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Rethinking U.S.-China Security Cooperation

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Abstract

This paper argues that traditional arms control approaches no longer work well for even traditional security problems on the U.S.-Chinese security agenda for three reasons: Firstly, even when both states reason for arms control from the superpowers' experience during the Cold War, they do so in different ways; secondly, a growing number of experts and policy elite in both countries do not think the benefits of formal arms control outweigh the costs and risks; and thirdly, those who think formal arms control has an important role to play lack a clear and compelling logic for why arms control is durable and achievable among highly interdependent states with unequal power, mixed interests, and dissimilar values. Past attempts find a new basis for U.S.-China security cooperation—e.g., by using voluntary measures or by relying on the economic interdependence of the two states—have proved insufficient. The second half of this paper suggests the basic elements of a cooperative security logic that could be a more appropriate and effective basis for cooperation. Instead of narrowly defining the objective of arms control as increasing deterrence stability at lower cost and risk, this logic aims more broadly to prevent threats from developing, provide reassurance, and promote consensual political order among states. Rather than trying primarily to set equal technical limitations on military capabilities, dialogue and negotiations should seek to ensure that whatever capabilities states have, including asymmetrical and dual-use ones, are used for mutually acceptable purposes and according to equitable behavioral rules. Issues related to transparency, verification, and compliance management would also be handled in ways that promote cooperation rather than competition. The paper concludes by examining how U.S.-Chinese cooperation in space, on nuclear weapons issues (including the Comprehensive Test Ban Treaty), and on missile defense all stand to benefit from reliance on this new logic.

Introduction¹

I was asked to provide an American perspective on cooperative approaches to “traditional” security problems, which I define broadly to include anything involving the threat or use of military force. I should provide a disclaimer, though, because my own thoughts about arms control are often different from the dominant view among U.S. policymakers. I do not think that there is one “American” perspective on security, any more than there is a single Chinese point of view. But I think it is useful to compare dominant themes in U.S. and Chinese thinking about arms control to highlight obstacles and opportunities for cooperation.

As you well know, the bilateral U.S.-China strategic agenda has historically encompassed nuclear and conventional military issues, and increasingly also missile defense, space, and cybersecurity. Preventing proliferation and terrorist access to weapons of mass destruction is on the U.S.-China agenda for multilateral security challenges, as is managing relations with nuclear-armed third parties such as India, Pakistan, and North Korea, in hopes of minimizing the risk that nuclear use by one of them could cause grave problems for international security.

I could assess the state of play on each of these important issues, but there would be little that you haven’t heard before. Since the mid-1990s, the United States, China, and other members of the international community have made much less progress on the traditional arms control and nonproliferation agenda than an objective observer would expect, given the dramatic changes in the global security environment. Today, I want to talk about why that is, and what to do about it.

I will argue that traditional arms control approaches no longer work very well even for traditional security problems, in part due to three ways in which current U.S. and Chinese thinking about arms control obstructs progress. I will also explain why some supposedly “innovative” ways of thinking about security cooperation are not accomplishing much, either, and may actually be damaging the two countries’ overall relations. Understanding why our ability to create more advanced weapons and more powerful multipurpose technologies has outstripped our ability to work together to prevent their deliberate or inadvertent misuse suggests a set of conceptual and practical problems on which U.S. and Chinese experts could cooperate to better address current and future global security challenges.

¹ An earlier version of this working paper was presented at a panel about “U.S. and China Cooperation on Traditional and Non-Traditional Security Issues” at the Carnegie-Tsinghua Center for Global Policy on June 19, 2014. Comments and reactions are welcome; please send to ngallag@umd.edu.

Outmoded ideas obstruct arms control and nonproliferation

There are numerous reasons why progress on arms control and nonproliferation has been more difficult than expected in the immediate aftermath of the Cold War, including geopolitical shifts, changes in weapons technology, and greater activism by anti-arms control domestic political actors than pro-arms control groups. But there are also less obvious conceptual reasons why those of us who research, teach, and advise policy makers about international security may be inadvertently compounding the difficulties by continuing to think about arms control in ways that do not fit well with the current circumstances of global security.

When American or Chinese experts argue for or against the utility of “traditional” arms control, they typically have a narrow, time-bound conception of what arms control is, how it operates, and what its objectives are. Usually, it’s some version of the bilateral agreements negotiated during the Cold War by two roughly equal superpowers to enhance deterrence stability by limiting or prohibiting specific types of nuclear capabilities.

I define arms control more broadly, to include any cooperative constraints on security-related capabilities or behavior among states with a mix of common and competing interests, ideologies, and values.² Many successful arms control and nonproliferation agreements have involved two or more states with very different military capabilities and security needs, including the 1968 Nuclear Nonproliferation Treaty (NPT) and the 1992 Chemical Weapons Convention (CWC). Arms control can take different forms, from legally binding treaties with extensive verification and compliance management arrangements, to politically binding accords, parallel unilateral initiatives, and tacit reciprocal restraint and reassurance. It can serve the military objectives posited in Thomas Schelling and Morton Halperin’s classic 1961 book, *Strategy and Arms Control*: to reduce the risk of war, the amount of destruction should war occur, and the cost of military preparations. But it can also serve political objectives that are adversarial or cooperative, such as gaining hard or soft power advantage vis-à-vis a potential adversary, or reducing the role that threats and use of force play in international politics.³

² Unilateral actions can be cooperative even when they are not designed to elicit reciprocal actions if the objective is to reassure other states regarding real or perceived threats to other states. Unilateral arms control initiatives can also be adversarial, if they are intended to make other states appear to be dangerous because they do not want to reciprocate by taking steps that would advantage the country proposing reciprocal unilateral initiatives. Or, they may be undertaken for purely internal reasons, without regard to what other countries might do in response.

³ The term “soft power” is most commonly associated now with Joseph Nye’s concept of influencing other countries through attractive ideas (values, culture, policies, and institutions), rather than through material means (economic incentives/disincentives or threats and use of force.) Traditional realists such as Hans Morgenthau, though, included various types of ideas (e.g. moral and philosophical principles, legal provisions, and political ideologies) as forms of power when they were used as means to establish and maintain control over other individuals or countries in order to promote national interests, as opposed to being followed for their own sake. See Joseph Nye, *Bound to Lead: The Changing Nature of American Power* (1990) and *Soft Power: The Means to Success in World Politics* (2004), as well as Hans J. Morgenthau, *Politics Among Nations* (orig. 1948).

One impediment to U.S.-China cooperation on traditional security issues is that even when American and Chinese experts are both reasoning from the superpowers' experience with nuclear arms control during the Cold War, they do so in different ways. Americans and Chinese make different starting assumptions about what the main threat to security is, how deterrence and missile defense relate to that threat, what cooperation might be mutually beneficial, how verification and compliance issues should be handled, and where successful cooperation could lead over time. American officials use a version of the logic that informed the Reagan and George H.W. Bush administration's approach to the Strategic Arms Reduction Talks (START). Chinese experts think about arms control in a way which is much closer to the logic underpinning the Strategic Arms Limitation Talk (SALT) agreements and the Anti-Ballistic Missile Treaty, which I call the Cambridge community logic. Because American and Chinese arms control experts use different logics, not only do they talk past each other, but they also often misjudge each other's motives for saying what they do.

Americans see China's growing military, economic, and political power as the biggest threat to strategic stability. Predictions about what might happen if China uses those capabilities to deny U.S. access to, and freedom of action in air, sea, land, space or cyberspace are very similar to predictions made in the late 1970s and 1980s about how the Soviet Union could use its advancing nuclear capabilities to de-couple the United States from Europe, coerce U.S. allies, and possibly even try to fight and win a nuclear war—none of which, I should note, actually came true. The United States sees its "pivot to Asia" as a prudent move to preserve regional and global stability by maintaining U.S. conventional superiority, deploying missile defense, and taking other steps to reassure nervous allies. The Obama administration would like to keep nuclear weapons in the background of its security relationship with China. But even after declaring that it would not use nuclear weapons against non-nuclear weapon states that are in good standing under NPT,⁴ the United States still retains the option to initiate use against China despite China's unequivocal No First Use (NFU) pledge. U.S. officials justify continued nuclear ambiguity as enhancing regional stability, on the theory that China will be less likely to attack Taiwan or engage in other conventional aggression if it knows that the United States could destroy some or all of its strategic nuclear weapons before it had a chance to launch them. They also suggest that China should want the United States to remain the dominant military power in the Pacific so Japan feels no need to match China's conventional and nuclear capabilities.

China actually considers U.S. military superiority and unilateralism as one of its main security problems, partly because the United States will not rule out using nuclear weapons for objectives other than retaliatory deterrence of nuclear attack. Chinese leaders have not gone as far as Soviet

⁴ Department of Defense, "Nuclear Posture Review Report," April 10, 2010, p. viii.

leaders did after the Cuban Missile Crisis, when they concluded that the only way to keep the United States from coercing the USSR was to match the American nuclear arsenal. But just as the Soviet Union justified its quest for nuclear parity as necessary to stop the United States from engaging in counter-revolutionary activities and start treating the Soviet Union as an equal world power, China depicts its own weapons development and assertive behavior as necessary to uphold regional order, prevent provocation and crisis escalation, encourage diplomatic dispute resolution, and convince the United States to negotiate limits on the “weaponization of outer space” and other advanced military activities where it currently enjoys a big advantage.⁵

The United States and China share interests in preventing proliferation and terrorist access to weapons of mass destruction. But the United States places more stock in intrusive inspections and coercive sanctions, while China is ambivalent about transparency and thinks behind-the-scenes engagement is a more productive way to handle compliance concerns. Both countries say that the future of global security depends on the two largest economies learning to share more responsibility for system management. Yet, both harbor grave concerns about whether or not the other is a reliable cooperative partner.

The second obstacle to U.S.-China cooperation on traditional security issues is that growing numbers of experts and policy elite in both countries do not think the benefits of formal arms control outweigh the costs and risks. The George W. Bush administration made this case most explicitly when it dismissed legally binding treaties with elaborate verification and compliance arrangements as “outmoded relics of the Cold War” which took too long to negotiate and did not deal effectively with the most dangerous threats, yet reduced countries’ freedom to protect themselves and their allies. President Obama’s 2010 Prague speech initially seemed to return the United States to its historical position at the head of global efforts to eliminate nuclear risks through international law and diplomacy. But after negotiation and ratification of the relatively minor New START treaty proved much more difficult than expected, the United States has not made much effort to negotiate further nuclear reductions, restart fissile material cut-off treaty talks, ratify the Comprehensive Test Ban Treaty (CTBT), or develop any proposals for legally binding space or cybersecurity agreements.

Chinese leaders have usually been more ambivalent about arms control. They have not had the former Cold War superpowers’ extensive experience negotiating, verifying, and managing compliance with a wide array of arms control agreements. When the Cold War arms race neared its peak, Chinese officials said that once the superpowers ended development of new types of nuclear weapons and cut their existing arsenals in half, China would join all other nuclear states

⁵ Chinese Premier Li Keqiang, “Keynote Address” to the Royal Institute of International Affairs and the International Institute for Strategic Studies, Chatham House, London, June 18, 2014.

in multilateral negotiations.⁶ After the superpowers eliminated all of their intermediate-range nuclear forces and agreed to substantial cuts in the first and second Strategic Arms Reduction Treaties, China did become a constructive player in the CTBT negotiations of the mid-1990s. But after the United States failed to ratify the CTBT and walked away from the ABM Treaty without paying an obvious, immediate price, Chinese experts again began to say that their country would not join strategic nuclear negotiations until the United States and Russia brought their force levels and postures much closer to China's current position.

A third problem is that those in the United States and China who still do think formal arms control has an important role to play in twenty-first century security policy have not been able to counter the naysayers effectively because they lack a clear and compelling logic for why arms control is desirable and achievable among highly interdependent states with unequal power, mixed interests, and dissimilar values. So long as nuclear deterrence remains an important feature of security policy, some insights from the Cambridge community logic and the Reagan-era logic will be useful for professionals concerned with reducing nuclear risks. But the vast majority of policymakers and citizens around the world are no longer deeply concerned about the possibility of global nuclear war, so making the case for arms control as a way to enhance strategic stability is not very compelling to them.

Overcoming these obstacles requires creative thinking about both the technical and political dimensions of arms control as a means to address current and future security challenges in a way that fits today's circumstances, not those of the Cold War. The technical side of arms control includes questions about what total number, type, and distributions of military capabilities could provide greater security at lower cost than at present, or what type of monitoring technology and inspection rights would deter or detect all militarily significant violations. Americans typically emphasize quantitative measures of arms control progress, such as how many fewer nuclear weapons the United States and Russia will have under New START compared with the number they had at the height of the Cold War. They also often suggest that the way to get domestic and international agreement about arms control-related questions is to let scientists from different countries work together to solve technical problems without distorting political pressure.

Experts from most other countries see arms control as an inherently political subject, not as a technical problem that gets inappropriately politicized. By this, they usually mean that the interests, relationships, and decision-making processes of key participants in negotiation, ratification, and implementation inevitably shape outcomes at least as much as the technical characteristics of military and monitoring capabilities do. But arms control is also inherently political because it is impossible to think about it seriously without making some starting

⁶ Chinese Foreign Secretary Huang Hua, "Address to the United Nations Special Session on Disarmament, June 11, 1982, reprinted in Ken Coates, *China and the Bomb*, (Nottingham, England, 1986), pp. 64–80.

assumptions about nuclear deterrence, other countries' intentions, the nature of international politics, and other essentially contested questions.

When I have suggested elsewhere that neither American nor Chinese arms control experts seem to be making much headway with their own political and military leaders, or with those on the other side, my American and Chinese colleagues readily admit that is true. Yet, they often keep making the same type of arguments for security cooperation because they still believe arms control is important, and do not know any more effective way to approach it. They attribute lack of progress to obstacles over which they have no control, such as belligerent behavior by other states, the global spread of powerful dual-use technologies whose use cannot be monitored by satellites or other non-intrusive means, or powerful domestic groups in their own country that oppose arms control for ideological or economic reasons. Rarely do they consider that their own strategic logic for arms control—i.e. both a coherent conception of what the major security threats are, how cooperation could help address them, how verification and compliance issues should be handled, and where they want initial cooperative steps to lead, a viable strategy for getting international agreement and sufficient domestic support for measures that fit this concept of cooperation.

To address these problems, I think we need a joint effort to work out the basic elements of a shared logic for arms control that fits current global security circumstances, is considered fair and mutually beneficial by countries with a range of interests, and can sustain functional collaboration even among states with very different political systems. I also want to start exchanging ideas about how this logic could be applied through practical projects that would significantly reduce current nuclear risks and improve conditions for more far-reaching future cooperation. But first, let me explain what I think is valid about two popular alternatives to formal arms control, what I find problematic, and why I think that twenty-first century security challenges still require a mix of formal and informal cooperative measures.

Is formal arms control still useful in the Twenty-first Century?

There are Americans on both the right and the left ends of the political spectrum who say we do not need any more formal arms control treaties because we can get whatever security cooperation we need through enhanced dialogue, increased transparency, shared norms, voluntary confidence-building measures, and coalitions of the willing. Some Chinese experts make a related argument, that global interdependence has reached a level where war would be irrational regardless of how many, or what type of weapons could be employed in a conflict.

The first analysts to argue explicitly against the utility of arms control were unilateralists like Colin Gray who think that national leaders should make decisions about defense budgets,

weapons acquisition, and use of force based solely on their own calculations of national interest. They had been vigorously opposed to any Cold War arms control agreements that limited U.S. capabilities or potentially reduced support for military spending by the United States and its allies. Once Gorbachev began unilaterally reducing Soviet conventional forces and offering major nuclear concessions (for what they attributed solely to internal economic constraints rather than a reassurance strategy), and the U.S. public became focused on domestic issues as the Cold War ended, these unilateralists saw no reason to engage in arms control negotiations even for public relations reasons.

Eventually, they were joined by Americans from the other side of the political spectrum who had been frustrated by the slow pace and modest accomplishments of Cold War negotiations, and who blamed the arms control enterprise itself for failure to make major progress once the Cold War ended, not the unilateralists who were complicating negotiations and delaying ratification of START II, the CTBT, and other treaties that had been signed in the 1990s. This group hoped that unilateral initiatives, norms, codes of conduct and other forms of cooperation that did not require painstaking negotiation of rigid rules, contentious ratification, and cumbersome implementation could accomplish more in a shorter period of time.

There are circumstances where informal cooperation is all that is needed, or the only way to start on a difficult problem. But there are also some very important limitations on what can be accomplished through informal cooperation that reflect the nature of the security problem and the context in which it must be solved.

Dialogue, transparency, and voluntary CBMs can be sufficient when misperceptions are the sole cause of a security problem. But they can increase tension when what states are saying, showing, or doing confirms the existence of serious conflicts of interest over which they are willing and able to fight if some red line is crossed. Even when neither side has aggressive intentions and both understand that war would be an irrational way to advance most policy objectives, making TCBMs the centerpiece of efforts to promote security cooperation can backfire. Because the United States and China both have good reasons not to show and tell each other everything about their military capabilities and plans, using the other side's rejection of a particular TCBM you have proposed as a "litmus test" of its intentions can be misleading. It may look like the proposer wants to cooperate while the rejector does not, when neither country might really be interested in meaningful cooperation. Or they both might be, but have very different ideas of where to begin.

Likewise, norms and codes of conduct can be used to reduce uncertainty, increase predictability, and minimize misperceptions when there is widespread agreement about the distinction between appropriate behavior versus actions that are irresponsible, reckless, illegitimate or aggressive. But when they are not clearly defined, legally codified, and supported by agreed mechanisms for verifying compliance and resolving compliance disputes, there is much room for confusion, self-

serving interpretation, and disregard of “soft law” obligations when following those rules would be inconvenient. For example, in discussing territorial disputes in the East and South China Sea, Secretary of State Kerry framed the core question as: “whether might makes right or whether global rules and norms and rule of (international) law will prevail.”⁷ Yet, parties on both sides of the disputes can invoke international principles and precedents in support of their claim, while accusing the other side of intimidation, provocation, and attempts to change the ‘facts on the ground’ in their favor. The only concrete examples Kerry gave for how the conflicts might be de-escalated and resolved diplomatically involved a 2002 Declaration of Conduct developed by ASEAN, a regional forum that does not include China, and arbitration under the U.N. Convention on the Law of the Sea, a treaty which the United States has not ratified. Even when there is near universal international agreement that some action is wrong, like sending troops to seize part of a neighbor’s territory, such shared understandings won’t keep leaders from doing whatever they calculate is in their national self-interest to do unless they care more about the general importance of upholding community norms than about whatever they might gain by breaking a particular rule, or lose by enforcing it.

Coalitions of the willing, and informal cooperation among like-minded states are other forms of voluntary cooperation that are sometimes depicted as more “innovative” and more effective than formal arms control. Loose forms of policy coordination can be useful when interests are neatly aligned, and when states are naturally inclined to work smoothly toward a common goal without much organization or information. But the informal nature of things like the Proliferation Security Initiative make it hard to assess if, when, and how they actually improve security compared to what would have occurred in the absence of such arrangements.

Informal cooperation among like-minded states is more likely to work when the United States, or some other “benign hegemon” is willing and able to bear a disproportionate share of the costs.⁸ The United States and its allies have the most similar interests and values, but even when they share a common objective, like stopping Russian destabilization of Ukraine, they can still have frustrating disagreements about leadership, strategy, tactics, and burden-sharing. Countries like Russia, China, Iran, and India are even less willing than U.S. allies are to subordinate themselves to U.S. leadership without prior agreement on the ends and means of cooperation. Yet, most traditional and non-traditional security problems cannot be effectively addressed if cooperation

⁷ John Kerry, “U.S. Vision for Asia-Pacific Engagement,” East-West Center, Honolulu, Hawaii, August 13, 2014.

⁸ Duncan Snidal differentiates between two types of hegemonic states, “benign” ones which use their power to bear the costs of establishing and maintaining regimes that provide public goods for other states as well as advancing the interests of the hegemon, and “malevolent” ones, which consider only their own short-term interests rather than the longer-term interests of all international society members. See “The Limits of Hegemonic Stability Theory,” *International Organization* 39:4 (autumn, 1985), pp. 579–614.

occurs only among allies or other like-minded states, and only then when one country is willing to shoulder most of the burden.

Another proposed alternative to traditional arms control sees economic interdependence between the United States and China as an overriding incentive to manage lower-level conflicts of interests without resort to war, much as mutual nuclear vulnerability gave the Cold War rivals one overarching common interest that dwarfed their stakes in regional conflicts and other individual disputes. With the 2008 economic crisis fresh in policymakers' minds, the need to keep territorial disagreements and regional tensions from destabilizing markets enough to cause another global recession probably is of greater concern to U.S. and Chinese policymakers than the more remote possibility that conflicts could escalate to nuclear war. Depicting economic interdependence as the main motivation for security cooperation is particularly appealing to Chinese policymakers and international relations scholars because China and the United States are now roughly equal in economic power, while the United States remains far ahead of China and all other countries in terms of its military might.⁹

The problem with using economic interdependence as a catalyst for cooperation is that countries can exploit interdependence for bargaining leverage to increase their own relative gains rather than working together to maximize absolute benefits and minimize absolute losses for both parties. Indeed, one of the tensions built into traditional arms control theory is between incentives for mutual compromise so that a crisis does not escalate into a nuclear war that nobody wants, versus incentives to “manipulate shared risk” so that the other side has the last clear chance to avoid nuclear disaster by conceding to the manipulator's demands.

The United States' increasing use of economic sanctions to punish Iran, Russia, and other countries engaged in objectionable activities is one example of using asymmetrical interdependence in global energy and financial markets for coercive bargaining leverage. Russia's manipulation of energy supplies and prices is another. Saying that China's minimum nuclear deterrent neutralizes U.S. military advantages, leaving relative economic power to play a decisive role when China engages in strategic competition with others in the Asia-Pacific region is a third variation on the theme of exploiting economic interdependence for strategic advantage.¹⁰

Stronger or more skillful players can sometimes get concessions by credibly threatening that the other side will be worse off if they reject some demand than if they acquiesce, but this is more like extortion than equitable cooperation, and it often backfires. Practicing coercive diplomacy

⁹ Lora Saalman, “Placing a Renminbi Sign on Strategic Stability and Nuclear Reductions,” pp. 343–81 in Elbridge A. Colby and Michael S. Gerson, eds., *Strategic Stability: Contending Interpretations* (Carlisle, PA: Strategic Studies Institute, 2013).

¹⁰ Zhao Baomin, quoted in Saalman, “Placing a Renminbi Sign on Strategic Stability,” p. 353.

generates mistrust and resentment, because the weaker player is much more likely to resist, cheat on, or break out of a coercively imposed arrangement than a more equitable and consensual agreement. It also gives potential target states a strategic imperative to preserve autonomy, motivating choices that are not economically rational, such as operating one's own uranium enrichment or plutonium reprocessing facilities even when it would be easier and less expensive to buy nuclear fuel on the international market.

In short, rising economic interdependence will not automatically lead to mutual cooperation any more than increased communication, greater transparency, and more vigorous efforts to promote one's preferred norms will. Interdependence, systematic exchanges of sensitive information, shared principles, and equitable behavioral rules can all contribute toward a strategic logic for twenty-first century arms control. But to promote significant security cooperation between the United States and China, those elements should be fit into a larger conceptual framework identifying what the main security problems are, why particular forms of arms control would be mutually beneficial, how verification and compliance issues should be addressed, and where small cooperative steps might lead.

A new approach to U.S.-China security cooperation

Even those American and Chinese security experts who distrust each other and see a future war as inevitable would likely agree that now, and for the foreseeable future, a massive attack on their homeland is a much less plausible security threat than nuclear proliferation, catastrophic terrorism, civil conflicts spiraling out of control, or regional crises which escalate into a war that nobody wants. Complex interdependence and the global spread of powerful technologies to a wide range of states and non-state actors have vastly increased the potential for large-scale violence and destruction to be associated with what used to be considered second-order security threats, and nobody is immune. In a complicated, rapidly changing, and highly uncertain security environment, the basic question is this: Is better for the United States and China to compete for as much military, economic, and political power as they can get, and to remain free to use that power however they want to protect and promote their national interests? Or, should they make a greater effort to agree with other countries on additional rules, information exchange mechanisms, and other cooperative steps to reduce existing risks, minimize misperceptions, provide reassurance, and prevent new threats from arising?

CISSM's Advanced Methods of Cooperative Security program starts from the premise that basic trends associated with globalization are making it increasingly difficult, expensive, and ineffective for the United States and China to try to solve their security problems unilaterally, or to engage in close, sustained cooperation only with other "like-minded" countries. When the United States was the world's sole military, economic, and political superpower, it could not

protect itself against the 9/11 terrorist attack, prevent North Korean proliferation, or replace hostile and repressive regimes in Iraq and Afghanistan with peaceful, well-governed democracies. As the gap between the United States and China has narrowed in each aspect of comprehensive national power, both countries have become progressively less capable of achieving their basic international security objectives without various forms of restraint, reassurance, and active collaboration from the other. But they will not be able to achieve the level of cooperation they need unless they use a new logic for arms control that fits current global security circumstances. Let me suggest what the basic elements of this logic might be, in order to start a conversation about how these ideas could be refined and applied in ways that would make sense to leaders and publics in both the United States and China. It is not necessary to reach agreement on every aspect of the analysis in order to identify new opportunities for cooperation; arms control agreements have often been deemed desirable for different reasons by different states and domestic groups. But the closer we can get to a shared logic for cooperation, the easier it will be to negotiate and ratify significant new arms control agreements.

Because the United States and China lack extensive experience working together on Cold-War style arms control, it may be easier for them to put a new logic for security cooperation at the center of what they try to do together than it has been for the United States and Russia to make cooperative security more central to their relationship than mutual deterrence. But the level of mistrust is high enough between the United States and China that it is not enough to discuss abstract principles for cooperation. Neither side feels confident that it knows what the other means when it expresses support for “strategic stability” or “mutual respect,” and neither side knows how much influence professed support for such principles will actually have on the other’s behavior. Therefore, it is useful to explore how the logic of cooperative security could provide both countries with a new perspective on issues where long-standing disagreements have been major impediments to cooperation, such as missile defense and NFU declarations. It can also help build confidence to consider how the logic could be applied to carefully defined agreements on issues such as space security, and practical joint projects to advance shared objectives, such as minimizing the proliferation risks associated with nuclear energy, so that both sides could have a more precise understanding of what cooperation would entail, how it would benefit both countries, and how they could ensure everyone upholds their end of the bargain.

Arms control for cooperative security. The first step is to specify the overarching purpose of arms control in a way that can appeal to a broad range of countries, as well as to different domestic groups within those countries whose support is needed for arms control to work. Here, I borrow from Hedley Bull, an Australian-born strategist and international relations scholar who spent most of his career in Europe, interacted extensively with American arms control experts, and thought deeply about how China, India, and other emerging powers would interact with the

more established nuclear states as their power grew.¹¹ He tried to write about arms control in a way that could fit with the interests, ideas, and values of people in all these different countries, not to present any particular country's perspective as universally valid, scientifically correct, or morally superior. Bull wrote his classic works on arms control and international relations in the 1960s and 1970s, yet I find that many of his ideas are a better basis for cooperation on Twenty-first century security challenges than either the Cambridge community logic or a Reagan-era approach are.

Like Bull, I would argue that the basic objective of arms control is not only to increase deterrence stability at lower cost and risk—although that will remain an important function so long as deterrence still plays a role in security policy—but also to increase consensual order and to strengthen the sense of society among states in a world of rapid technological innovation. “Consensual order” refers to distributions of capabilities and patterns of behavior which promote basic goals that are shared by all members of international society, and that are developed and upheld predominantly by cooperative rather than coercive means. Even when the Cold War was at its worst, Bull thought that all countries shared some security-related objectives. Not only did they have a common interest in avoiding nuclear war, but also in restraining other forms of physical violence and preserving international peace (i.e. the “absence of war among members is the normal condition, to be breached only in special circumstances and according to generally accepted principles”). Bull also identified other types of shared goals, including preserving the state system, protecting the sovereignty of individual states, managing economic interdependence, addressing resource scarcity, and socializing national leaders to be responsible members of an international society instead of trying to maximize their own interests at others' expense. Since the end of the Cold War, these shared objectives have been joined by emerging global challenges, like mitigating climate change, stopping the spread of pandemic diseases, and operating an efficient, safe, and reliable global internet.

Arms control affects states' ability to achieve all of these shared objectives, not just the reduction of war and the preservation of peace. To begin with, complex interdependence means that what happens in the military dimension of international relations affects the political, economic, and environmental dimensions, and vice-versa. For example, money that governments spend to buy weapons is not available for economic development or social spending, but money they earn from selling arms abroad can provide domestic economic and political benefits even when the sales undermine arms control or nonproliferation objectives. Therefore, the United States and China will have difficulty engaging in mutually beneficial forms of economic cooperation if they fear that whichever side gets more from financial or trade transactions will use the resulting economic gains to strengthen themselves for military competition in the absence of arms control.

¹¹ Hedley Bull, *The Control of the Arms Race* (1961), *The Anarchical Society* (1977), and “Arms Control and the International Order,” *International Security* 1:1 (Summer, 1976).

They will also have difficulty cooperating on shared security objectives, such as dissuading North Korea from testing, selling, or using nuclear weapons, if the main international strategy being employed (sanctions) creates far more economic, political, environmental, and humanitarian risks for China than for the United States. And certain types of internal conditions, such as extent of press freedom or censorship, of corruption or rule of law, and of domestic political dysfunctionality, will naturally affect each country's confidence in the other being a reliable cooperative security partner.

A second reason why arms control is relevant to the broad range of goals that the United States and China share with each other, and with other members of international society, is that many of the most powerful technologies existing or under development today have both military and non-military applications. Such dual-use technologies cannot be widely available for commercial, academic, or other civilian use without also being potentially used for hostile or destructive purposes by state or non-state actors. Nor can access to them be reliably and legitimately denied to states or non-state actors who are suspected of wanting to use them as weapons. The NPT and International Atomic Energy Agency (IAEA) safeguards are the international community's way of reducing the risks that materials, facilities, and expertise developed for civilian nuclear programs will be used to acquire nuclear weapons by states that did not already have them when the NPT was signed. That consensual arrangement has been largely, but not completely, successful. But one reason why most countries have signed the treaty, and few have been accused of violating it, is that most states that have developed substantial civilian nuclear energy programs so far are either allowed to have nuclear weapons under the NPT or are advanced industrialized democracies that do not desire their own nuclear weapons.

The current system for managing the dual-use risks posed by nuclear technology will become increasingly inadequate as more developing countries see nuclear energy as an important part of their strategy for economic development without devastating environmental consequences. Numerous other advanced technologies that are integral to the quality of life in the twenty-first century, including microbiology, satellites, and computers, also have both constructive and highly destructive military uses. They also tend to be much smaller and more broadly dispersed than nuclear weapons, reactors, or enrichment and reprocessing facilities are. But the international community has not yet developed anything close to the NPT and the IAEA safeguards system for promoting their beneficial applications, while preventing their misuse.

A third way in which arms control is relevant even outside the military domain is that in the absence of a world government to make and enforce laws, sovereign states cooperate by negotiating more or less elaborate and explicit agreements; verifying compliance through some combination of data exchanges, remote sensing (national or international technical means), on-site inspections (OSIs), and espionage; and encouraging compliance through a mix of diplomacy, norms, economic inducements, international law, coercive threats, and war. The more constraints

states put on military capabilities and behavior, the less salient threats and use of force will be in international politics. This promotes consensual order: states will be more inclined to make and faithfully implement cooperative agreements when the terms are mutually beneficial and equitable, and the decision-making processes are inclusive and fair, than when they are coerced into conceding to avoid worse consequences. For global governance without world government to go beyond a very superficial level, though, participants must develop sophisticated ways to monitor compliance and manage compliance problems that do not rely primarily on national intelligence, punitive threats, and preparations to resume competition at a higher level than before—verification and enforcement strategies that make arms control very unstable.

This raises important questions about how far arms control and disarmament can go without a world government to protect rule-abiding states and punish those who commit aggression, violate agreements, or permit horrific violence against their own citizens. Under the United Nation's Charter—which is the closest thing that exists to a constitution for global governance—countries can have national military forces for self-defense, collective defense, and Security-Council authorized operations. The Charter also directs the Security Council to develop a plan to regulate armaments so that members can fulfill these military functions without alarming others or using more human and economic resources than necessary (Art. 26). This unfulfilled arms control provision is rarely mentioned, while the Charter's approval of national defense is routinely cited.

If the United States and China want to avoid having security dilemma dynamics drive their military spending to levels that pose even bigger problems for economic health and social stability than they already do, they need some agreed way to differentiate between appropriate military spending and acquisition, versus excessive rates that indicate aggressive intentions. Both maintain that their current rates are no higher than necessary given their legitimate defensive needs and special responsibilities as global and regional powers. Yet, each also considers the others' spending and acquisition patterns to be far beyond what it legitimately needs. Those concerns create strong pressure to reallocate even more government resources from economic and social needs to military spending.

They also need a better understanding between themselves and with other members of the Security Council about which uses of national military capabilities are consistent with the objectives of modern international society and which undermine consensual order. For example, what constitutes legitimate self-defense or collective defense versus coercive prevention in an era when states or non-state actors could use weapons of mass destruction with little or no warning, or use cyber weapons to wreak havoc without a traditional "armed attack?" If the Security Council cannot reach timely agreement about how to respond to massive civil violence, transborder aggression, major violations of arms control and nonproliferation agreements, or some other serious transgression of international rules, is military action by individual states

legitimate, and possibly even necessary for international peace and security, or does that further undermine consensual order?

All of this suggests that even if American and Chinese leaders currently see no need to negotiate a START-style agreement with each other, there are plenty of reasons why they should be trying harder to reach agreement on a wide range of arms control-related issues. These agreements should be designed, though, less to alter the number, type, and distribution of military capabilities, and more to provide reassurance that whatever capabilities states have will be used for mutually acceptable purposes and according to equitable behavioral rules. To provide mutual reassurance about compliance with those rules, and to accomplish other shared objectives, states and certain types of non-state actors will need to be willing to share more information than they have before. But under what we call systematic transparency arrangements, access to sensitive security or confidential business information would be carefully controlled to prevent misuse for competitive purposes.

Application to space security. To think about how this might work in practice, consider space as a strategic realm where the United States and China currently have high mistrust and competition. Neither country can reliably protect all the satellites on which their security, economy, and quality of life increasingly depend. But deterrence is extremely difficult in this domain, and an offensive space security strategy would be extremely dangerous. This creates a pressing need for mutual reassurance that states and their citizens are not using whatever dual-use space capabilities they have in ways that deliberately or inadvertently cause harm, or create excessive risks, for others.

The United States' preferred approach is to build international support for a set of norms, or a full-blown Code of Conduct, that allows the United States to continue doing what it wants to do while branding some other actions, like debris-generating ASAT tests, as outside the bounds of acceptable international behavior. But China and Russia see the Obama administration's support for voluntary transparency and confidence-building measures in space as a cynical attempt to reduce global pressure for legally binding constraints on the United States' much more advanced military space capabilities.

China's approach to space security is equally unacceptable to the United States. With Russia, it has proposed a draft treaty on the Prevention of Placement of Weapons in Outer Space (PPW). The proposed treaty would ban space-based weapons and threats or use of force against objects in space, defined in a way that includes space-based missile defense interceptors but not debris-generating ASAT tests. Although China has not destroyed any more of its own satellites since its 2007 ASAT test sparked an unexpected international outcry, it has taken a page from the United States' playbook by testing its hit-to-kill interceptors against missiles at a low enough altitude that no long-lasting debris results. These Chinese missile defense tests involve the same basic

capabilities used for anti-satellite applications. But the United States cannot object too loudly without acknowledging that the same is true of its own more advanced missile defense capabilities, and those that it has helped Japan, and to a lesser extent India, develop.

Both the United States and China would like reassurance that the other is not preparing to attack their satellites, or conduct debris-generating tests that could inadvertently damage them. They will get further by specifying the problem in a way that covers both sides' concerns, and thus creates incentives for both sides to cooperate. Thus, if the United States wants to talk about how China plans to use its advancing hit-to-kill capabilities, the United States should be willing to provide more reliable reassurance about its missile defense and anti-satellite plans.

Some of that reassurance could come in the form of information exchanges and joint studies. For example, the more China has learned about the capabilities and limitations of existing missile defense technologies through its own research and development efforts, the less alarmed it is about the near-term effects of U.S. missile defense programs on strategic stability, although it remains concerned about the long-term effects of large U.S. investments in missile defense, especially around China's periphery.¹² The more the United States and China learn about how small and short-lived would be the military advantages of disabling or destroying one of the military satellites that the United States uses over the Asia-Pacific region for communication, intelligence, targeting, or navigation, and how much harder it would be to control conflict escalation if either side began attacking satellites, the less likely they are to see this as an attractive course of action.¹³

If the United States and other space-faring nations do not want China or anyone else to conduct more debris-generating ASAT tests, then they should consider an equitable rule that reflects the dual-use nature of hit-to-kill technology. Both the United States and China have already mastered the basic capability, but there is more that both could do. Therefore, both might be willing to reassure the other by promising neither to test kinetic energy interceptors against objects in space or from objects in space, which would simultaneously address the United States' biggest concern about China's ASAT program and China's biggest concern about the United States' missile defense program. Russia is the only other country that has done a destructive ASAT test, as part of the Soviet Union, so all three countries would have a latent capability, but not one that they would want to try to use except in the more dire circumstances. It would not be hard to convince most other countries to join such a ban, and even if there were a few hold-outs, the normative pressure on them would be much stronger than it would be in the absence of any restraints on other countries.

¹² Gregory Kulacki, "Chinese Concerns about U.S. Missile Defense," Union of Concerned Scientists (July 2014).

¹³ Jaganath Sankaran, "The Limits of Chinese Anti-Satellite Capabilities and the Resilience of U.S. Space Power," CISSM Policy Brief (July 2014).

New opportunities for nuclear cooperation. In the nuclear realm, the United States wants China to be as transparent as the United States is about how many nuclear weapons it has, where they are, and what China's future plans are for its arsenal. China counters that as the weaker state, it cannot provide such sensitive information until the United States provides reassurance that it will not use that information to launch a pre-emptive strike by making an unequivocal NFU pledge. Although the Obama administration emphasizes the importance of behavioral norms in other military domains, it argues that declarations about nuclear intentions are less meaningful than capabilities because intentions can be misrepresented or changed. The Obama administration makes much of the fact that the United States and Russia have cut their nuclear arsenals by 85 percent compared to the Cold War peak. China welcomes this, but notes that the United States still has roughly 50 times more deployed strategic nuclear warheads than China, and 300 times more weapons in its total nuclear arsenal. Chinese experts also note that although the U.S. and Russian nuclear numbers have changed, their basic approach to deterrence has not as justification for why China remains unwilling to join in the next round of strategic nuclear reductions, should that happen any time soon.

The basic problem is that American arms control proponents are using technical indicators of interest in cooperation—such as amount of information exchanged and the number of strategic weapons no longer deployed—while Chinese experts are using political indicators, such as declaratory policy. Even if the Obama administration could get Russian agreement to go beyond the New START limits to something like 1,000 nuclear weapons on both sides, those reductions will not give China the type of reassurance it wants. Chinese calls for the United States to make a NFU pledge and to publicly acknowledge a condition of mutual nuclear vulnerability with China are indirect ways of telling the United States that China will not consider limiting or reducing its own small strategic arsenal unless the United States unequivocally adopts a purely retaliatory form of nuclear deterrence, or changes its primary security relationship with China from a damage-limitation form of deterrence and defense to reassurance and cooperative prevention.

One way to circumvent this stale argument would be to undertake forms of nuclear cooperation that have both technical and political dimensions and that are compatible both with China's policy of minimum deterrence and the United States' more ambiguous approach. For example, the United States could work with China and other states to substantially improve and harmonize national nuclear accounting systems without revealing sensitive nuclear information. This would provide reassurance that all countries with nuclear weapons have high standards of managerial

control, improve protections against proliferation and terrorist access, and lay the groundwork for future verification of deep cuts or total elimination of nuclear weapons.¹⁴

Another form of nuclear cooperation that would promote both security and environmental goals, address the dual-use nature of nuclear technology, and provide a non-discriminatory way to strengthen the nuclear nonproliferation regime would involve U.S.-China cooperation on small modular reactors (SMRs) and associated fuel cycle arrangements. North Korea and Iran are the leading edges of a problem that will only grow worse as more countries see nuclear power as important for energy security, economic development, or air quality reasons. If nuclear energy is also to make a significant contribution to climate change mitigation, its global use would need to increase three- to five-fold by 2050, a feat that could not be safely accomplished without major changes to both nuclear reactor designs and international oversight practices. The United States has decades of experience with nuclear technology and institutional innovation, while China has the world's fastest growing market for nuclear energy and ambitions to become a major nuclear exporter. Therefore, the two countries are logical lead players in an international effort to develop new types of nuclear reactors that could provide easily scalable amounts of nuclear power in a way that was inherently safe, required little or no indigenous nuclear expertise, and did not increase the availability of weapons-grade fuel or access to enrichment and reprocessing technologies. There are reasons to believe that it would be technically and economically feasible to meet these objectives by mass producing several types of small reactors (30 to 300 MWe) with sealed cores that could operate for 30 years or more without refueling, and that could be transported from a small number of regional fuel cycle centers by truck, train, or boat to their operational locations, then returned with their spent fuel to the regional centers.

Lots of countries considering nuclear power would probably prefer to buy long-lifetime sealed core SMRs rather than traditional large light water reactors because the up-front costs are much smaller, the infrastructure requirements are much less, a reliable fuel supply would be guaranteed for the lifetime of the reactor, and responsibility for safe management of the spent fuel would be avoided. Over time, though, the best way to minimize the risks of nuclear energy would be for all countries to meet their peaceful nuclear energy needs by participating in this arrangement.

A number of countries and companies are currently working on SMRs, but none of those being developed for near-term deployment have these advanced features. Under current market conditions, no individual company or country will take the risks and make the investments required to identify the most promising proliferation-resistant SMR designs, determine licensing requirements, test prototypes, and build production facilities without having a large number of orders in hand. And, nobody will commit to buying a large number of advanced SMRs whose

¹⁴ Jonas Siegel, John Steinbruner, and Nancy Gallagher, *Comprehensive Nuclear Material Accounting: A Proposal to Reduce Global Nuclear Risk*, CISSM, March 2014.

technological feasibility, performance parameters, and cost have not yet been determined. But if the United States and China joined forces, they could form a consortium of governments to undertake a joint prototype development project that would be at least as exciting and important as the International Space Station or the International Thermonuclear Experimental Reactor, both of which have or will cost substantially more.¹⁵

These examples show how the logic of cooperative security can be used to identify specific ways for the United States and China to provide mutual reassurance and prevent new threats by prohibiting certain actions in space that are of particular concern to the international community, improving accounting standards and managerial control over their nuclear arsenals, and developing a new model for generating nuclear energy without increasing nuclear risks. Each project has both technical and political dimensions. Each develops equitable rules for responsible behavior with powerful dual-use technologies. And each would increase transparency and predictability while still protecting against the misuse of sensitive information.

A cooperative security approach to CTBT ratification. Many items that have been on the arms control and nonproliferation agenda for decades also fit into the logic of cooperative security, but using that logic changes the primary motivation for pursuing these forms of cooperation in ways that can generate new momentum to achieve them. For example, the case for something like the Comprehensive Test Ban Treaty can be made much stronger by considering not only technical arguments for and against ratification, but also political motivations. The United States and China both played very constructive leadership roles during CTBT negotiations, and both were among the first countries to sign the accord. They are the only two NWS parties to the NPT who have not ratified it, though, and the treaty cannot enter into force until both have shown leadership in this regard, too. The leaders of both countries currently say that they are seeking the necessary domestic approval, but it has been a low political priority for them.

Much more is publicly known about the ratification process in the United States than in China. One of the biggest problems in the United States is that the Clinton and Obama administrations have tried to make the case for ratification on apolitical, technical grounds, while the intense minority blocking ratification are driven by political motivations. Many of them care primarily about domestic politics: they want to side with the Republican leadership in the Senate and against a Democratic president more than they care about how a negative vote will affect U.S. security or foreign policy. But some senators oppose CTBT ratification because their starting assumptions about nuclear weapons, arms control, and international politics make the costs and risks of ratification outweigh any potential benefits. These senators cannot be persuaded to vote for ratification with technical assessments of programs to keep the U.S. stockpile safe and reliable without nuclear explosive testing; of U.S. and international monitoring capabilities; and

¹⁵ John Steinbruner, "Anticipating Mitigation," CISSM Working Paper, June 24, 2014.

of other countries' ability to acquire or improve nuclear weapons without detection because such technical assessments do not address their political concerns. And, from a strictly technical standpoint, the CTBT's non-proliferation benefits are low because an explosive test is not required for high confidence that a Hiroshima-type weapon would cause immense destruction. Moreover, the technical constraints imposed by the global testing moratorium observed by all countries except North Korea since 1996 are the same as those that would be imposed by CTBT entry-into-force, except for the additional verification information that could come from OSIs.

A stronger case could be made for Test Ban Treaty ratification on political grounds at both the international and domestic levels. Inability to conduct more tests leaves the United States and China with some unanswered questions about weapons in their stockpile, and places some constraints on life-extension and modernization options, but it is not clear that this prevents either country from doing anything that they would otherwise decide to do. What matters more is how the two countries use the treaty to gauge each other's interest in cooperation versus competition so they can make decisions about their own strategic programs. When the Clinton administration led global efforts to ban all nuclear tests, after more than a decade of U.S. efforts to prevent such negotiations, China decided that nuclear weapons would play such a small role in post-Cold War security that it had no need for tests to do some of the things that the United States and USSR had done, such as putting large numbers of independently targetable warheads on long-range missiles. China then made important concessions, giving up the right to conduct peaceful nuclear explosions and accepting more permissive verification arrangements. This sent a powerful signal to the United States and other countries that China had decided to play a more active and constructive role in building global arrangements for cooperative security.

The willingness of Republican senators to vote down ratification of the first major international accord since the 1919 Treaty of Versailles that established the League of Nations, followed by President Bush's opposition to CTBT ratification, and Obama's passive support have sent China and the rest of the world a very different type of signal. These moves suggest that the United States is more interested in preserving its nuclear freedom of action than it is in cooperative security, even if it has no particular reason to think it will ever conduct another nuclear test. This negative signal has increased China's reluctance not only to ratify the CTBT before the United States does, but also to negotiate a ban on fissile material production, or take other steps to reduce its own nuclear freedom of action. Failure to ratify the CTBT fuels uncertainty, mistrust, and worst-case scenario planning in both countries. But its effects on the broader nonproliferation regime are worse than on bilateral relations.

From a cooperative security standpoint, a major weakness in the nuclear nonproliferation regime is that under the NPT, the five permanent members of the Security Council can have nuclear weapons and unsafeguarded civilian nuclear programs, while all other signatories promise not to acquire nuclear weapons and to let the IAEA monitor their civilian nuclear

activities. For pragmatic reasons, the non-nuclear weapon states party to the NPT (NNWS) accepted these discriminatory rules on a temporary basis, but only if the nuclear weapon states (NWS) committed to negotiate an end to the arms race, reduce their nuclear weapons, and take other steps towards general and complete disarmament. The CTBT has historically been at the top of the NNWS parties' list of arms control measures that they use to judge whether or not the NWS are living up to this NPT obligation, so it speaks volumes to them that neither the United States nor China has ratified the accord. This affects the United States' ability to convince NNWS to accept more safeguards on their own civilian nuclear programs or to exert pressure on Iran. It hurts China's efforts to reassure its neighbors and the rest of the world that as it becomes wealthier and more technologically advanced, it will not change its minimal nuclear deterrence posture. It also raises serious doubts among NNWS about the United States' and China's willingness to uphold their end of the central bargain in the NPT. When the 2015 Review Conference occurs, it will not be enough for the United States and China to repeat what they have said at every review conference since the NPT's indefinite extension in 1995 about the United States' numerical reductions or China's No First Use Pledge if they are no closer to CTBT ratification than they were in 2000.

The domestic strategy for ratification by the United States, and possibly also in China, too, involves putting the CTBT at the center of a debate between cooperation versus competition as the core principle for nuclear security in the twenty-first century. The reason why American unilateralists oppose the CTBT, a NFU pledge, and restraints on missile defense more intensely than anything else on the nuclear arms control and nonproliferation agenda (besides complete nuclear disarmament) is that giving up the freedom to conduct nuclear tests, use nuclear weapons against countries that have not used them on you (or your allies), and protect yourself against nuclear attack by anyone else means giving up the hope that the United States can meet its own security needs without any international cooperation. This dream is cherished by a small, but vocal and well-funded, segment of American policy elite. Poll after poll conducted by CISSM and other organizations, however, show that the vast majority of Americans prefer cooperative security over militaristic unilateralism, both in principle and in practice.¹⁶

As a formal arms control agreement, the Test Ban Treaty has numerous features that make its entry into force much better for international security than an indefinite continuation of the testing moratorium alone. It codifies a clear-cut behavioral rule: signatories will not conduct nuclear explosions for any reason. It creates an international monitoring system whose information, analysis, and costs are shared by all members, giving everyone reassurance of compliance and high confidence of detecting any significant violations. It lays out a process for initiating and conducting on-site inspections that was painstakingly negotiated to balance the

¹⁶ For polls conducted by CISSM and the Program on International Policy Attitudes, see: <http://www.cissm.umd.edu/papers/pipa.php>.

benefits of access with concerns about false accusations, intelligence collection, and other verification abuse. The Treaty also creates an implementing organization that is inclusive and efficient to help states fulfill the core objectives of the treaty and expand the benefits of cooperation, such as using the treaty's monitoring system to track the spread of radioactivity after the Fukushima accident in Japan. These verification and compliance management arrangements are important in their own right, and they help build up the institutional capacity and knowledge that will be needed for more ambitious forms of cooperation.

Overcoming missile defense as an obstacle to cooperative security. If the CTBT is an issue where U.S. and Chinese leadership agree on what should be done (treaty ratification and entry into force), but have so far lacked political motivation to make it a high priority, missile defense is an issue where they not only disagree about what should be done, but are also handling that disagreement in a way that creates unnecessary obstacles to cooperation on other issues. Missile defense is fraught with more political symbolism than it deserves because its American proponents have made it into a litmus test for patriotism (e.g. there should be no limits on efforts to protect Americans and their allies), while China and Russia use willingness to accept limits on missile defense to gauge whether Americans favor arms control or unilateralism.

One of the main reasons why the Obama administration has made much less progress on arms control with China, Russia, or any other country than one might have hoped after hearing the Prague speech is that it tried to finesse the politics of missile defense by pledging to continue a vigorous program (patriotism) while hoping that some unilateral changes to system architecture and voluntary transparency measures would reassure Russia without the United States agreeing that Russia had legitimate concerns. Although his missile defense ambitions are not as grand as his Republican predecessors', Obama and his aides have retained the part of the Reaganesque logic for arms control in which deploying defenses reduces the need for offensive weapons. Therefore, they see no contradiction between Obama's arms control objectives and his efforts to deploy limited defenses that might be able to intercept a few missiles launched by a proliferator, but do not reduce Russia or China's ability to retaliate in the unlikely event of a U.S. attack. For domestic political reasons, though, the Obama administration has been unwilling to negotiate any new legal restrictions on missile defense to replace the ABM Treaty, so Russian and Chinese experts see U.S. missile defense ambitions as open-ended. And, because they still reason from the logic on which the ABM treaty was based, when they recognize that Obama's missile defense ambitions are more modest than his predecessor's, they still take his support for missile defense as evidence that he is not seriously interested in deep nuclear reductions.

Using a cooperative security logic can be helpful here because missile defense is not as important in it as in Cold War logics for arms control to enhance deterrence stability. Fear of attack by nuclear-armed intercontinental ballistic missiles was at the top of the list of superpower security concerns during the Cold War, but it is much lower on the list of things that American

and Chinese leaders worry about now. The few countries that have long-range ballistic missiles are very unlikely to attack the United States or China, while those states or non-state actors that might be highly motivated to attack are unlikely to use ballistic missiles. Furthermore, the United States, Russia, and China now have enough experience with missile defense to know that there are major technical and economic limitations on what can be accomplished even if a country is willing to spend more than thirty years and \$160 billion on a major endeavor.¹⁷ Therefore, a realistic assessment of current threats and defensive capabilities suggests that whatever a country thinks about ballistic missile defense, it should not let exaggerated hopes or fears about it impede cooperation on more urgent security problems.

The foregoing analysis suggests a variety of steps that the United States could take if it wants to reassure China and Russia that its efforts to develop limited missile defenses are not evidence of U.S. unilateralism or threats to their deterrent. Perhaps the most reassuring step would be for the United States to accept legal constraints on space-based missile defense testing or deployment because that is the basing mode that is least promising from a technical and economic standpoint, but most threatening to large land-mass countries like Russia and China. The fact that the United States has not been willing to legally rule out a future development that would only be worth pursuing if the United States was willing to spend unlimited amounts of money for a small chance of achieving a comprehensive defense against nuclear missiles tells Russia, China, and the rest of the world that even if only a very small percentage of policy makers and U.S. citizens actually favor a highly unilateral security strategy, they currently have disproportionate influence on U.S. policy.

If the United States wants more security cooperation with Russia and China without formal limits on missile defense, then it has to convince them that it is pursuing missile defense as part of a cooperative security strategy, not as a unilateral effort to weaken their deterrent. One frequently proposed way to do that would be for the United States to invite Russia and China to join in more extensive missile defense cooperation than it has been willing to propose so far. But it would be a mistake to put too much emphasis on missile defense cooperation as the first and best way to judge whether or not these countries can move beyond mutual deterrence as the primary basis for their security relationship because that keeps them stuck in outmoded arguments about the relationship between missile defense, deterrence stability, and arms control. The more progress they can make on some of the other issues that I have suggested are more central to cooperative security in the twenty-first century, or on other items that they jointly

¹⁷ The Missile Defense Agency's (MDA) historical spending chart shows that the United States spent \$164.7 billion from FY 85-14 on MDA and its predecessors in the Department Defense, but there is also money for missile defense in other parts of the DOD budget. The United States began working on missile defense in the 1950s, but the level of attention and rate of spending was much lower in earlier years than after President Reagan's 1983 speech announcing his Strategic Defense Initiative (SDI).

agree to put on the cooperative security agenda, the more missile defense will be seen as a potentially useful, but relatively minor, part of a comprehensive security strategy.

Conclusion

Skeptics will say that my way of thinking about security is outmoded and unrealistic, stuck in the excessive post-Cold war optimism of the early 1990s that has been decisively discredited by Russian aggression against Ukraine. Recent events in Eastern Europe, and many other places in the world, are just the latest in a long line of reminders that power politics remains a major feature of international relations. The question for the United States, China, and the rest of the world is whether power politics is all that matters in international security. If they do not believe that is true, then they should redouble their efforts to develop inclusive cooperative security institutions based on equitable rules, systematic transparency, and effective compliance management to reduce the risk of war, the damage should war occur, the cost of military preparations, and the role of threats and use of force in twenty-first century security policy.

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