear weapons tests in 1998 by India and Pakistan, at the P-5 and UNSC levels. But Washington soon lifted its sanction on India, imposed after the nuclear tests, due to the needs of its anti-terrorism campaign. The shift of interests also led to the Bush administration to waive domestic and NSG restrictions on India, a policy also partly motivated by Washington's concern about China's rise.

Toward Pakistan, China and the United States also have experienced a complicated partnership. In the 1980s, both countries used to tolerate Pakistan's nuclear development, initially for their common interests in countering Soviet aggression in Afghanistan from 1979. The U.S. Congress passed a number of pieces of legislation to constrain or end the Washington-Islamabad security partnership due to Pakistan's military nuclear program. But this legislation was all circumvented by the executive branch, citing national interests as well as intelligence indicating that "Pakistan's nuclear development has not passed the level to warrant the U.S. sanctions". For reasons of global strategic balance, America made willing concessions to Pakistan's nuclear weapons development.

In the wake of "9-11" attack, the United States turned the Islamabad government that it had viewed previously with distaste into a "non-NATO ally". It supplied billions of dollars in weapons and aid to this rediscovered partner. All those laws banning tangible aid due to concerns over Pakistan's nuclear program were superseded by a paramount need to place military assets in the country and use its territory and space to conduct the war on terror in Afghanistan. However, even though the United States pushed to waive India from the NSG restrictions, it still enforces the NSG restraints upon Pakistan. Besides, Washington asked Beijing to agree to waive India from restriction on accessing international cooperation for peaceful use of nuclear energy, but has not accommodated China's interest in granting Pakistan similar treatment.

Again, there is no lack of China-U.S. nonproliferation in South Asia. The two countries jointly condemned nuclear weapons tests of India and Pakistan. They are both members of the NSG to make India and Pakistan less likely, for a while, to access international cooperation in civilian nuclear energy. However, as nonproliferation plays at a different level in their national interests, America has played the non-proliferation card, positively or negatively, against India, Pakistan, and China at different times. Therefore China and the U.S. have an unprincipled partnership in this regard. Without proper mutual trust and respect, it could be uncomfortable for them to deepen a habit of nonproliferation cooperation.

To reconcile the differences between China and the United States, these two countries have to adjust their habit of often placing national interests above principle-based cooperation. True, India needs international cooperation for civilian use of atomic energy, but Pakistan also would require it. The NSG was generated to punish India and other similar-acting countries. In the same vein, when NSG restrictions are waived for India, this informal international organization loses its rationale and the same relaxation should apply to Pakistan. Revising the NSG to suit India impairs China-U.S. trust and cooperation on nonproliferation, especially when the United States may be strategically driven to check and balance China's rise. China must be pressed to protect its special bond with Pakistan by citing the "grandfather-term" for pre-existing arrangements in its understanding with the United States when Beijing joined the NSG. Therefore, to maintain their nonproliferation collaboration, they have to both end any cooperation with India and Pakistan in the name of civilian use.

Middle East

In the Middle East, Iran presently stands out as another main challenge to global security. Iran is entitled, as any other country, to nuclear energy, on the condition of peaceful use, per its treaty obligation under the NPT. Its previous clandestine nuclear developments exposed in the early 2000s warrant international suspicion and the Security Council demand that Iran suspend its uranium enrichment program until all suspicions are properly cleared. However, Teheran has refused all relevant UNSC resolutions, and been pushing for operational nuclear power generation and fissile material production, currently uranium enrichment. With U^{235} enriched to some 20%, Iran is quite close to weapon-grade uranium, in terms of Separative Work Units (SWUs) further required.

China and the United States have collaborated on all UNSC resolutions so far to punish Iran for its nuclear and missile development. Meantime, they are members of another six-party-meeting, involving the P-5 plus Germany, to address the Iranian nuclear issue. Mostly they are collaborative in both punishing and extending incentives to Iran. Nevertheless, the successes of cooperation have been focused until quite recently on sanctions on Iran's non-energy sectors. Thus far China could not accept punishing Iran with the energy card—until the end of 2011, Iran was still China's third largest oil supplier and China had provided Iran with refined oil. In 2011, Iran accounted for 11% of China's refined oil exports, and 22% of Iran's oil was exported to China. Obviously, Iran is indispensable for China's economic lifeline.

With similar pragmatism as the United States, China has placed its national interest above that of the United States, and placed its energy security interest, which is related to its core interests of economic development and the party's leadership, above nonproliferation. In this context, China is reluctant to go along with the West to use oil to influence Iran's nuclear behavior, especially when its economy is still growing at around 9%. In the late 1990s China seemed to negate its commitment to supplying Iran with a nuclear power reactor to be installed in Bushehr, and might have incurred retaliation by Iran. This time China has to be more cautious in balancing its interests in an independent foreign policy, energy security, major power relations, and international responsibility.

It is plain that cutting oil business entirely with Iran does not seem a viable option; but curtailing the increase, or even lowering the amount of energy transactions, remains a possibility. Some may feel that China's image as a responsible stakeholder might thus incur questions. Though the United States would

feel it unhelpful, China would largely stick to its policy. But it would do so not out of intention to be harmful to America, contrary to the U.S. initiative to recede from the nonproliferation principles of the NSG so as to partner with India on nuclear energy, while aiming at China. As China currently consumes three times more energy to generate a similar size of GDP as Japan, it has a good chance in the long-term to improve its energy efficiency in the future so as to reduce its economic pragmatism and improve its nonproliferation practice.

But in short term, China could still hedge against the risk of a U.S./Israel-Iran conflict by reducing its energy reliance on Iran. Reportedly China has indeed taken such a measure at the start of 2012, by cutting crude oil importation by half in January. Premier Wen Jiabao made a tour early in the year to some of the oil rich countries in Middle East to double China's effort of diversifying energy dependence. He made a tough statement to the effect that "China stands firmly against Iran's manufacturing and possession of nuclear weapons." These actions and rhetoric shall help narrow the gap of the relevant China-U.S. positions.

Summary

China and the U.S. are cooperating much more now on nonproliferation than two decades ago, which adds to international stability and global security. However, there are still many problems as both countries largely employ nonproliferation as a tool, rather than a principle which would override their other competing interests. The U.S. meddling in Taiwan profoundly impairs Beijing-Washington trust and constructive engagement in preventing and managing regional proliferation crises with fuller efforts. Factors such as nuclear nonproliferation, geo-strategy and economic as well commercial interests, compete in their respective national policy deliberation and implementation. It cannot be assured that nonproliferation would always prevail.

Despite these challenges, China and the U.S. are expanding their nonproliferation cooperation and over time, with China's further rise in its international profile and progress in its technological innovation, there shall be a growing chance of stronger partnership between the two powers in this crucial matter. While mutual trust would pave the foundation for nonproliferation cooperation, such collaboration itself should nurture trust and confidence. As major powers of the world, China and the United States have to lead global efforts to combat nuclear proliferation, putting aside factors that drive them to compete. In this view, China and the United States could consider to form a solid partnership for nonproliferation at the highest level, and subject other parts of relations to it. If there is a certain G2 for them, that shall lie with WMD nonproliferation, at both Asia and the global levels.

Is Greater Sino-U.S. Nonproliferation Cooperation in Their Interest?

Dr. Lora Saalman

Gaps in mutual interests, not mutual trust, underlie differences between the United States and China when it comes to combating proliferation. China sees proliferation as less of a threat to its interests than does the United States. Moreover, China's level of engagement is largely predicated on Washington's response or anticipated response to proliferation, rather than any direct threat that proliferation might pose to Beijing. When Washington's approach is expected to be extreme or destabilizing for Beijing's interests or to lead to the latter's isolation, China can be found playing a more active role of mediator between the nuclear "haves" and "have-nots."

However, this dynamic is not static. First, China's position as a nuclear power straddling two identities is increasingly difficult to play. Second, the growth of China's status and its comity with Russia on such issues as Iran, Libya, and Syria indicate that the threat of international isolation may not compel future cooperation. Third, China's pursuit of stability makes it seek a balance between keeping the United States preoccupied and dissuading it from an extreme response that would harm China's economic and political interests.

These three factors have major implications for the degree to which overt and direct bilateral coordination between the United States and China is possible or even beneficial to the nonproliferation regime. This essay seeks to explore each of these principles in the cases of North Korea and Iran.[1] The analysis concludes with means of better predicting Chinese response on current and future nonproliferation issues, as well as the degree to which it is likely to cooperate with the United States.

Mutual Trust

Lack of mutual trust (*huxin*) between China and the United States is an oft-repeated lament within China, particularly among its arms control community. There is no doubt that the Taiwan issue is among the root causes of damaged mutual trust between the United States and China. However, when it comes to nonproliferation and strategic dialogues, Taiwan is no longer mentioned to anywhere near the extent that it once was. What matters most are divergent U.S. and Chinese perspectives on proliferation.

These differences are revealed not only in China's policies, but also in its semantics. "Arms control" (*junbei kongzhi*) speaks to the ideal of responsibilities of both nuclear weapons states (NWS) and non-nuclear weapons states (NNWS) under the Nuclear Nonproliferation Treaty (NPT). In principle, it seeks to equitably delineate the obligations of the haves and the have-nots. By contrast, "nonproliferation" (*bukuosan, fangkuosan*) focuses on keeping nuclear weapons out of the grasp of non-nuclear weapons states. Yet the most crisis-prone of these terms within China is "counter-proliferation" (*fankuosan*), as it indicates use of interdiction or force by nuclear weapons states against non-nuclear weapons states.

[1] This essay is based on rigorous primary source research into over 400 Chinese articles addressing Sino-U.S. nonproliferation-related cooperation and the North Korea and Iran nuclear issues. A comprehensive version, with detailed quotations and citations, is to be published in Beijing University's forthcoming volume Zhongguo guoji luntan pinglun 2012 (China International Strategy Review 2012), Center for International Strategic Studies, Beijing University, June 2012. "China Strategic Review 2012." As pointed out in the companion essay by Shen Dingli, "Proliferation indeed poses threat to China, but not as serious as to the U.S."

While having gradually come on board with the nonproliferation regime throughout the 1990s, there is recognition within China that countries seeking nuclear weapons are often looking to guarantee their security and survival in the face of external threats. This is an issue frequently raised in any number of proliferation cases, including North Korea and Iran, and driven home by the case of Libya. With China's ongoing adherence to the principle of non-interference and strong advocacy for sovereignty, it is difficult for Beijing to reconcile demanding countries to forgo this path to national security, one which China itself has yet to relinquish.

According to this logic, it is not simply the decision of countries to proliferate that is doing damage to the regime. Instead, it is also the NWS states—the United States in particular—which perpetuate inconsistency in words and deeds or double standards (*shuangzhong biaozhun*), combined with the use of and threat to use force against NNWS. More often than not, the United States is cited within China as either triggering or exacerbating proliferation. The threat that the United States poses to various countries' regime survival, the nuclear and conventional predominance that it seeks, and its disregard for sovereignty are all part of the discourse on why states seek nuclear weapons. In short, it is difficult to ask a country to coordinate with you on resolving an issue, when it sees you as being a major source of the problem.

China as Mediator

Just as the United States and its policies can serve as a polarizing force, the U.S. approach to nonproliferation ironically provides a springboard for China in building its unique form of mediator diplomacy. China's self-identification as both a P-5 country among the "haves" and as a developing country among the "have-nots" places it in a position to transcend dividing lines and to play its cultivated role of go-between. Some of the more prominent examples include China's role as a host of the Six-Party Talks and recent shuttle diplomacy in the case of Iran. Chinese analysts cite both of these cases as an opportunity for China to test and to prove its diplomatic mettle.

As part of this logic, China has demonstrated itself as much more ready to become involved when faced with the chance of U.S. counter-proliferation activities that might lead to tension or conflict. China is adverse to and most likely to undertake action to prevent crises and its own isolation. This was evident both at the time of the first set of Six Party Talks in August 2003 (when there was concern about military force being used) and more recently in China's agreed participation in the multilateral negotiations surrounding Iran's nuclear program (against the backdrop of debates over the chances for the United States and Israel to use force against Iran).

In each of these cases, China sees itself as being able to come forward as the honest broker in the face of other powers trying to exert greater control and leverage over smaller ones. For example, in the Six Party Talks, crisis mediation has become a role that China has proven willing to play. In undertaking this approach, however, the United States is seen to have invariably become the actor engaged in excessive pursuit of "absolute security" (*juedui anquan*) against which China serves as a balancing influence. In other words, the United States is viewed as the "bad cop" to China's "good cop." Within this construct, however, there is a paradox: the stronger China identifies itself with the NWS agenda, the more its influence over NNWSs weakens. Consider this dynamic—and what it suggests about China's perceived interests—in two cases:

North Korea

Of all of the global cases of proliferation, China has proven itself most comfortable serving as a mediator on the North Korean nuclear issue. This is partly reflected in the level to which Chinese experts are willing and able to explore Beijing's role and the impact of the North Korean nuclear issue on China. Based on Chinese experts' analyses, a number of key points stand out regarding Beijing's efforts as an intermediary.

To begin with, there appears to be a symbiotic relationship of action and reaction between the United States and China. A common refrain heard among Chinese experts at the time of North Korea's 2006 nuclear test was that Beijing was waiting to see what Washington would do and react accordingly. While there was certainly consternation following the test, including official use of the term "wantonly" (*hanran*) to refer to Pyongyang's decision, ultimately China's reaction was more about the United States than about North Korea.

In fact, by the time of North Korea's 2009 test, the adverb "wantonly" was nowhere to be seen in official Chinese statements. Moreover, with each round of follow-on sanctions, China worked to soften the wording of United Nations Security Council (UNSC) resolutions. From this brief episode, it appears that coming to terms with North Korea's provocative actions has been easier than doing the same with potential U.S. ones. This partly stems, once again, from China's conflicted identity of trying to relate to both the "have" and "have-not" countries.

Yet even with its efforts to maintain autonomy from both camps, China has increasingly alienated itself from its "have-not" position the closer it has hewn itself to the United States. Ironically, the leverage that the United States wishes for China to exert against North Korea is weakened every time that it is undertaken in concert with the United States. Beijing can also be seen to be walking a fine line of meeting international obligations in the face of domestic demands for it to take a harder and more independent line vis-à-vis Washington. This is part of the reason that Chinese analysts frequently assert that China does not have the leverage over North Korea that the United States assumes it to have.

When Chinese analysts discuss U.S. concerns regarding North Korea, nonproliferation receives prominent mention. Nonetheless, while citing denuclearization as one of China's aims, much more emphasis is placed by Chinese analysts on maintaining stability and security. In turn, the fact that North Korea perceives an existential threat from the United States supplants any questions over the right to nuclear weapons. The greatest threat to the goal of peace and stability on the Korean Peninsula is not nuclear weapons per se, but rather the potential for the United States to undertake destabilizing moves in response.

In fact, a survey of available Chinese writings demonstrates the following hierarchy of its interests on the North Korean nuclear issue: 1) ensuring that war does not erupt, 2) pursuit of denuclearization, 3) allowance of continued survival of North Korea, 4) guarantee of peace and stability on the peninsula, 5) containment of the strategic expansion of the United States in Northeast Asia, and 6) maintenance of stability in Sino-U.S. strategic relations. By contrast, U.S. interests are described as featuring: 1) containment of China and Russia, 2) protection and control of Japan and Korea, 3) stabilization of the situation, 4) elimination of North Korea's nuclear weapons, 5) prevention of nuclear proliferation, and 6) maintenance of the nuclear nonproliferation regime.

It could be argued that these lists of priorities point to the mutual trust issue mentioned at the beginning of this essay and often cited by Chinese analysts. But, in essence, what lies behind trust are interests. And what is even more apparent in these two lists is that Chinese and U.S. interests are inverted. While allowing China to remain engaged, the role of mediator does not require it to necessarily take sides or to violate its interests. Instead, it allows Beijing to better shape the outcome by seeking to soften Washington's approach towards Pyongyang. In effect, even when acknowledging its own role, there remains a tendency within China to frame the North Korean nuclear issue as between Washington and Pyongyang.

Direct cooperation between Beijing and Washington on nonproliferation is made difficult for China to accept on a number of levels. China's posture on North Korea reflects an inherent conflict of interests. At one level, finding a solution to the nuclear crisis would lessen the U.S. ability to use the North Korean nuclear issue to intervene in regional affairs, increase military deployments and exercises, strengthen alliances, provide missile defense and other weapons technology, and contain China. But at another level, resolution of the issue and improvement of Pyongyang's relations with Washington could strengthen the U.S. regional role. Unification on the peninsula would open a greater window for the United States on China.

To shape the U.S. role and forestall these outcomes, China is likely to continue to serve as a conflicted intermediary. For while offering China the opportunity to display its diplomatic prowess, there is a growing resentment of the demands and expectations placed upon Beijing to resolve what it continues to view as an issue that is ultimately between Washington and Pyongyang. As argued by one senior Chinese analyst at the China Institutes of International Relations, China feels like it has been cheated by the United States, which has misrepresented the North Korean nuclear issue to further its other regional interests.

Iran

When it comes to the Iran nuclear question, there is a tendency to link it with North Korea in Chinese experts' analyses. However, the number of these articles is markedly reduced from those found in the case of North Korea. Similarly, the overall role for China as detailed in these discussions about Iran is much more limited. This disparity between the two cases is, of course, not surprising given China's longer history of mediating the North Korean nuclear issue and its geographical proximity to the locus of the dispute.

Yet it also has some stark interest-based motives, including China's efforts to maintain its connection to a strong Middle East political and economic partner, as well as supplier of oil. Closer integration with a U.S.-led agenda is seen as harming China's ability to maintain a stable linkage to Iran. Indeed, given China's ever-growing interests in energy security and engagement within the Middle East, the Iranian nuclear issue in some ways promises to have just as much, if not more, long-term implications for a range of Chinese economic and political policies than does the North Korea nuclear issue.

Against the backdrop of these interests, analyses by Chinese experts frequently mention Iran's right to use nuclear energy for peaceful purposes, regional stability, and opposition to comprehensive sanctions or the use of force. These writings generally do not see China following the U.S. lead on the Iran nuclear issue. As in the case of the North Korean nuclear question, Chinese analysts frequently make the issue

pointedly and primarily about the relationship between Washington and Tehran. Even when other countries are mentioned as part of the "great power game" (*daguo zhijian de boyi*), the role of the United States takes center stage.

This does not mean that Chinese analysts are unaware of Beijing's essential role within the UNSC. Yet the tendency remains to downplay China's level of influence. Even as a UNSC member, China is seen as a "relatively detached" (*xiangdui chaotuo*) party motivated crisis-by-crisis. Despite this ad hoc nature, some Chinese analyses began as early as 2006 to look at Beijing's ability to serve as an intermediary vis-à-vis Tehran. Within the context of a perceived U.S.-Iran dynamic, emphasis on the potential for Beijing to exert a greater influence on the Iran nuclear issue became more pronounced in 2010, as analysts began to talk of the triangle formed by the United States, Iran, and China.

Preventing a loss of balance, the potential for attack on the part of the United States or Israel, and the chance of international isolation harming China's economic interests have served as catalysts for recent Chinese involvement. While in the past, China's economic concerns have kept it from getting involved when it came to sanctions or censure against Iran, these very same interests in stabilizing its energy supply are what compel China's greater role now. In fact, the question of whether the United States or Israel would engage in an attack on Iran has captivated the national consciousness in China. Collapse or instability across the region would send shockwaves through China's oil supply chain, so it is not surprising that energy security and China's overall economic development have been front and center in Chinese discussions of late.

But even more so, Beijing has again found an opportunity in the case of Tehran to serve as a conflicted intermediary. For China, moreover, the Iran issue is also being folded into Beijing's larger rhetoric and agenda of becoming a strong country, while at the same time pursuing a harmonious world (*hexie shijie*). While some may view these aims as contradictory, in the Chinese discourse they are part of the same trend. China's function is increasingly seen as balancing out destabilizing and provocative moves on the part of the United States, whether in Syria or Iran. If this approach continues, by shaping or mediating U.S. interests, China can gain in international stature, while remaining above the fray.

In attributing the United States with so much power and influence over China's response to proliferation, the major question that arises is "how" or more importantly "if" China would undertake an active role in the absence of its concerns about potentially destabilizing or dangerous U.S. actions. Also, in remaining "above the fray," one must ask whether China might be inadvertently contributing to its own international isolation. However, China has largely not been faced with such questions. This, in large part, is because of the crucial and often overlooked role of Russia in China's nonproliferation policies.

China's growing linkages and commonalities of position with Russia on non-proliferation issues largely insulate it from international isolation. In this regard, when dealing with cases of proliferation, in particular Iran, the tendency in any number of Chinese analyses is to link China and Russia's position as pitted against that of the United States and the European Union. From the perspective of the aforementioned "good cop" and "bad cop" scenario, this dynamic makes sense. But it also indicates that direct cooperation on proliferation issues may prove to be easier between China and Russia, than between China and the United States. In fact, getting Russia onboard with such initiatives could serve as a major step towards compelling China's involvement.

Conclusion

While Chinese experts often mention the centrality of mutual trust, the main obstacle to greater China-U.S. cooperation on nonproliferation is differences in perceived interests. Conversely, the lynchpin of building cooperation needs to be finding mutual interests. When a weak case is made that it is in China's interest to become involved, or one based on abstract nonproliferation ideals, it is unlikely to gain much traction. The baseline assumption within China when evaluating any U.S. action is that it is undertaken with an eye towards maximizing U.S. national interests, whether these aims are declared or hidden. Rarely, if ever, is the argument that an action is needed on nonproliferation grounds taken on its own merits. However, this same logic could also be applied to China.

On specifics, Beijing is unlikely to sign onto sanctions that will harm its own companies' interests and national growth. But it will not necessarily block those actions that allow for it to utilize U.S. isolation of a particular country to gain greater market access for Chinese companies. In terms of military action, when faced with the credible potential for attack or other destabilizing moves from the United States or others, China is more likely to engage to thwart such an outcome. The more extreme the predicted U.S. response, the more likely China will be to get involved to try and curb such a result. Its oft-stated goal is stability for economic development and growth. This realpolitik continues to pervade everything China does.

However, while the desire for heading off crises is good in principle, it can also lead to unintended outcomes when threats meant as pressure or bluffs are misconstrued. If China misinterprets the level of U.S. commitment and will, it could make matters worse by blocking legitimate measures or by not responding at all. As just one example of the limits of this approach, while China opposed U.S. actions in Iraq and Libya, it ended up responding in a relatively minimal way. Its strong stance on Syria may be seen as an effort to recalibrate this approach. Thus, anticipating the issues on which China is most likely to intervene and how it will respond comes down to better understanding the depth and nature of Chinese interests on any given issue. This can be achieved by case-by-case research and scenario building on the economic and political opportunity costs for China.

When not faced with a crisis, China is best served by not coming down too hard on any one side and instead assuming a stance of wait and see. Only when the chance of military intervention or other extreme actions that will directly threaten China's interests is imminent is Beijing likely to undertake a stronger position. This is a pattern that meshes together any given number of scenarios and is illustrated by the two cases of North Korea and Iran. China's nonproliferation role has been and will continue to be one of a mediator, standing between the players or above the fray. From one perspective, this is not necessarily a negative development, as there is a need for a "bridge" (*qiaoliu*) connecting the nuclear "haves" and "have-nots." Beijing maintaining its autonomy and not allowing itself to become too closely linked to a Washington agenda can be conducive increasing its leverage on other states.

At the same time, China's influence may not always be applied in the manner desired by the United States. Taking the U.S. "side" is not seen as being in China's best interest, as it binds Beijing to what it often perceives as U.S. adventurism and attempts at regime change. As such, any extremes or resultant isolation are anathema to what China maintains as being as essential for its growth, namely stability. This approach suggests that while Beijing may make an effort to stave off conflict, it may not be intent on or capable of resolving the problem. Moreover, if proliferation is fundamentally a greater harm to the United

States than to China, this reduces the incentive to find an enduring solution. It is not in China's best interest to make things easier on the United States, particularly when the view in Beijing is that Washington seems bent on making things difficult for China.

Having the U.S. preoccupied, while China serves as a mediator and friend to all sides, provides China with a win-win (*shuangying*) scenario, even while it may stymie U.S. efforts for a united front. This begs the question of whether this is a strong basis for Sino-U.S. cooperation. In some respects, it is. China and the United States have a symbiotic relationship as mediator and enforcer. Achieving the same goal does not require both parties to stand on the same side of the table. In fact, if Washington and Beijing were to engage in greater open and direct coordination, this would not necessarily be beneficial to the nonproliferation regime. The closer that China aligns its policies with those of the United States and the other "haves," whether via sanctions, military pressure, or otherwise, the less likely that the "have-nots" will listen to it. Thus, realization of global nonproliferation interests may be found to lie not solely in the interests of China or of the United States but rather somewhere in between.

Cooperative Actions by the United States and China to Meet Nuclear Security and Proliferation Challenges

Mr. William Tobey

Issue and Scope

The North Korea nuclear issue is a substantial ongoing failure in international nonproliferation efforts. It is also a central security question confronting the United States and China and a threat to stability in the region. Therefore dealing with it is an important element of building a long-term cooperative and stable U.S.-China strategic relationship. Resolving the issue on terms favorable to China and the United States will strengthen the relationship; failing to do so will drive a wedge between Beijing and Washington.

Despite extensive efforts to curtail and reverse Pyongyang's nuclear weapons programs, there is little reason to believe that this threat has abated, or even ceased to grow, and little prospect that the possible resumption of Six Party Talks will lead to a better outcome than the previous two decades of fitful negotiations.

In three-party talks in Beijing in 2003, North Korean diplomats threatened to test, expand, or even to export the North's nuclear capability. Pyongyang subsequently committed all three actions. Hence, the nonproliferation failure spans several dimensions:

The DPRK Arsenal

North Korea detonated two nuclear tests (in 2006 and 2009), has declared itself a "nuclear power," has likely separated sufficient plutonium for a small nuclear arsenal, and is apparently now capable of enriching uranium for weapons purposes.

Additional Capability Reliant on Imports

Between March 2009 and November 2011, North Korea constructed a modern 2,000 centrifuge uranium enrichment plant at Yongbyon, which almost certainly relied upon imported technology and equipment, despite extensive UN sanctions imposed after the 2006 nuclear test. Officials at Yongbyon claim that the enrichment facility is limited to low-enriched uranium (LEU) for reactor fuel. However, the plant is not safeguarded and additional enrichment capacity, elsewhere in North Korea—not necessarily limited to LEU—cannot be ruled out. Moreover, it is unimaginable that the North could have constructed an operational gas centrifuge enrichment plant within 20 months without drawing upon experience or even equipment from a similar, earlier facility built elsewhere in North Korea. This, of course, implies that North Korean uranium enrichment work antedates construction of the Yongbyon enrichment facility. (Theoretically, outside assistance may also have accounted for the rapid success, but this would also imply a nonproliferation failure.) Thus, both the North Korean arsenal, and Pyongyang's capability to add to it, may be growing.

Onward Proliferation

In support of illicit nuclear weapons programs, North Korea has exported nuclear material (UF6 to Libya in 2001) and plutonium production technology (a gas-cooled, graphite-moderated reactor to Syria in 2006-2007.)

Nuclear Security

North Korea is both one of the most opaque political systems on earth and one of the most brutal and pervasive police states. The first characteristic makes it difficult to judge DPRK precautions to prevent theft or diversion of nuclear weapons or material. The second implies a strong deterrent against such actions, if they were viewed as inconsistent with state security.

Nonetheless, since 1990, there have been 20-some cases of fissile material—highly enriched uranium (HEU) or plutonium—seized beyond the control of competent authorities worldwide. While there is no reason to believe that any of this material originated in North Korea, the ongoing seizures demonstrate that loss of control of fissile material is a real and urgent issue. Moreover, North Korea's illicit trafficking of counterfeit currency and goods, drugs, and arms demonstrates a willingness to engage in corrupt practices, and commerce with smugglers. The "insider threat," thus, cannot be ignored. Finally, totalitarian regimes occasionally fail, especially when associated with the economic desperation now experienced by the North. Under such circumstances, stewards of nuclear weapons and fissile material might become thieves and smugglers to maintain their standard of living even as the system fails around them, as occurred in the former Soviet Union.

While there is little reason to believe that North Korea will abandon its nuclear weapons under any foreseeable circumstances, the other five parties, and indeed North Korea itself, are likely to continue to pretend that this is possible. Therefore, this paper is designed to address cooperative actions regarding nuclear security and proliferation, *aside from the central issue of the Six Party Talks*, i.e. reversing the North Korean nuclear weapons program.

Instead, this paper attempts to address the following question:

> Assuming that both the talks and North Korea's nuclear weapons program will remain in place—the former in fits and starts, the latter continuously—what cooperative steps can be undertaken to lessen the risks to the international community from onward proliferation, theft, diversion, or loss of control of North Korean nuclear weapons or material?

Specific potential risks to Chinese and U.S. interests posed by the spread of North Korean nuclear weapons or material include:

- Deeper and more dangerous regional tensions in the Middle East, raising energy prices;
- Access to fissile material by terrorist groups, with unpredictable but dire consequences; and,
- A threat to stability on the Korean Peninsula as other states hold Pyongyang responsible for proliferation.

Conditions that Might Lead to Proliferation or Loss of Control of Nuclear Weapons, Material or Technology

In theory, nuclear weapons or material might emanate from North Korea under one of three conditions:

- North Korean authorities might order a sale to fund regime coffers, for political purposes, or both;
- Insiders might divert material or a weapon to sell for personal gain or for reasons of personal ideology; and,
- Political instability might undermine physical and personnel security systems and practices at nuclear institutions, leading to a breakdown in security.

While the latter two scenarios are theoretical possibilities in the case of North Korea, there is precedent for each in other nations and, of course, the first scenario has already occurred in the North. Therefore, prudent policy makers will make contingency plans to address these circumstances. China and the United States are perhaps best suited of all nations to deal with such contingencies in the North Korea case and acting together, they will be far more effective than either could be on its own.

Options for Action

Several lines of action are possible to prevent the further spread of nuclear weapons, material, and technology from the DPRK. Each also involves several possible tangible activities, which could be pursued in a coordinated fashion.

Greater Use of the Global Initiative to Combat Nuclear Terrorism

As founding partners in the Global Initiative to Combat Nuclear Terrorism (GICNT), China and the United States have a ready-made umbrella for cooperation. Among other things, the GICNT statement of principles provides for:

- Improving the ability to detect nuclear and other radioactive materials to prevent nuclear trafficking;
- Improving capabilities to search for, confiscate, and establish safe control over unlawfully held nuclear or radiological materials; and,
- Information sharing pertaining to the suppression of nuclear terrorism.

All of these principles could foster greater actions to prevent further onward proliferation from North Korea. Moreover, cooperation under the umbrella of the GICNT may appear less threatening to North Korea, and so long as national capabilities are enhanced need not specify a particular threat scenario. Thus, using the Global Initiative to manage cooperation may address the concerns of those who worry that too much is being asked of China, particularly with regard to a close ally of Beijing.

Increased Cooperation on Detecting and Preventing Illicit Nuclear Trafficking

Specific actions by the two nations might include:

- Regular and routinized sharing of law enforcement and border security information related to nuclear and radiological smuggling in Northeast Asia;
- Full implementation of “Second Line of Defense” programs to prevent transshipment of North Korean nuclear material through Chinese ports or airports;

- Increased inspection of DPRK cargo transiting the territory, waters, or airspace of Northeast Asian nations bound for states that have outstanding and unmet requests for clarification or information by the International Atomic Energy Agency (IAEA) secretariat; or
- Joint interdiction exercises to respond to nuclear smuggling scenarios.

Coordinated Emergency Response in the Event of Loss of Control of Nuclear or Radiological Material in or Transiting Through Northeast Asia

Loss of control over nuclear or radiological materials can occur for a variety of reasons, but the basic responses are similar regardless of cause. Moreover, the effectiveness of that response depends critically on contingency planning for timely and effective measures. Time is of the essence, and does not allow for establishment of ad hoc communications procedures. Specific steps that might be taken in this realm include:

- Joint exercises of radiological source recovery teams to share insight on equipment, procedures, and concepts of operations (China has already hosted a radiological source recovery exercise under the GICNT, which could be built upon);
- Sharing of governmental points of contact for nuclear and radiological emergency response, and exercises to ensure timely and effective communications in the event of a loss of control emergency;
- Border control contingency planning for scenarios involving loss of control of nuclear or radiological material to prevent the onward proliferation of nuclear material; or
- Regional and bilateral dialogue on emergency response to loss of control of nuclear or radiological material to improve the coordination and effectiveness of response throughout Northeast Asia.

Constraints, Context, and Priorities

While some in Beijing may feel constrained by reluctance to appear to be acting against Pyongyang, cooperation under the GICNT and working at the technical level should address this concern; moreover, if the proliferation problem remains unresolved, resulting unilateral U.S. responses are likely to be even more problematic to those harboring the concern. For example, North Korea's nuclear program directly injures stated Chinese security interests in five key ways; it:

- Drives the United States and its allies Japan and South Korea closer together;
- Makes the continued presence of U.S. troops on the Korean Peninsula more likely;
- Increases the salience of nuclear weapons, and in particular extended deterrence;
- Drives additional missile defense deployments, which capable against Chinese as well as North Korean systems; and,
- Is a source of instability in its own right, by raising military tensions and emboldening Pyongyang to undertake conventional military provocations.

Should these considerations prove insufficient to motivate Chinese action, or to overcome wariness about acting on the North Korean nuclear issue, the context of the cooperation could also be set in addressing fissile material transiting Northeast Asia.

Although they would be most effective if implemented together, these options could be undertaken separately, prioritizing those that are most easily accomplished politically. A nonproliferation working group between the two countries, held at the deputy assistant secretary level, and including technical experts beyond the foreign ministries could likely make significant progress.

Conclusions and Recommendation

The central question of the Six Party Talks—denuclearization of the Korean Peninsula—appears intractable. Nonetheless, both China and the United States have important interests in preventing the matter from growing worse because nuclear weapons, material, or technology emanate from the DPRK. Further nuclear proliferation by North Korea would threaten regional stability and international peace and security.

Both the United States and China are well positioned to address the North Korean proliferation threat, and their actions will be more effective if taken together. The Global Initiative to Combat Nuclear Terrorism provides a framework for such cooperation. Moreover, specific, tangible acts that China and the United States could undertake would address the threat of onward proliferation by the DPRK. Such actions are critical to building a long-term cooperative and stable U.S.-China strategic relationship. Beijing and Washington should take them.

China, U.S. and Nonproliferation: Rebuilding Consensus and Promoting Cooperation

Dr. Fan Jishe

The arms control and nonproliferation agendas of Washington and Beijing have, in broad terms, gradually converged in the last two decades. But the two countries still have a variety of differences when approaching nonproliferation challenges. What are those differences and why do such differences persist? Is it possible to further cooperation and reduce differences for both countries? The first part of this paper summarizes the differences in Chinese and American nonproliferation policies. The second part explains the reason for the policy differences, and analyzes the possibility to convert divergence into convergence. Finally, this paper applies this analysis to the current North Korea nuclear crisis and nuclear security issues.

China and U.S. Differences in Nonproliferation

China and the United States share common interests in nonproliferation and have had considerable cooperation addressing regional nonproliferation challenges in the last two decades. However, there exist many differences in China's and U.S. policies toward nonproliferation. These differences originate from the importance of nonproliferation issues in their foreign policy agenda, the way they judge a nonproliferation challenge, their approach to address nonproliferation challenges, and the platform they prefer to tackle these challenges.

First and foremost, the importance of nonproliferation issues in the foreign policy agendas of China and America is quite different. During the Cold War, the United States and the Soviet Union made arms control a high priority issue. Much of their efforts were devoted to preventing the other side from gaining advantage, while nonproliferation efforts aimed to prevent other countries from obtaining a nuclear capability. Since the end of Cold War, nonproliferation has become a top priority for the United States in order to stop potential adversaries from acquiring Weapons of Mass Destruction.

For China, nonproliferation was not an issue of much importance in the foreign policy agenda at all in the Cold War era; after the Cold War, even though the importance of nonproliferation issue increased gradually and even dramatically, so far it is not a top priority issue yet. In China's National Defense White Papers since 1998, arms control and disarmament issues are usually addressed in the last part or included in the part on international security cooperation. In addition, arms control and disarmament issues are more important than nonproliferation issues, and nonproliferation is considered only as part of the general security environment.

Second, the way that two countries judge nonproliferation challenges is quite different. It is always controversial to judge whether a country is engaging in nuclear proliferation activities. China considers universally accepted international norms as the only criteria to judge a nonproliferation challenge, and tries to seek consensus on these issues. If one country is suspected of engaging in nuclear proliferation activities, China takes the reports from International Atomic Energy Agency's (IAEA) inspection and verification as the authoritative source of evidence. The United States usually makes judgments according to its intelligence, and emphasizes the possibilities that one country might be on its way to obtain nuclear

bombs. Such a difference between China and the United States is somewhat similar to the difference between presumption of innocence and presumption of guilt.

Third, once a nonproliferation challenge is confirmed, the two countries' approaches in addressing these challenges are quite different. As reflected in China's White Paper on Endeavors for Arms Control, Disarmament and Non-Proliferation, "proliferation of WMD has complicated root causes. In order to prevent their proliferation, an integrated approach must be adopted to address both the symptoms and the root causes." The integrated approach includes building a global security environment of cooperation and mutual trust, resorting to political and diplomatic means (seeking dialogue instead of confrontation, seeking cooperation instead of pressuring) to solve the proliferation problems. China does not think sanctions, or pressure of any kind, will work if the root course of proliferation is not eliminated. In addition, China emphasizes finding a face-saving approach as well, and does not think public confrontation helpful for nonproliferation efforts.

By contrast, the United States tends to discuss proliferation directly, and does not bother to address the root causes of proliferation. All American officials like to say that all options, including dialogue, negotiations, sanctions, threat of the use of force, and ultimately military strikes, are on the table. For China, a political solution serves as a framework and once that political framework is achieved, a nonproliferation challenge will become a “specific” and “technical” issue to be tackled with easily. That is a “build down” approach. For the United States, only when “specific” and “technical” issues are dealt with successfully, will there be some hope for a political solution. That is "build up" approach. This difference between the approaches of China and the United States is somewhat similar to the difference between traditional Chinese medicine and western medicine. When there is a symptom of illness, a Chinese doctor's diagnosis is that something went wrong with the whole body and the medical prescription usually deals with the whole body rather than the affected part only. The western doctor will address the same symptom differently, usually treating the affected part only with some specific medicine, treatment, or operation if necessary.

Fourth, China and the United States favor different platforms to address proliferation challenges. For any proliferation challenge, China believes that the IAEA is the right agency to provide evidence, while United Nations Security Council is the right platform to decide what kind of action should be taken. Decisions against a proliferation challenge should be made on consensus. They also must be able to strengthen and improve the existing nonproliferation mechanism rather than do any damage to it. For the United States, all channels should be explored. The United Nations Security Council could play a role but not necessarily a central one in addressing proliferation concerns. If no consensus could be reached in the United Nations Security Council, the United States may seek other alternatives, such as a coalition of willing. In case it is impossible to work out a solution in the Security Council, moreover, the United States is willing to take actions unilaterally. Most American officials and experts defend this policy in the following way. The U.S. reluctance to rely exclusively on the United Nations Security Council is only because the United Nations Security Council could fail to act on time, and any Resolution proposed could be vetoed, too. In addition, consensus is not the only way to judge a proliferation challenge, because a challenge could develop into a threat before consensus among major powers is reached. Then, so the U.S. argument continues, it will be too late to address such a challenge.

Rebuilding Toward Consensus: From Divergence to Convergence

The origins of China's approach in nonproliferation are its history, experiences, national interests, and foreign policy legacy. China developed its own nuclear capability because of the nuclear threat from the United States. This historical experience explains why China emphasizes "an integrated approach" to address the symptoms and the root causes as well as relying on the United Nations and other international organizations rather than narrowly defined ad hoc forums. In turn, when China was fairly weak, isolated, and on the defensive, China developed its Five Principles of Peaceful Coexistence. This legacy still serves as the guiding principles in China's foreign policy even though China's security environment and its relations with major powers have changed dramatically now. China is not very comfortable with any platform other than IAEA and UN, partly because China was not treated fairly and as an equal while China was weak and excluded from international community from 1950s to 1970s and partly because China believes that action based on consensus, taken by either UN or IAEA, is legitimate and should be implemented by all countries including China.

Another foreign policy legacy that underlies China's approach to nonproliferation is that China identified itself as a developing country. China has developed and maintained a fairly good political relationship with most of the developing countries, including those raising proliferation concerns. In recent years, with the expanding of China's interests, China's stakes in regional stability and prosperity are increasing as well. As a result, China is gradually adjusting its foreign policy according to its national interests, but it takes time.

It took several decades for China to develop its current attitude, policy, and approaches to nonproliferation issues, and it is unrealistic to expect China's nonproliferation policy to be identical to American policy. Nonetheless, while China and the United States have different views and take different approaches in addressing proliferation challenges, this situation should not be exaggerated or interpreted in a wrong way. In particular, over the past decade, every time disputes between China and the United States over nonproliferation issues emerged, more often than not, arguments were heard such as: China does not have the political will to address proliferation challenges; China is not a responsible player and only wants to achieve its own political, economic benefits by supporting those proliferating countries at the expense of international security and regional stability. These arguments incorrectly interpret our two countries' differences in nonproliferation approaches as differences over objectives. They serve only to reduce the potential for the two countries to further cooperation. Such arguments increase mutual suspicion rather than build up mutual trust.

There is no denying that both China and the United States share the common goals of nonproliferation and regional security. Moreover, without the two countries' cooperation, it will be very difficult for the international community to find feasible and long lasting solutions to proliferation challenges. Cooperation between China and the United States is not only necessary, but also required. Further, even if the approaches of China and the United States in regional nonproliferation issues differ, the two countries interaction over nonproliferation in the past two decades indicates their respective approaches are not in conflict, but complementary. However, there is rising expectation for China to play a bigger role in dealing with proliferation concerns now, while China's leverage and capability is limited. Therefore, occasionally there are frustrations and complaints regarding cooperation with China. But such complaints and accusations are likely to make harder not easier to build cooperation. Taking into account

these differences, China and the United States could further their cooperation in the following four aspects.

First, China's traditional ties with the developing countries could serve as source of strength rather than barrier when addressing proliferation concerns. China's past interaction with major powers is somewhat similar to the current proliferating countries' interaction with the United States. Now China has benefited so much from being integrated into the international community and developing economic interdependent relations with major western countries. Therefore, with such a history experience, China is in a better position to convince the proliferating countries to think twice over the nuclear option. In addition, unlike the United States' confrontational approach, China does not like to criticize those countries of proliferation concern publicly. This enables China to do the job privately. Both as an honest broker and a stakeholder, China could convey a persuasive nonproliferation message to them. China has done this job many times in the past, sometime successfully with cooperation from other countries, sometimes unsuccessfully without other countries cooperation. In the future, China and the United States should further their effective cooperation in this regard, rather than complaining about each other.

Second, China favors relying on authoritative evidence, international platforms, and a use of political and diplomatic means to judge and address proliferation challenges. This approach should serve as the first step for any follow-on measures to be taken. Only when all these efforts are exhausted, will other means such as exerting pressure, imposing sanctions, or the threat of the use of force gain legitimacy. Such an approach will make it a little bit easier for China to reach a domestic consensus on, and to get China's support for, any action to be taken. The history of nonproliferation indicates that haste makes waste, and the Iraq War is a case in point. On the other hand, there are quite a lot of examples in nonproliferation history where political and diplomatic means succeeded in addressing a proliferation concern.

Third, in comparison, China prefers reliance on political incentives with limited strings attached to political disincentives to convince another country to renounce nuclear option, while the United States prefers political disincentives or political incentives with strict strings attached to force other country to give up the nuclear option. Both political incentives and disincentives should be combined together to address proliferation concerns, and the sequence and precondition matter much. The political incentives could include individual and collective efforts to allay national security concerns, access to peaceful use of nuclear energy and technology, the possibility of establishing diplomatic relations, etc., while the political disincentives could include sanctions, pressures, and collective activities. China and the United States could employ these different approaches in parallel, and with the awareness of cooperation in mind. Certainly, if political incentives do not work well, then it will be necessary to increase the political disincentives.

Fourth, due to China's traditional ties with those countries of proliferation concern, other than nonproliferation interests, China has historical, geopolitical, and economic interests as well. Most of the time, China's policy in nonproliferation is not to choose one interest against the others, but to balance long-term and short-term national interests. Therefore, it is very important for China and the United States to find a balanced way to address these concerns simultaneously, and it is too idealistic to expect China to echo other countries concerns without reservation. In addition, China tends to take ensuring regional stability as the first priority when addressing nonproliferation challenges, while the United States puts

nonproliferation as the first priority. Their respective preferences are not necessarily in conflict with each other, but how to balance the two priorities is a major challenge for both countries to address.

Some Possibilities for Cooperation to Meet Nuclear Security and Proliferation Challenges

Basically, China and the United States have few differences over nuclear security and there exists considerable room for both countries to cooperate in this regard. For example, third countries could learn and benefit from China's nuclear security culture. In particular, China is committed to setting up a nuclear security Center of Excellence, which could serve as a platform for training, sharing best practices, technology exchange, and other international cooperation with neighboring countries. In turn, China also has participated in intercepting illicit nuclear material trafficking in the past, and when the time is ripe, China may join in the multilateral interception exercises as well. In the future, China and the United States also could share information on nuclear security. Now it may not be the right time for both countries to initiate official cooperation in nuclear forensics. Nonetheless, China and the United States could address this issue in the Track II dialogue, starting with a discussion of what type of the technology to employ in this regard. Overall, nuclear security is one area in which there are fewer irritating issues and more room to expand cooperation between both countries.

Other than nuclear security cooperation, both countries could further their cooperation in dealing with proliferation challenges in the Korean Peninsula as well. The Six Party Talks aimed at denuclearizing North Korea through a negotiating process have been in an on-and-off mode for many years, but the North Korea nuclear crisis remains unsolved. It is not because all of the countries involved, including China and the United States, have not invested enough energy; but because of poor coordination and collaboration among major powers, again including China and the United States. Starting from the fact that China and the United States share the common goals of stability and denuclearization in the Korean Peninsula, they could further their cooperation in the following areas in the future.

First of all, it might be useful for experts from both countries to review jointly their countries' policies on the North Korea nuclear issue. The purpose would be to find out where both countries have succeeded or have failed in the past, and to explore the reason behind those successes and failures. Based on that kind of policy review, it would be equally important for experts from both countries to assess jointly each country's respective interests and stakes in a nuclearized or a denuclearized Northeast Asia.

Second, the United States should provide North Korea with the hope of future diplomatic relations between the two countries, while China should persuade and convince North Korea to open up and reform. In the past decades, while the United States tended to promote regime change, China made many efforts to promote regime transformation by inviting many high ranking North Korean officials to visit China and introducing them to China's experience in opening up and reform.

For North Korea, two elements seriously affect any decision to open up and reform: firstly, how to maintain domestic stability while opening up and reforming; and secondly, how to shift focus from investing in military capacity to investing in economic development. China could help North Korea to tackle the first concern by sharing China's experience with them and by arranging for the North Korean officials to meet and talk with local Chinese officials. However, the second concern can only be addressed by the United States. North Korea has insisted that its nuclear capability is the outcome of hostile U.S. policy toward North Korea, and it further clarified the meaning of "hostile policy" in a lengthy

memorandum issued by North Korea Foreign Ministry on August 31, 2012. Specifically, this memorandum pointed to the U.S. refusal "to recognize the DPRK as a sovereign state with whom it may co-exist in the international community." China's efforts have not been very successful because of North Korea's deep worry about its external security environment. The historical experience of China's opening up and reform and establishing diplomatic relations with the United States at roughly the same time could be applied to the North Korean nuclear issue as well. China could continue its efforts to persuade the North Korean leadership to open up and reform, while the United States should adopt concrete measures to show North Korea that it would be possible to establish diplomatic relations with the United States if it decides to give up nuclear option.

Third, in case North Korea conducts provocative actions in the future, China and the United States should work together and send out the same message to North Korea, leaving no room for North Korea to manipulate differences between China and the United States. United Nations Security Council (UNSC) Resolutions 1718 and 1874 demand North Korea halt its missile and nuclear tests. Should China be alerted in advance of any possible moves in these areas by North Korea, China could use its ties with North Korea to urge it to exercise restraint and prevent it from escalating the fragile situation. Should North Korea initiate any actions which could be viewed as a direct violation of UNSC resolutions and damaging to regional stability, China and the United States should consult closely to figure out a proper response. Considering the regional implications of either country's reaction to North Korea's possible moves, it is very important to keep in mind that close consultation could help reduce misperceptions of each other's reaction and their implications. In the event of any provocative actions taking place with solid evidence, China could reduce political incentives provided to North Korea. However, it is also important to remember that China's influence over North Korea is limited.

Four, bilateral negotiations and the Six Party Talks are equally important. When China invests lots of energy to promote the resumption of the Six Party Talks, the United States could take some risks by negotiating the core issues with North Korea directly. Ever since the emergence of the North Korea nuclear crisis, many forms of negotiation have been tried, including bilateral talks, three party talks, four party talks, and six party talks. It is not an issue of choosing one against the other; to solve the proliferation challenge from North Korea, any form of negotiation that may lead to progress should be explored. Bilateral negotiation and multilateral negotiation could be mutually reinforcing and complementary. Certainly, the history of negotiation with North Korea indicates the results of neither bilateral negotiation nor multilateral negotiation are sufficient. Bilateral negotiations might be interpreted differently and turn out to be difficult to implement, while negotiations in a multilateral setting might dilute the core issue and make a consensus difficult to achieve. Therefore, in the future it is worthwhile for the United States to address the core issues with North Korea in a bilateral setting, but the achievements should be endorsed in the multilateral setting.

Five, in order to strengthen nuclear security in Northeast Asia, China and the United States could cooperate under the umbrella of Global Initiative to Combat Nuclear Terrorism. China and the United States could take measures as required jointly or unilaterally in the following areas: sharing information of nuclear or radiological material smuggling; building up China's capacity to scan or inspect cargos transiting Chinese ports or airports, with technical assistance from the United States; increasing scanning or inspection of particular cargos transiting Chinese territory, waters, or airspace, if authoritative

information warrants these actions; conducting dialogues over emergency response to nuclear security dangers in Northeast Asia.

Finally, when discussing the denuclearization of North Korea, more often than not, some might argue why bothers to restart the Six Party Talks or other negotiations since negotiations have failed so many times. On the contrary, this line of argument would continue, the priority now is to manage the consequences of a nuclearized North Korea, that is, to contain possible proliferation, to delay possible technical progress, to be prepared for any provocation, and to be prepared for any regional spillovers in case there is any contingency. If this school of thoughts prevails in the future policy debate, denuclearization will be a mission impossible since it is equivalent to recognizing North Korea as a nuclear power. What is more important, this school of thoughts will set an example for other countries of proliferation concern to learn from, and for the NPT treaty, it will be another straw that might break the camel's back.

Strengthening Sino-U.S. Strategic Mutual Trust by Scientific-Technical Cooperation: Why and How?

Dr. Liu Chong

This paper mainly discusses the role of and prospects for strengthening bilateral science and technology (S&T) cooperation between China and the United States in the nuclear field. Broadly speaking, as the U.S.-China strategic relationship encompasses the fields of politics, economics, science and technology, culture and other areas, cooperation and exchanges on nuclear science and technology make up only a small part of the overall cooperative activities between the two countries. However, this one field of cooperation is significant for bilateral strategic stability, has considerable political sensitivity, and to some extent reflects the changes in the bilateral strategic relationship. Thus, it needs thorough analysis and is worth trying to facilitate.

Lessons Learned From Sino-U.S. Nuclear S&T Collaboration Over the Past Three Decades

Fundamental Characteristics of Sino-U.S. Exchanges

First, since the 1980s, China and the United States have embarked upon a multi-layered and wide range of exchanges, from those at the governmental level to those at the private sector level, including policy analysis, technical cooperation, youth training and other programs covering disarmament verification, nonproliferation safeguards, nuclear security and nuclear safety. At the governmental level, the two countries signed a "civilian nuclear cooperation agreement"; they started the "U.S.-China Technical Exchange Program"; and the U.S. Department of Energy, the Chinese Atomic Energy Agency, the Chinese Atomic Energy Academy of Sciences, and other organizations carried out relatively deep cooperation in the field of nuclear materials security and physical protection technology. At the non-governmental level, there have been various visiting scholar programs as well as the International Summer Symposium for young scientists organized by the Union of Concerned Scientists and the ISODARCO Beijing Conference which serve as a platforms for exchanges between Chinese arms control scholars and scholars from other countries.

Second, given this background, the starting point today for strengthening U.S.-China S&T cooperation is quite high. As early as the late 1980's and early 1990's, scientists from both countries, and even from the nuclear weapons laboratories, had undertaken cooperation on nuclear materials protection, verification, and other topics. Furthermore, U.S, scientists had visited many Chinese nuclear weapons research facilities and testing sites, even before the establishment of bilateral exchanges between the civilian nuclear regulatory and research sectors. These exchanges played an important part in promoting mutual understanding between China and the United States.

Third, in the late 1990s, China-U.S. science and technology exchanges in the nuclear field experienced a relatively large setback, and have yet to recover fully. Mainly, this was due to the issuance of the Cox Report by the U.S. Congress in 1999, which falsely accused Chinese scientists of using U.S.-China cooperation to steal U.S. secrets. This report led to the U.S. ending of the cooperation program between the nuclear weapons laboratories and it also impacted normal U.S.-China exchanges on economics and trade, high technology, education, and other topics. After a period of disruption, laboratory cooperation on nuclear materials protection and security in the civilian field under the auspices of the U.S. Department of Energy and the Chinese Atomic Energy Agency were slowly restored. The two

countries have also carried out a number of cooperative activities on reducing the threat of nuclear terrorism, strengthening nuclear detection capability, and other related topics. However, because the United States refuses to admit officially that the Cox Report was not objective, exchanges between nuclear weapons laboratories have not resumed. Although President Obama proposed the resumption of exchanges between nuclear weapons laboratories after he was elected, this has yet to be realized.

The Fruits of U.S.-China S&T Exchanges

Science and technology exchanges in the nuclear field between the two countries have certain salient characteristics. They also have born and can bring tangible fruits in a number of ways as shown in the following discussion.

First, nuclear scientists briefing each other on major strategic projects can enhance the credibility of policy statements. Some scholars believe that U.S.-Sino S&T cooperation only has symbolic meaning and insist this cooperation was the outcome of mutual trust rather than a driving force in building such trust. For these persons, the value of S&T cooperation probably lies more in the process than the outcome. Actually, the bilateral communication of the nuclear scientists could contribute to strategic mutual trust in a substantial way. Data and scientific laws do not lie easily. In line with policy requirements, scientists can provide technical data on the key parameters and details of large scale projects and increases of capability that may raise major strategic concerns. In so doing, they can gain each other's trust and help raise the overall level of bilateral strategic trust. For example, during the CTBT negotiations, the United States claimed that its Stockpile Stewardship and Management Program was aimed at maintaining the reliability of nuclear weapons and was not aimed at developing new capabilities. However, the Chinese side worried that U.S. Stockpile Stewardship was simply a way of escaping the CTBT and continuing U.S. nuclear modernization. To this end, scientists from both countries carried out a number of frank exchanges, which helped dispel the doubts on the Chinese side and promoted the completion of the CTBT.[1]

Second, the different perspectives of scientists in governmental and military exchanges constitute a useful complement to more policy dialogue. Science and technology are relatively objective. Scientists often have different views on policy questions and can sometimes play an important promotional role. For example, at the beginning of the 1990s, China made a major adjustment to its stance on arms control and non-proliferation. It began to play a positive role in multi-lateral international meetings, treaty negotiations, and on regional security questions. Thus, arms control and disarmament became a part of Chinese national security policy and was accorded an important position. These changes occurred while U.S.-China scientific exchanges were taking place and the Chinese arms control expert community was forming.[2] These exchanges may have played a unique role in influencing China's arms control diplomacy in that period.

Third, multi-level exchanges between scientists can increase the breadth and forward-looking scope of the discussion. As exchanges between scientists are often very informal, and the questions discussed are often quite broad, there can be a frank discussion of issues of concern to both sides. Moreover, such

[1] Zhao Hong: *Exchanges between Chinese - American Arms Control Experts: The Case of CTBT,* Master Degree Dissertation, Tsinghua University, 2006, p 32- p35.
[2] ibid., p 23-p24

exchanges can promote the technical evaluation of the feasibility of future arms control and nonproliferation initiatives or treaties as well as the design of related verification and control measures. This is particularly evident in the negotiations over the CTBT between the two countries.

Lessons of History

There has already been more than 20 years of U.S.-China nuclear science and technology exchanges. Although they have played a role in promoting mutual trust between the two countries, they have also exposed problems. Especially some practices on the U.S. side still pose a serious obstacle to science and technology exchanges between the two countries.

On the one hand, some politicians in the United States cannot completely give up cold war thinking and seek to make China an imagined enemy. More generally, there is a wider lack of strategic trust toward China. The 1999 Cox Report is the classic example of fabrication and hatred of China by the anti-China forces within the United States. The report groundlessly accuses China of "stealing" U.S. nuclear weapons secrets, but it is entirely speculation with no evidence at all. In fact, in the early 1990s, the former director of the intelligence department of the U.S. Los Alamos National Laboratory, Danny Stillman, visited almost all of China's nuclear weapons research institutions and test sites, and he has stated his belief that Chinese nuclear weapons are entirely the result of China's own efforts, and were not obtained through spying. In particular, Stillman has said that the United States gained much more from these exchanges than China did. Robert Daniel, who visited China with Stillman, also believes: "Without putting anything out, the United States got a lot of the whole inside story on the Chinese nuclear program."[3] If U.S. politicians cannot get rid of the cold war thinking and keep making China into an imagined enemy, the political atmosphere would severely hinder the various types of cooperation between the two nations, including nuclear S&T collaboration.

On the other hand, some more specific U.S. mechanisms and procedures hinder U.S.-China exchanges. As mentioned, in the 1990s, the Chinese side allowed officials from the U.S. side to visit nuclear test sites, but when it came time for the Chinese side to visit a U.S. test site, the U.S. side rejected it for various reasons.[4] More recently, after NASA administrator Bolden's visit to China, the U.S. Congress inserted the "Wolf" clause into a budget allocation bill, which not only prevented access to NASA by the Chinese National Space Administration, but it even made it impossible for Chinese reporters to carry out interviews and reports on U.S. space activities. Similar "pay lip service, but never carry it out" performances are not uncommon in U.S.-China science and technology exchanges. This is because of the influence of the U.S. political system and it also demonstrates the U.S. side lacks good faith in the exchanges. Further, especially after the Cox Report, controls on export of high-tech items to China, and limits on U.S.-China science and technology exchanges, have been obstacles to overall bilateral science and technology cooperation including in the nuclear fields.

[3] Steve Coll: The Man Inside China's Bomb Labs, U.S. Blocks Memoir of Scientist Who Gathered Trove of Information, Washington Post, May 16, 2001.

[4] "China is the Only Declared Nuclear No First Use Country (中国是唯一宣布不首先使用核武器的国家)", *China Newsweek (中国新闻周刊)*, No. 14, 2010. p.34

Some Thoughts on Future U.S.-China Science and Technology Cooperation

Overall, there are good prospects for science and technology exchanges as part of the broader process of political exchanges between the two countries. Specifically, both sides should use the political exchanges to provide the necessary policy support for technical exchanges and use the technical exchanges to address both sides' strategic concerns. In accordance with a principle of gradual and orderly progress, the overall goal in such an approach would be to move, from less sensitive to more sensitive areas and from the civilian to the governmental sector, gradually removing the obstacles to deepened science and technology exchanges between the two counties. The key principle should be to focus on mutual concerns, and vigorously to promote the common interests of both sides, thereby strengthening and deepening bilateral strategic mutual trust.

Good Communication on Major Concerns Involving Bilateral Strategic Stability

Nuclear strategic stability is the important cornerstone of the strategic relationship between the two countries. In the context of a high degree of asymmetry between U.S. and Chinese strategic forces, how to build strategic stability and how to treat the developing changes affecting strategic stability are both worth investigating in exchanges between U.S. and Chinese scientists.

First, China and the United States should come to a deeper understanding of this new era in bilateral strategic stability. In the 2010 Nuclear Posture Review and the Ballistic Missile Defense Review, the United States stated several times that it wanted to build strategic stability with China, but never elaborated on specific measures. How to understand the content and form of bilateral strategic stability deserves intensive research on the part of scientists in both countries. China and the United States have a broad range of mutual interests and their interdependence is constantly deepening. As for potentially sensitive issues, for the moment consultation and research can be carried out at the non-governmental level.

Second, the two nations need more common understanding on the concept of transparency. Currently, the United States and China differ on the definition and practices of this concept. Some scholars even believe that differences in the strategic cultures of the United States and China over the value and purpose of transparency are a great obstacle to bilateral strategic trust. However, in pursuing strategic stability, we should not simply subscribe to the proposition of "more transparency, more stability". Instead, transparency itself is a comprehensive concept which needs thorough analysis and definition. The difference between the United States and China over transparency is more an issue requiring co-study than a great obstacle that cannot move. Further, strategic transparency has two different aspects, transparency of intentions and transparency of capabilities. The U.S. side tends to focus more on the transparency of Chinese capabilities, such as the size of China's nuclear forces, etc. However, the Chinese side is more concerned with the transparency of U.S. intentions, for example the true goals of U.S. missile defense, air-sea battle, and the development of other forces and concepts.

Moreover, given the high degree of asymmetry between U.S. and Chinese strategic forces, the fact that China as the weaker party to a certain extent maintains ambiguity about the number and deployment of its nuclear forces should in fact help to prevent an arms race and safeguard bilateral strategic stability. As the United States is the stronger party, it should go further to strengthen the transparency of its intentions and not seek parity in such exchanges in the nuclear field. Instead, by responding to China's

major security concerns in a targeted and persuasive manner, U.S. actions would avoid China triggering an arms race by being excessively concerned.

As one next step, the arms control experts of the United States and China should carry out in-depth studies and exchanges on the question of transparency. The purpose of such studies would be to grasp better the relationship between the concepts of transparency of intentions and transparency of capabilities as well as to define what kind of transparency in each strategic area would enhance strategic stability for each party. Thus, such experts' discussions would help both sides' political and military leaders to make decisions enhancing strategic stability.

Third, the U.S. side could provide more information about the targets of major strategic weapons programs and capacity building activities in advance. What are the targets and plans for U.S. anti-missile systems, especially the development of ABM in East Asia? What is the purpose of U.S. nuclear weapons infrastructure upgrades? How are the U.S. Prompt Global Strike, space plane, and other major strategic weapons programs being developed, etc.? In truth, all of these questions impact bilateral strategic stability and there needs to be an increased level of transparency on these topics. In order to reduce China's worries, U.S. scientists could elaborate on these important details from a technical level. Also, if the United States did not seek parity in exchanges but focus on answering Chinese concerns, it would be better for both sides, because the elaboration from the United States could decrease the motivation of China to take countermeasures. After the United States gains trust from China through such a communication process, China would be more willing to answer the doubts from the United States.

Efforts to Explore Common Interests and Concerns, and Actively Carry Out Cooperative Projects

Many U.S. scholars regard restoring exchanges between Sino-U.S. nuclear weapon laboratories as a very important stepping stone in building mutual strategic trust between the two nations. However, in these days of a profoundly changing international situation, exchanges between individuals from the countries' nuclear weapon laboratories is not as significant as it was in the cold war era, when the start of such exchanges was a critical symbol of bilateral strategic trust. Nowadays, the main security threats to China and the United States do not come from each other. The two countries have broad and profound common interests, and this point has been reflected in their science and technology exchanges. So viewed, the following are promising areas for the United States and China:

The first area is an in-depth assessment of the international non-proliferation situation. In the context of the global nuclear renaissance, China and the United States could carry out such an evaluation of future potential threats in the field of international non-proliferation, focusing on national nuclear power development. For example, U.S. Professor Siegfried Hecker carried out exchanges with Chinese scientists after North Korean nuclear tests and achieved good results. [5]

The second one is technical cooperation in the field of nuclear materials security. China and the United States have already started comprehensive cooperation in this area. For example, in 2006, the U.S. Department of Energy and the State Development and Planning Commission of China signed an agreement on Cooperation Concerning Peaceful Uses of Nuclear Technology. In January 2011, China and the United States signed a memorandum of understanding to work together on establishing the Center of

[5] Siegfried S. Hecker: Adventures in scientific nuclear diplomacy, *Physics Today*, July 2011, p 31.

Excellence for nuclear security. In December 2011, the two countries started the Megaports Initiative pilot project in the Yangshan Port of Shanghai. In September 2012, China and the United States commissioned a Radiation Detection Center in Qinhuangdao, to enhance efforts to counter nuclear smuggling. Building on such fruitful collaboration, experts from both countries can carry out further analysis of the sources of potential threats, to determine their level of priority and to enable their governments to focus future collaboration on their prevention. The two countries could also carry out cooperation on nuclear and radiological materials detection technology, to improve the level and efficiency of detection devices.

The third area is technical cooperation in the field of nuclear safety. The Fukushima nuclear accident focused attention on the potential safety hazards in current nuclear power plants. China and the United States currently have the most reactors and the most plans for nuclear power development. So the two countries should conduct in-depth cooperation in this field.

Apart from these areas, the two countries can also consider strengthening cooperation in the development of safeguards and verification technology.

Mitigate the Impact of the Structural Obstacles to Exchange and Cooperation

At the same time that the two countries are seeking ways to strength science and technology exchanges in the nuclear area, they should avoid unnecessary disputes. They also could take steps gradually to deal with the obstacles that interfere with a further deepening of bilateral cooperation.

First, a sound risk control mechanism is strongly needed. In implementing U.S.-China science and technology exchanges, there is information that each side does not want the other to access. Both sides should cooperatively research and implement various means of information management to control this risk, thereby promoting national security interests while protecting national security information. Development and implementation of such risk control measures will help reduce speculation about loss of secret information, based on hearsay evidence such as in the Cox Report. Moreover, the two countries should consider establishing procedures for prequalification for aspects of cooperation that require congressional approval, to prevent the embarrassment of not being able to implement an agreement, as described above. In turn, if the U.S. side knows that it will be difficult to carry out an agreement, then this should be admitted to the Chinese side before an agreement is reached. U.S. officials should not wait until after the reaping the benefits of an agreement to pull out various "political excuses" to shirk their own obligations.

Second, the two countries need to cooperate to reduce greatly or even eliminate the obstacles to exchanges of scientific personnel. After the Cox report, the U.S. Government set up all kinds of obstacles to scientific personnel exchanges between the two countries. If we can establish effective risk control mechanisms, and continue to maintain the various limits on personnel exchanges, then there will be no more excuses.

Thirdly, in a targeted manner, the United States should relax high-tech export controls against China. China understands U.S. security concerns, but as today's market prosperity is highly dependent on high-tech development, too stringent export controls will hurt the United States' own security interests in the end. Especially in technical areas of common concern, strengthening bilateral exchanges may produce a

"1+1>2" positive effect. For that reason, it would be better that the United States reduce those export control restrictions on technology and equipment which hinder reasonable and necessary bilateral areas of cooperation. By doing so, U.S. actions would contribute to enhancing the level of technical cooperation between the two countries and to strengthening the two countries common interests.

Fourth, China and the United States could pay more attention to exchanges between young nuclear scientists and policy personnel. From history, we can see that the young science and technology personnel who participated in exchanges between the two countries in the 1980s now have become the backbone of their various fields. In particular, they play an important role in coordination and cooperation between the two countries in the field of arms control. China and the United States could further enhance exchange efforts focused on youth and make an effort to strengthen other types of interaction between young scientists and policy analysts. Doing so would help to lay a solid foundation and create a good atmosphere for strengthened cooperation between the two countries.

U.S.-China S&T Collaboration and Cooperative Security

Mr. Toby Dalton

Science and technology (S&T) cooperation in matters related to national security is an important practice states can undertake as a means toward establishing patterns of behavior that build confidence and improve mutual understanding. Such cooperation differs from other efforts with similar objectives, such as track II policy dialogues, by virtue of the principal actors involved—scientists and technical experts, as opposed to policy experts and retired officials and military personnel—and the subject of cooperation, namely the application of scientific disciplines such as physics, chemistry, geology, and engineering, to national security questions. Activities undertaken through science and technology cooperation could include, for example, information sharing on approaches to common challenges, such as environmental monitoring; discussion of new approaches to international issues, such as techniques and technologies for nuclear forensics; and joint studies or assessments, like atmospheric modeling. When mature, such cooperation could extend to the development of new technologies or instruments, for instance on approaches to improve treaty monitoring.

The value of S&T cooperation probably lies more in the process than the outcome, as such cooperation on its own is unlikely to result in a fundamental reorientation of bilateral relations, and it is rather fruitless to expect such returns. However, as part of a broader diplomatic and security process, S&T cooperation provides a useful channel to regularize habits of dialogue, challenge assumptions and perceptions, reduce uncertainties, build professional bonds and a common lexicon, and explore technical approaches to security challenges. S&T cooperation, in particular in the nuclear area, has intrinsic value in facilitating dialogue and remains a mechanism with great potential for the United States and China to utilize as a means toward building a stable strategic relationship.

Potential Contributions of S&T Cooperation

S&T cooperation as a tool of statecraft is not particularly well explored in the international relations literature; there is no specific theory of how and why S&T cooperation contributes to international security, even though it is a fairly common practice. It is commonly understood as a confidence-building measure: intended to avoid crisis or conflict, stabilize relations, and build a foundation for peaceful and cooperative relations. Unlike most CBMs, which are applied in the political-military arena, S&T cooperation in this guise focuses more narrowly on the intersection of science and national security.

In practical terms, there are a few mechanisms by which S&T cooperation could contribute to these broader objectives. First, dialogue among experts who share a common basis of interests and technical language is more likely to transcend the cultural or political barriers that otherwise impede trust building and improvements in the strategic relationship. Second, these experts—trusted by their governments for their technical expertise—inevitably form a constituency with a vested interest in continued cooperation. They can be important voices within their political system arguing for stability. Third, S&T cooperation has potential "spillover" benefits if it helps build confidence in the dialogue process in other organizations, as appears to have been the case when the participation of Chinese nuclear scientists in international meetings facilitated the eventual participation of officials from China's 2nd Artillery Division

in such gatherings.[1] And fourth, as consensus on the value of S&T cooperation and the trust that results permeates the thinking of government officials, it creates some "breathing room" to allow for an expansion of dialogue into more sensitive areas.

Levels of S&T Cooperation in U.S.-China Relations

There are multiple levels at which S&T cooperation can take place, with the higher-level cooperation requiring greater oversight but delivering potentially larger rewards. At a low level, cooperation among universities occurs by virtue of student and faculty exchange and joint research programs. Medium-level efforts may take the form of Track 2 dialogues involving retired officials or scientists. There are many such U.S.-China efforts at this level across a broad range of issues, including for instance the Initiative for U.S.-China Cooperation on Energy and Climate. At a medium-high level, there are so-called Track 1.5 processes with some measure of government oversight and sometimes involving officials and scientists acting in a personal capacity under the rubric of non-governmental structures. A good example of this kind of cooperation is the effort by the Chinese Scientist Group for Arms Control and U.S. National Academies' Committee on International Security and Arms Control, which produced a very useful glossary of nuclear terminology.[2] Finally, at the highest level are activities negotiated and implemented between governments and their sub-agencies and laboratories. There are a wide array of such official S&T cooperation programs between the United States and China, including for instance cooperation on seismic hazards between the U.S. and Chinese Geological Surveys. It is worth noting that commercial S&T activity is also beneficial to the extent it increases broader economic interdependence, which is an important layer of a healthy and stable bilateral relationship between states, but is less directly part of a cooperative security framework.

The sensitivities involved in any cooperation that relates to national security require careful oversight and political commitment by both parties. There will always be skeptics who will argue that such cooperation undermines security and ought to be avoided. It is therefore important to insulate the cooperative process in such a way that these critics have no basis for claiming that national security is at risk. Similarly, parties involved in cooperation should seek to avoid reverse linkages to unrelated issues that might slow the cooperation or undermine its intent. It seems pragmatic for S&T collaboration to begin in less sensitive areas and involve less sensitive entities, and build toward more sensitive topics once there is a good foundation for such cooperation and trust in the procedures that have been developed. There is always some measure of risk involved in cooperation on sensitive issues, but such deliberate care will help avoid the kind of shocks that could harm the broader relationship.

There is a strong base of S&T cooperation between the United States and China at all of the levels of authority identified above. An important nexus in particular exists between the medium and high levels, with the need for mid-level cooperation on topics that are still too sensitive for the high level. On nuclear issues, there is good cooperation between civilian nuclear authorities and regulators on nuclear safety, safeguards and security. This cooperation does not currently extend officially to the agencies or laboratories involved in nuclear weapons activities. Instead, these more sensitive topics are discussed in several Track 1.5 and Track 2 channels, which do not carry an official imprimatur.

[1] Li, Bin, "Promoting Effective China-US Strategic Nuclear Dialogue," *Carnegie Nuclear Policy Program Commentary*, October 18, 2011.
[2] Available at: http://sites.nationalacademies.org/PGA/cisac/PGA_050966

Barriers to Cooperation

In the last three decades, U.S.-China discussions and cooperation on nuclear issues has steadily grown, but not without encountering some major hurdles. Currently there are legal frameworks in place at the government-to-government level that permit a range of cooperation between agencies and commercial entities. Civil nuclear and nuclear security cooperation have become major thrusts of these discussions, but increasingly there are signs that nuclear weapons-related issues are emerging as a topic for broader discussions in the future, certainly between the militaries of the two sides, but also involving the technical and policy communities.

There are at least four significant structural barriers to deeper U.S.-Chinese government-to-government cooperation on more sensitive nuclear issues, however, outside of the usual political flare-ups. The first barrier is bureaucratic. In the 1990s, U.S. and Chinese nuclear laboratories began a process to establish a program of S&T cooperation that would have improved understanding between the nuclear establishments in both countries. The cooperation, though nascent, was seen as very promising in both countries as an important avenue for reducing mistrust on nuclear matters. Unfortunately, cooperation with China became highly politicized in the United States with the release of the Cox Commission report in 1999, which prematurely ended the lab-to-lab process and regrettably damaged the reputations of scientists involved.

There seems to be interest in both Washington and Beijing in finding a way over this hurdle, but no agreement within their bureaucracies about how to do so. On the Chinese side, intense feelings of grievance over the affair remain; on the American side, there is a tendency to dismiss the Cox report as an artifact that should have minimal bearing on the future. Washington interprets Beijing's pre-conditions for resuming cooperation as a demand for an apology. U.S. officials recognize the Chinese desire for closure, but are not able or willing to "apologize" for a report by the U.S. Congress, for which the U.S. Executive Branch has no responsibility. At the same time, Chinese officials and scientists seem unwilling to take the risk to proceed without resolution of this incident and a formal institutional mechanism to insulate them from any criticism that might result from such cooperation in the future.

The second barrier is a difference in the strategic cultures of the United States and China over the value and purpose of transparency. In the United States, transparency as a general matter is understood as part of the fabric of liberal democratic government. U.S. strategic culture therefore places a high value on transparency in its threat assessments and efforts to build partnerships. When U.S. officials and experts analyze other countries' strategic orientation, they look in particular at transparency in the decision-making process, as well as of intentions and capabilities. Chinese strategic culture, on the other hand, seems to place higher value on opacity, due to China's interest in maintaining deterrence with a small nuclear arsenal and more potent conventional military capability. Transparency, it is said in China, is an element of a coercive strategy by strong states against the weak. This view may be changing as demand grows in China for greater visibility on government activities, especially those impacting people's daily lives. But such change will take time and near-term U.S. proposals to increase transparency as part of a confidence-building effort will continue to be discounted in Beijing.

A third barrier, though somewhat less problematic than the first two, is a perceived technology gap between the United States and China. The significant and rapid advancement of Chinese science and technology in the last decade has narrowed the gap, and China's ongoing investment in a manned space

program and large civil nuclear sector will shrink the gap further when it comes to more sensitive areas of cooperation. Still, there may be reticence on the part of U.S. experts to engage if they do not believe the cooperation will involve information flowing in both directions, while Chinese experts may not yet have sufficient confidence in their own expertise to be comfortable in such engagements.[3]

A fourth barrier to building a cooperative security relationship is the asymmetry in military capabilities between China and the United States. Although China has closed the gap in capabilities through greater military spending and important investments in infrastructure, such as in communications and space, this asymmetry will continue for the foreseeable future. As long as it does, and as long as the United States and China continue to seek to identify and exploit vulnerabilities in the other party's capabilities, there will be significant resistance in both capitals to any collaboration that might expose sensitive information.

A Path Forward

Without concerted effort, these four barriers will continue to frustrate U.S. and Chinese efforts to build a stable security relationship, including through S&T cooperation. Progress is still possible however. Navigating the difficult path ahead will require specific focus and discussion between the two sides on identifying a process that works and prioritizing substantive areas that are mutually beneficial.

Often, and particularly with the Cox report, it appears that U.S. and Chinese discussions and differences focus on process at the expense of developing shared objectives. It may not be possible to overcome the Cox report episode, at least in the near term. This is unfortunate, but does not preclude cooperation going forward. Indeed, it is noteworthy that a broad range of discussions and collaborations on sensitive national security issues, often involving technical personnel from U.S. and Chinese national laboratories, has taken place over the last decade with relatively little disruption. The specific focus on the "weapons labs," in this regard is not critical. There are many scientists at U.S. and Chinese non-weapons laboratories doing relevant work and having the right knowledge and skills to contribute. This demonstrates that resuming the lab-to-lab format is not a necessary condition for cooperation, as desirable as that format might be.

The bureaucratic hurdles described above can be resolved if process becomes a means, rather than an end. If U.S. and Chinese officials are serious about elevating the role of S&T cooperation, they should define a shared vision built on the integration of broad objectives, cooperative process, and specific topics. Establishing this kind of hierarchy, and specifically tying together form and substance, would help insulate S&T cooperation from external shocks and criticism. Both sides should agree on each of these three elements, even if they have different reasons for pursuing cooperation. In Washington, an interagency process should backstop cooperation to ensure that all relevant parties are supportive; informal Congressional briefings are a necessary aspect of maintaining support.

If defining the vision is the top-down approach, it is important that it be matched by a bottom-up effort to establish topics for cooperation that meet that vision, are appropriate for the available

[3] See for instance Prindle, Nancy, "The US-China Lab-to-Lab Technical Exchange Program," *The Nonproliferation Review*, Spring/Summer 1998, pp. 111-12.

collaborative processes, and have significant support within the scientific community. Absent a formal bilateral process, existing Track 1.5 and Track 2 venues provide ample opportunity for U.S. and Chinese experts to exchange ideas and to probe the suitability of particular topics. Indeed, at one such meeting it might be beneficial to devote a session to the definition of an agenda for S&T cooperation. At the conclusion of these meetings, each side can report back to officials on the results of their conversations.

Thinking about the objectives of cooperation, what kind of topics might have priority, and the process for cooperation, several possibilities come to mind:

- After the Fukushima nuclear accident, many concerns have been raised about the safety and security of commercial nuclear facilities. One clear lesson from Fukushima is the need for strong emergency planning and preparedness, which of course has multiple applications. This seems like one area in which U.S. and Chinese scientists, who in some cases already observe table top and field exercises in both countries, could do more to share lessons from these experiences, as well as other technical modeling and risk assessment techniques. These are topics that go beyond the existing cooperation agenda involving U.S. and Chinese nuclear regulators.
- Bilateral and multilateral nuclear test site transparency has been proposed several times over the years, but has not been taken up due to some of the hurdles described above. Yet, there are potential significant linkages between S&T cooperation involving sensitive facilities like test sites and broader objectives of stability in bilateral relations. Though "transparency" may not be the most appropriate framework for this activity, the idea would be to use test sites as the subject of informal consultations, proceeding to reciprocal visits and possibly observation of some activities—as a stepping stone perhaps to broader discussions of management of evolving nuclear arsenals. Such activity could help build confidence in China that the U.S. nuclear modernization program is not about building new capabilities that are intended to or will threaten China. Likewise, it could help build confidence in the United States that China's modernization and nuclear test activities are not in preparation for a "race to parity" if and when Washington and Moscow agree to reduce further their nuclear arsenals. Perhaps one way to initiate this type of cooperation is to frame it not in terms of a bilateral activity, but in terms of confidence-building with the Comprehensive Test Ban Treaty Organization. Providing a different bureaucratic framework may assuage some of the concerns that have prevented this activity to date.
- Careful broadening of dialogue between scientists about potential security capabilities could help each side better understand threat perceptions and the potential dangers of mirror imaging. For instance, Chinese scientists could present to their American colleagues their understanding of and concerns about U.S. missile defense activities or conventional long-range missile systems.[4] U.S. scientists could present on their understanding of and concerns about China's anti-satellite programs. All of these could be based on information only in the open literature and would serve to highlight how capabilities are perceived or misperceived in both countries. This framework for exchange of ideas may be useful in general, even if the particular topics suggested here are too sensitive to discuss at this time.

[4] See for instance Zhao, Tong, "Conventional Counterforce Strike: An Option for Damage Limitation in Conflicts with Nuclear-Armed Adversaries?" *Science and Global Security*, Volume 19:3, pp. 195-222.

- Nuclear security (which will be covered in greater detail in another paper) is an area in which formal S&T cooperation has been highly productive. China's participation in the Nuclear Security Summit process and construction of a Center of Excellence for nuclear security training and technology, done in partnership with the United States, is a great example of this work. The high-level political commitment by both governments to nuclear security provides a useful framework under which to consider additional S&T cooperation. This could include, for instance, discussion and development of technologies and systems for countering nuclear smuggling or joint modeling of scenarios involving terrorist use of a radiological dispersion device. It would also be useful for China and the United States to coordinate technical backstopping and resulting diplomatic approaches to strengthening multilateral nuclear security work through the International Atomic Energy Agency.
- In recent years, China and the United States have invested more energy in an invigorated P-5 process, which also provides a new potential umbrella for S&T cooperation. As U.S. and Chinese officials become more comfortable participating in this format, and as the agenda becomes more concrete, there may be opportunities for bilateral cooperation on specific issues related to the fulfillment of elements of the 2010 Non-Proliferation Treaty Review Conference Action Plan. This could include discussion of new verification measures for disposition of excess fissile materials or for building confidence in the reduced operational status of nuclear weapons. These exchanges could set the stage for work on "information barriers" or other techniques that could be applied in a future arms control process involving both China and the United States.
- In addition to near-term ideas like those described above, longer-term scientific exchange programs could also be considered. Such programs, though costly, would constitute an investment in enhancing the scientific understanding and networks of individuals who will become informed and important voices in their respective policy systems. Such exchanges could be done, for instance, through a bilateral nonproliferation technology course for young U.S. and Chinese scientists just starting their careers in government or at nuclear laboratories. For senior scientists, including those employed at nuclear weapons laboratories, a six-month or one-year exchange assignment in an appropriate department at a prominent university could also build trust and understanding.

Conclusion

U.S.-China S&T cooperation is already taking place at multiple levels in a variety of forms and across a broad range of issues. This cooperation is valuable as both an end and a means: the relationships and understandings that result from this cooperation are an important aspect of building a stable bilateral relationship and eventually a cooperative security relationship. But the entirety of the cooperation at this time does not seem to be greater than the sum of its parts. That is, the stability that should result from these activities has not yet been achieved.

What should Washington and Beijing do to elevate S&T cooperation so it makes a more important contribution to stability? First, though both sides recognize that the Cox report remains an irritant, they need to either accept that this irritant will remain or find some way to resolve it. Working from this basis, U.S. and Chinese officials should define a shared vision for S&T collaboration that establishes specific objectives, agreed processes, and approved topics. Second, both sides acknowledge that some measure of

"Cold War thinking" continues to pervade the relationship, but it is not clear that each side understands what the other means by this: that the United States does not accept mutual vulnerability with China? That China interprets U.S. extended deterrence relationships in Asia as a threat? Discussion among retired officials, scientists and military officers to unpack this construct would be helpful, particularly to the extent it can identify areas of commonality and topics to incorporate into S&T dialogues that would help clarify such perceptions. And third, though both sides may have different ideas about transparency, there is a wealth of publicly available policy and technical information that could be packaged and translated for the purpose of reassurance. For better or worse, there would be greater onus on China in this regard, given that most U.S. nuclear experts have limited Chinese language ability.

Scientists and technical experts in both countries already speak the same technical language and in many cases may be more comfortable and able to interact on sensitive subjects than other groups. By utilizing these networks and carefully directing such cooperation into more sensitive areas, and by thoughtfully involving the scientists and experts who shape government opinions and policy, Washington and Beijing can take an important step forward in reducing mistrust that results from a lack of clear and informed dialogue on strategic plans, capabilities, and intentions. On its own, S&T cooperation will not bring about a bilateral cooperative security relationship, but it can be an integral and stabilizing element.

Conclusion:
Building Towards a Stable and Cooperative Long-term U.S.-China Strategic Relationship—Some Closing Thoughts on the Way Ahead

Dr. Lewis A. Dunn

By way of conclusion, this section of the Joint Study report sets out some thoughts on ways to build a stable and cooperative long-term U.S.-China strategic relationship. It addresses respectively U.S. and Chinese interests in building a stable and cooperative strategic relationship; the challenges to doing so; elements of an overall strategy that China and the United States might follow toward that goal; and potentially promising areas for next steps or initiatives that the two countries could take, whether at the Track 1 ½ or at the official levels.

In addressing these topics, I have drawn on broad themes and specific ideas contained within the experts' papers as well as points from the discussion in the July 2012 Beijing workshop of paper-writers. Every effort has been made to do so accurately. I have not, however, included specific citations to the papers though I do thank all of the authors now. That said, the propositions that follow are my personal reflections on the way ahead and I, alone, am responsible for them.

The Interests and the Stakes

For many reasons, building toward a stable and cooperative strategic relationship is in the interests of both the United States and China. This basic judgment was widely shared among the Joint Study's experts, both Chinese and American.

From one perspective, a stable and cooperative China-U.S. strategic relationship would contribute to both countries' security interests, not least by avoiding dangerous military competition, confrontation, or even conflict between our two countries in the years ahead. A cooperative strategic relationship also would facilitate actions by both countries—whether independently, in parallel, jointly, or in cooperation with others—to address global political, security, and economic challenges. From containing proliferation to shutting-down piracy, from restoring a sound global economic order to dealing with global environmental challenges, U.S.-China cooperation will be essential. Strategic cooperation also will be needed to deal with the need for rules of the road for outer space and cyber space. Equally important, a more cooperative relationship would allow scarce leadership attention, political capital, and economic resources in both countries to be used to address each country's pressing domestic economic, social, and other priorities.

From a broader perspective, getting the strategic relationship right between China and the United States is especially important for both countries because that relationship will decisively shape all aspects of the 21st century, including the prospects for war and peace. Here, many participants in the Joint Study stressed explicitly both countries' interests in avoiding the oft-encountered historical experience of confrontation and sometimes conflict between a rising power and an established power—the situation today respectively of China and the United States.

The Challenges

Building toward a stable and cooperative long-term strategic U.S.-China strategic relationship, however, confronts significant challenges. Throughout the preceding papers, these challenges have been highlighted by the paper-writers, with some of the experts more optimistic and others more pessimistic in describing and assessing their impacts. All these challenges are well-known.

At one level, there are political challenges, ranging from long-standing disagreements over Taiwan to more recent tensions arising out of territorial disputes in the South China Sea and the East China Sea. Still other political challenges stem from the need to work out each country's future role in Asia—compounded by China's rise as well as by possible mutual misperceptions of each other's intentions across the region.

Still another challenge highlighted during the Joint Study is the underlying mix of mutual uncertainties and limited mutual trust. Building cooperation is difficult when there is no agreement on whether the United States and China are adversaries, rivals, uneasy partners, or potential friends. In turn, the relationship is vulnerable to crises, surprises, and mistakes.

There also is a growing risk of heightened U.S.-China military competition and a more adversarial relationship driven by interacting military capabilities and deployments in a context of mutual uncertainties, limited trust, and some real differences of interest in Asia. Respective concerns here focus on the one hand, on U.S. deployments of missile defenses and possible future conventional global strike capabilities and China's nuclear modernization on the other hand. Both countries also remain vulnerable and attentive to each other's activities in the space and cyber space realms. The interaction of heightened military capabilities and mutual uncertainties, moreover, could become a self-reinforcing cycle: the deployment of new capabilities by each country could heighten uncertainty and add to mutual suspicion, only then to result in procurement of still additional capabilities, creating in turn still further uncertainties and pressures for additional capabilities. In effect, the danger, as many of the experts in the Joint Study specifically warned, is that China and the United States could fall prey to the traditional "security dilemma."

For both countries, relationships with third countries—and different perceptions of those third party relationships in Washington and Beijing—also can spillback to shape the two countries' interests, approaches, and the prospects for building a more cooperative strategic relationship. This impact is most evident respectively in U.S. alliance ties to Japan and South Korea and Chinese ties to North Korea. Beyond Asia, China's ties to countries such as Iran that are regarded by the United States as sources of proliferation concern best exemplifies this challenge.

Domestic political and public pressures in both countries also can impact the relationship. Some particular concerns identified include Chinese perceptions of the politicization of U.S. policies toward China and U.S. perceptions of ongoing Chinese government cyber-efforts to exfiltrate vast, unprecedented amounts of U.S. corporate economic data and intellectual property. A closely related challenge is the extent to which publics in each country view the other country as a threat.

Notwithstanding these challenges, the Joint Study also highlighted important opportunities or foundations for building greater cooperation. The economic interdependence between the two countries—

and their shared interest in economic prosperity—provides important ballast to the ups and downs of the political relationship. Another important factor is the lack of the type of deep ideological differences and competing world views so characteristic of the U.S.-Soviet Cold War relationship. As already stressed, both countries also have strong interests in building strategic cooperation. Not least, the recognition by both countries' leaderships of the importance of the relationship and the need to build cooperation provides a foundation for doing so.

Elements of a Strategy for Building a Stable and Cooperative Strategic Relationship

Against the backdrop of this mix of interests, challenges, and opportunities, an overall strategy is needed for building toward a stable and cooperative long-term U.S.-China strategic relationship. In that regard, a number of critical elements were highlighted in the course of the Joint Study—and overall, met with broad agreement. Consider briefly these elements.

The United States and China should take as their broad goal to increase areas of cooperation and to manage if not reduce areas of competition between them. In so doing, it will be important to seek agreement on possible principles or norms to guide the evolving relationship and simultaneously or in alternating succession to work specific issues as a means of building habits of cooperation and enlarging areas of common ground. The former would speak to the Chinese preference for a principles-first approach and the latter to the U.S. preference for a specifics-first approach. As such, the two countries' strategy would combine what was termed in the Joint Study a "deductive-inductive approach".

In building greater strategic cooperation, leaders, officials, and experts in China and the United States also need to think in terms of a progressive, step-by-step program of actions. As a start, both countries should focus on those areas in which there is a political foundation for taking action before moving to more difficult, complex, and sensitive areas for cooperation. By building habits of cooperation and increasing mutual trust in less difficult areas, it should then be easier to address the more troublesome and complicated challenges facing both countries.

A progressive, step by step strategy also will need to take into account both the overall asymmetry between the military capability of China and the United States as well as more specific asymmetries between their military postures and doctrines, including deterrence strategies. Asymmetry between the two countries' global roles and relationships also needs to be reflected in overall strategy for building cooperation. This is likely to be a particularly important if difficult area. One reason is that some significant U.S. military capabilities that have been acquired for contingencies outside of Asia and unrelated to China still indirectly impact China's interests and have been of concern to China.

Implementing a progressive, step by step strategy would call for the use of multiple forums and types of engagement. As with the Joint Study, Track 2 efforts have a role to play. So do so-called Track 1 ½ discussions among experts and former officials. However, the tough questions and choices will need to be addressed at the official level because actions by the governments of China and the United States are needed to achieve the overall goal of increasing areas of cooperation and managing if not reducing areas of competition.

Not least, it will be necessary to strike the right balance between strategic patience and strategic progress. Patience will be needed regarding the readiness of each country to engage on certain issues and

in certain ways; in defining the objectives to be pursued and in evaluating the results achieved; and in defining the overall timeline. But with many of the challenges already upon us, it also is important to find ways to energize actions now lest those challenges outpace efforts to address them.

An Agenda for Action—Initiatives for Consideration

Strategic Dialogue between Militaries and Defense Establishments

Turning then to promising initiatives or ways forward, strategic dialogue is the most basic building block. Such dialogue already exists across many political, military, economic, and scientific-technical areas. However, military-to-military or defense-to defense exchanges remain much less developed compared to those in other areas. There was broad agreement during the Joint Study that perhaps the most important next step in the area of China-U.S. dialogue is for the United States and China to take steps to strengthen and institutionalize a process of continuing exchanges between our two countries' military and defense establishments.

Implementing a Process of Mutual Strategic Reassurance

Going beyond but also using strategic dialogue, there was also broad agreement that actions are needed to reach agreement on, and begin to implement, a dedicated process of U.S.-China mutual strategic reassurance. A process of mutual reassurance is needed to eliminate misunderstandings, dispel suspicions, reduce uncertainties, and slowly build trust. Mutual reassurance also is essential to help avoid misjudgments that could heighten arms competition, make it harder to manage crises, and at worst, lead to military confrontation or even conflict. The following steps of such a process of mutual strategic reassurance stand out from the Joint Study. There was considerable agreement on these broad steps even while the specific elements to be included in each step remained a subject to be explored further.

A first step in such a dedicated process of mutual strategic reassurance would be for experts and retired officials at the Track 1 ½ level to have a frank exchange on reassurance requirements, that is the "why" of reassurance. What does China seek reassurance about from the United States? Conversely, what does the United States seek reassurance about from China? What most worries each of us about the other? Many of the issues were illuminated by the papers in the Joint Study and are well-known from earlier China-U.S. dialogues, unilateral statements of officials, and experts' writings. For example, China is concerned about the impact of U.S. missile defenses and prompt global conventional strike on its nuclear retaliatory capability; the United States is concerned about the scope of China's nuclear modernization as well as its space and cyber activities; both countries need reassurance about how the other defines its role in Asia, if not globally. These Track 1 ½ experts' discussions then would provide the basis for a comparable exchange at the official level. Taken together, this identification of reassurance requirements would provide the start to defining an agreed U.S.-China reassurance agenda.

A closely related early next step in a process of mutual strategic reassurance, as also set out in the Joint Study, would be for China and the United States to seek to agree on a set of principles of mutual reassurance. By way of examples, one such principle would be both countries' agreement on the need, role, and importance of mutual reassurance to build toward a stable and cooperative strategic relationship. Other principles to be explored by the two countries to determine areas of agreement could include the importance of focusing on the future not on the past, of giving priority to measures aimed at enhancing mutual trust, the need to take into account the interaction of heightened political confidence and greater

transparency as a means, thinking in terms of a series of steps that build reassurance over time, the need to reflect asymmetries of military capabilities, and that mutual reassurance needs to be a two-way process with actions by both countries.

A process of mutual strategic reassurance should involve not only dialogue and discussion but also specific confidence-building actions and activities by both governments, whether unilaterally, in parallel, or jointly. In principle, many different baskets of actions can be identified, as reflected in the Joint Study papers. These baskets include: dialogue and exchanges of information; joint analytic studies and seminars; table-top exercises; reciprocal visits and liaison of personnel; and joint military and other operations. Focused on issues of mutual strategic concern and interest, many specific possibilities for engagement were suggested during the Joint Study, from military-to-military exchanges on nuclear doctrine through joint studies and table-top exercises on missile defense issues to joint response to a breakdown of nuclear security in Northeast Asia. At best, such activities would bring together individuals from the defense, military, and nuclear communities in both countries. Again, these types of activities could build on existing Track 1 ½ activities—but ultimately it would require more formal and continuing interaction among military and civilian defense officials from China and the United States.

Finally, in thinking about mutual strategic reassurance, it is important to remember that the actions of both countries' leaders can sometimes have a critical reassurance impact in positively influencing thinking in the other country even when those actions are not intended as "reassurance measures." Two examples cited during the Joint Study were respectively the decision of President Bush to attend the 2008 Beijing Olympics and President Hu Jin-Tao's decision to attend the 2010 Washington Nuclear Security Summit.

Finding a Way Forward on Transparency

Transparency has been an issue of continuing disagreement between the United States and China. This disagreement was reflected in the Joint Study. But at the same time there also were signs from both countries' experts of new thinking about ways forward that could help to bridge the differences between both countries' perspectives on transparency.

For the United States, greater transparency in the military field between countries is basically seen as a "good thing". It is regarded as a means to reduce mutual uncertainties, reassure each other, and build trust. The possible risks of transparency are not unappreciated by American experts and officials—and have figured prominently, for example, in the negotiation of arms control transparency measures with first the Soviet Union and now with Russia. But relatively less attention is focused on these possible risks. For China, transparency is viewed more skeptically. Cultural and historical factors, the belief that trust-building needs to precede transparency, and hard strategic calculations arising out of an approach to nuclear force survivability based on secrecy, as the Joint Study highlighted, all contribute to that skepticism.

A possible first step to break out of what has often been a dialogue of the deaf between our two countries on transparency would be to have a sustained discussion first among experts and then at the official level of how transparency is perceived by each country. What are seen to be the specific pluses and minuses, payoffs and risks, limits and possibilities for transparency? The reason for such a discussion is that we still do not really understand each other on transparency.

Building on an improved understanding of each other's perspectives, our differences on transparency argue for taking an evolutionary approach to next steps. That approach would acknowledge that there is going to be a continuing interaction between strengthened political trust and more improved overall relations and pursuit of greater transparency.

As part of such an evolutionary approach, a further step could be to identify areas in which both China and the United States already can agree that greater transparency can be pursued—and to do so. This already is taking place, for example, in the areas of civilian nuclear cooperation and civilian nuclear materials security. Similarly, both China and the United States have committed themselves in the NPT Action Plan from the 2010 NPT Review Conference to work with the other P-5 countries to identify NPT-related transparency measures, including a template for reporting actions by the NPT NWS in implementing Article VI's nuclear disarmament obligations.

Proposals by various Chinese experts – often welcomed by U.S. experts – that the United States and China focus discussion of military or strategic transparency initially on transparency of intentions rather than of capabilities also could be part of the way forward. Here, exchanges would be aimed at helping each country to understand better how the other thinks about strategic plans, postures, and policies—and makes decisions on them.

More broadly, as several papers in the Joint Study argued, there is a need to rethink reciprocity. In particular, it may not be necessary to apply rigidly the principle of matching one-for-one transparency so characteristic of U.S.-Russian arms control and under which a U.S. release of information would be mirrored by a comparable release by Russia. Instead, the United States and China could think in terms of aggregate transparency across the overall strategic arena—and allow for some asymmetries in the information each side releases. Put another way, each country could provide different information, take different transparency actions, and do so differing levels of detail—but ultimately, both countries would have a better overall understanding of the other and both countries would believe that they have both benefitted from the process.

Exploring the Concept of Mutual Strategic Restraint

Notwithstanding concerns about heighted strategic competition and instability arising out of the bilateral and multilateral nuclear dynamics among the nuclear powers in Asia and its peripheries, the time is not ripe for formal arms control negotiations, including negotiations involving the United States and China. Even dialogue on these issues among the P-5 countries arising out of their obligations in the NPT 2010 Action Plan has proved difficult. A broader multilateral arms control dialogue among the P-5 and India and Pakistan, as suggested during the Joint Study, likely would prove even more difficult.

By contrast, the exploration of issues related to arms control verification technology, practice, and policy could offer promising opportunities now for cooperation and engagement by Chinese and American experts and officials. Many possibilities were raised by the Chinese and U.S. Joint Study experts: exchanges on verification technologies, including on disposition of excess fissile material as well as on the reduced operation status of nuclear warheads; participation in mock "on-site inspections" related to the START implementation process; discussions of future verification requirements; and exchanges on lessons learned from arms control verification and negotiations.

In addition, while there are important practical obstacles, the time is approaching when China and the United States should explore the concept of less formal mutual strategic restraint across the nuclear, missile defenses, space, and cyber areas. This process would blend discussions and negotiations but unlike treaty-based arms control, resulting agreed restraints would take the form of reciprocal or parallel political commitments. There also would not be the type of formal verification procedures characteristic of arms control treaties but there could be complementary measures taken by each country to build confidence and enhance credibility.

Assuming an interest in exploring the concept of mutual strategic restraint, one possible first step would be Track 1 ½ discussions of what such a process might entail, what principles would govern it, what elements it would use, and its potential payoffs and risks as a part of an overall effort to build toward a stable and cooperative strategic relationship. Later, discussions could turn to specific areas for mutual strategic restraint that might be explored by the two countries—examples suggested range from limited agreement on measures and principles for crisis avoidance and management to much more far-reaching steps such as a mutual no first use agreement as confidence-building breakthrough or agreement on unilateral restraints on U.S. missile defenses as well as global strike capabilities paralleled by Chinese restraints on nuclear modernization. Complementary measures to build confidence in a process of mutual restraint also could be considered. But the first step is to explore the concept.

Possibilities for Strengthened Non-Proliferation Cooperation

Shifting from the direct strategic interaction between China and the United States, strengthened non-proliferation cooperation between the United States and China has long been seen as an important area for building strategic cooperation in the interests of both countries.

However, the Joint Study showed that building cooperation in this area needs to reflect important differences between the two countries in terms of how they evaluate the importance of non-proliferation among their interests and priorities. For the United States, non-proliferation was seen to be one of its two or three most important security interests; for China, non-proliferation was viewed as important but not a top rank interest, particularly given the importance of domestic social and economic transformation. Specific differences of approach also were evident in the Joint Study, entailing differences in assessments, means, and strategies. Moreover, China's approach to non-proliferation also is shaped by a belief that China can play a valuable role as a mediator between the NPT nuclear weapon states and the NPT developing country non-nuclear weapon states (including some problem countries).

Against this backdrop, a number of possible areas stood out in the Joint Study for building non-proliferation cooperation between the United States and China. It will be important to identify additional ways in which China's self-described mediating role with developing country NNWS can strengthen global non-proliferation efforts. For example, China could make an important contribution in encouraging support for the IAEA Additional Protocol and in pursuit of compromise outcomes at the 2015 NPT Review Conference. In turn, under the framework provided by the Global Initiative to Combat Nuclear Terrorism (GICINT), there may be possibilities for U.S.-China engagement to reduce nuclear material and weapon-related security risks in, out of, or flowing through northeast Asia.

More generally, building greater non-proliferation cooperation needs to take advantage of complementarities in the two countries' approaches to non-proliferation as well as areas in which there is

a confluence of U.S. and Chinese interests. In this regard, managing military flashpoints on the Korean Peninsula or encouraging reform in North Korea as well as avoiding the political-economic instability likely to result from Iran's continued nuclear weapon-related activities both stand out as examples. Further, it would be timely and potentially fruitful for U.S. and Chinese officials to exchange thinking on over-the-horizon proliferation challenges. Doing so could help to clarify their respective approaches to non-proliferation, identify commonalities, and not least to build habits of cooperation.

Making Progress despite Constraints on Strengthened Science and Technology (S&T) Cooperation

In principle, strengthened science and technology (S&T) cooperation between the United States and China generally and between the nuclear weapon communities of both countries specifically, the Joint Study participants agreed, could make an important contribution to building toward a stable and cooperative strategic relationship. Specific potential payoffs of S&T cooperation include building habits of cooperation between the scientific communities in both countries, bringing technical perspectives to bear in support of policy discussions, and building wider bureaucratic confidence in the overall dialogue process.

Consistent with the overall strategy set out above, there was agreement within the Joint Study on a progressive step-by-step approach, moving from less to more sensitive topics and partners. As in the area of mutual strategic reassurance, one next step proposed could be for U.S. and Chinese officials to seek agreement on a vision and principles of S&T cooperation. Many specific areas for S&T cooperation also were identified, with particularly broad support for the area of nuclear safety and security as well as the area of arms control verification already identified. S & T cooperation among younger scientists also is a promising area, not least to build understanding and ties among persons that will later be in positions of responsibility.

The toughest problem for U.S.-China S&T cooperation was agreed to be cooperation between personnel from each country's respective nuclear weapon communities. Within the Joint Study, there was fairly broad agreement in principle from both Chinese and U.S. experts on the desirability of restoring such cooperation and exchanges. However, no clear path forward could be agreed. Rather the 1999 Cox Report from the U.S. House of Representative—with its allegation of Chinese spying, an allegation rejected by China—continues to cast its shadow over any effort to renew ties between the two countries' nuclear weapon laboratories. Chinese calls for the report's repudiation and a U.S. government apology continue to be met by American urgings that both countries look forward not to the part. Given this impasse, one possible interim step suggested would be to draw on individuals from within the non-weapon laboratories within U.S. Department of Energy and National Nuclear Security Administration complex and its Chinese counterparts.

Looking Ahead

To wrap up this sketch of some of the key results from the Joint Study, the interests of both the United States and China would be served by building toward a cooperative and stable strategic relationship between our two countries. There clearly are important challenges to doing so—but also foundations on which to build. Perhaps the most important next step is to strengthen and institutionalize the ongoing U.S.-China strategic dialogue, including between the militaries and defense establishments of

both countries. An enhanced dialogue would be the building block to the other types of initiatives set out here—and especially to a progressive process of mutual strategic reassurance.

What Are the Prospects for Building a Stable and Cooperative Strategic Relationship?

Regarding the prospects for building a stable and cooperative strategic relationship between our two countries, let me paraphrase the words of one of the Chinese participants and one of the American participants in the Joint Study project: The prospects are bright but the evolution of the China-U.S. relationship will be a long process, full of zig-zags. Success will call as well for wise leadership on both sides.