



Center for International and Security Studies at Maryland
School of Public Policy, University of Maryland

Security Policy and the Question of Fundamental Change

By John Steinbruner

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Center for International and Security Studies at Maryland
4113 Van Munching Hall, School of Public Policy
University of Maryland
College Park, MD 20742
(301) 405-7601



SECURITY POLICY AND THE QUESTION OF FUNDAMENTAL CHANGE

Over the course of the 2008 election, the idea of fundamental change became the dominant theme of American politics, and to some degree the capacity to undertake it was displayed in response to a crisis of confidence in financial markets. When the flow of credit necessary to support normal economic activity virtually ceased in the final quarter of the year, prevailing ideology was abandoned and long-established policies radically altered in feats of reaction that would have been considered inconceivable just a few days before they actually occurred. The initial actions taken did not master the problem, and the process of doing so will apparently be lengthy and torturous. Nonetheless the ability to redirect policy in response to calamity was demonstrated at a moment—the final weeks of a presidential election—when it normally would have been considered least likely to occur.

The deeper question, however, is whether the United States political system can anticipate calamity before it occurs and undertake the fundamental redirection of policy necessary to avoid it. The financial crisis revealed that the leading institutions had been driven into unsustainable levels of debt by a misconception of risk that permeated the market. No one with direct responsibility noticed until the collapse occurred. A comparably significant misconception of risk lies at the core of prevailing security policy with yet greater potential for catastrophe. The risk results from operational practices of nuclear deterrent forces that are not assuredly safe or strategically justified but are deeply institutionalized. The underlying question is whether the United States can comprehend smoldering danger and adjust to changing circumstances that are ultimately more consequential but less immediately compelling than the financial crisis has been.

The political system that faces this question has been rightly revered for its ability to protect individual rights and to prevent the abuse of power. Judged against absolute standards, its historical performance in that regard has hardly been flawless, and in fact the protection of disadvantaged constituencies remains among the more urgent problems of American society more than two centuries after the

constitutional design was enacted. Judged against the record of other forms of government, however, it can fairly claim preeminence given the size and diversity of the population it serves.

That accomplishment is so seminal and its preservation is so vital that most Americans are extremely reluctant to acknowledge the price that has been paid. The United States political system, designed and painfully evolved to prevent tyranny, has grave difficulty formulating coherent policy that is responsive to common interest. Coordination of a deliberately divided and protectively restrained government depends on a degree of consensus that is difficult to achieve and even more difficult to change once it has been achieved. Provisions for protecting minority rights, moreover, make government policy highly susceptible to the self-serving influence of interests that are economically privileged and intensely invested in a particular cause. Those features pose a question as to whether the American political system is capable of adapting to rapid and radical changes of circumstance that require the highly organized defense of common interests in terms that are different from established habits. Is it a magnificent dinosaur headed for extinction?

One can reasonably hope that metaphor is overly dramatic, but the underlying issue is quite serious. Radical changes of circumstance, summarized in the term globalization, are widely acknowledged and ubiquitously discussed, but the ability to comprehend the implications let alone to manage them has not been demonstrated. The implosion of the global financial markets is a warning with much broader implications than yet acknowledged.

It is tempting to imagine, as Plato did, a concentration of executive power in a manner that assures dedication to legitimate common purpose as well as the wisdom required to serve it. The overwhelming burden of historical judgment holds, however, that there is no such formula, a judgment most succinctly summarized in Lord Acton's famous dictum: "power corrupts; absolute power corrupts absolutely." Given that apparent feature of the human condition, it would not be appropriate to contemplate a constitutional redesign in response to the process of globalization, but it is therefore vital to accomplish adaptation by revising the operational consensus that prevails in the United States and by treating

the various interfering pathologies to which the political system is susceptible as they occur.

The term operational consensus refers to the concepts of interest and to the principles used to pursue them that provide the basis for institutionalized policy. Broadly shared working assumptions about these matters are largely implicit and hence difficult to document directly, but they are necessary for any society to act coherently. They enable the actions of numerous individuals and organizations to be coordinated at feasible cost in terms of time and effort. The embedded assumptions that play this role for security policy have been forged through formative experience and extensive evolution. They are not easily changed because they must be replaced rather than simply abandoned and because the replacement process itself depends on formative experience and extensive evolution.

For the United States, the formative experience that provides the foundation for contemporary security policy began with the Great Depression and ended with World War II. As a result of that sequence the federal government became far more consequential domestically than it had ever been before, and the United States itself became far more consequential internationally. It was a moment of maturation brought about not merely by the passing of time but by response to momentous events. It gave the country as a whole an organizing and energizing focus – the defeat of imperial aggression – that proved to be as vital for economic rehabilitation as for national defense.

And for a half century thereafter a central feature of the experience was relived as the United States developed history's most capable military establishment in perceived global confrontation with the Soviet Union, which was assumed to present a danger of imperial aggression comparable to the belligerent regimes of Germany and Japan. That assumption sustained the broadly accepted clarity of purpose that had been forged in the World War II experience and has provided justification for financing the military establishment at an average rate of more

than \$400 billion per year in constant 2004 dollars.¹ Clarity of purpose and justification for resource allocation are essential elements of an effective operational consensus.

With the advantage of more detached retrospect, the strategic necessity of the Cold War confrontation can be questioned. But regardless of the judgment ultimately made in that regard, it is evident that whatever validity the legacy retained was vitiated in 1991 with the dissolution of the Soviet Union and its alliance system. Those events decisively removed any immediate possibility of conventional warfare on continental scale and hence any credible threat of globally significant imperial aggression. They did not eliminate the confrontation of intercontinental range nuclear forces that had supported the two opposing alliances, but it has been presumed that the deterrent effect of those forces would preclude their deliberate use once they were disconnected from any mission of territorial acquisition.

The reigning concept of imperial threat has not been replaced, however, and it is extremely difficult to do so outside the context of an active war. In the absence of a credible strategic enemy, it has been so far impossible to devise a practical substitute. The currently prominent phenomenon of terrorism cannot be equated with massive imperial aggression and cannot be addressed in the same way. Nor can a “rising” China be plausibly cast in the global imperialist role based on its history, current policies and extraordinarily demanding internal development imperatives. The United States as well as the international community as a whole is in serious need of an alternative formulation.

ISSUES OF ADAPTATION

The evident need derives not merely from the evaporation of the Cold War confrontation but from the rise of new circumstances. There are strong reasons to believe that the process of globalization is altering the dynamics of human societies to an extent that presents fundamentally different problems capable of overriding the traditional concern for territorial aggression. As capital and

¹ U.S. Military Spending, 1945-1996, Center for Defense Information (available at: www.cdi.org/issues/milspend.html).

commodity markets have expanded to global scale, the determining dynamics of economic performance transcend any sovereign jurisdiction. In reacting to that largely spontaneous development, most major societies have directed their energies to compete primarily for productive investment and terms of trade rather than territorial control, and they are implicitly discounting the utility of military power. The U.S. investment in traditional military capability is not being matched anywhere in the world. The most immediately troublesome problems of security are arising from civil violence and embedded terrorism within established sovereign jurisdictions unable to command the internal social consensus necessary to control them. The global threat posed by those situations is not that of imperial aggression but rather social and economic disruption. The global economy is a system of currency, commodity and service-flows crossing formal legal jurisdictions. It is dependent on expectations and informal rules of accommodation that are sensitive to violence and vulnerable to criminal exploitation. It is generating conditions of grievance, moreover, in that the pattern of growth is highly inequitable with massive accumulations of wealth among a very few individuals and endemic hardship among large populations. Meanwhile, the aggregate effects of human activity have reached proportions capable of altering global ecological balances thereby generating threats that might in principle exceed traditional forms of warfare.

But general recognition of these circumstances has not produced a fundamental change of operating principles. Preparations for traditional forms of warfare still dominate military investment, and the concepts of threat that underlie prevailing policy feature intrinsically aggressive strategic opponents no longer named but still proclaimed.

There are those who defend continuation of the legacy formulation despite the evident change of circumstance. Since large-scale warfare contesting the control of territory has regularly occurred throughout history and has demonstrated its capacity to forge social consensus, they contend that it will never be otherwise and that deterrence and/or defeat of an imperial threat should remain the primary commitment of American security policy in anticipation of the eventual appearance of such a threat or, in the more sophisticated form, as an exercise in

detering it. Whether expressed or implied, China and Russia are considered to be the prototype candidates. That line of argument endorses the established operational consensus and rejects any fundamental change. It has the considerable internal advantages of conceptual simplicity and institutionalized inertia, but it runs the considerable risk of making the United States itself appear to be an imperial threat to the rest of the world, a development that would have ruinous consequences in the context of globalization. More ominously, it also virtually precludes the advanced forms of collaboration necessary to respond to distinctly different dangers.

Precisely because an authoritative reformulation of operating principles has not yet occurred, the argument for doing so has less stature and less widespread recognition. The implications of the globalization process are nonetheless fairly evident. It is shifting both the scale and the character of primary threat. The traditional problem of large-scale military operations that by their nature are consciously hostile and centrally organized is receding in significance as investment is redirected. The principal immediate problems are posed by smaller scale but more widely dispersed and more spontaneously generated forms of violence that turn more on the dynamics of social consensus than the application of military force. The fundamental longer term problem is that of devising effective protection against ecological catastrophe. That emerging agenda basically requires global collaboration for mutual protection rather than military confrontation for national advantage and hence a change of prevailing attitudes as well as operating principles.

The conceptual adjustment required is quite demanding. It cannot rely on familiar historical precedent since the entire case rests on the assertion of fundamental discontinuity – that is, the emergence of unprecedented circumstances. It cannot reduce canonical threats to the familiar image of intrinsically hostile, strategically calculating, centrally organized opponents. It cannot evoke the emotional power of belligerence that the traditional conception of threat inspires. It requires widespread acceptance within the United States that virtually all candidate enemies are not in fact intrinsically motivated but are instead reacting to perceived threats emanating from our superior military power and antagonistic policies. Similarly it

requires widespread comprehension of the distinction between a calculating opponent and a dangerous process. It has to extend concepts of vital interest to global scale, thereby transcending national identity and cultural affiliation. It has to elevate concepts of equity and legitimacy over national advantage and the raw exercise of coercive power. And all this has to be done while facing the inherent uncertainties of anticipation. As Søren Kirkegaard once remarked, “life is lived forward but understood backward.”

The ability of the American political process to manage such an adjustment is yet to be determined, but the incentives for doing so make that an interesting question despite the imposing array of impediments and despite Kirkegaard’s trenchant observation.

RECENT EXPERIENCE

Both the imperative of adjustment and the difficulty of accomplishing it are intensified by the fact that the dominant impulse of the United States in the aftermath of the Cold War has been to extend rather than revise the underlying operational consensus. In the immediate aftermath, both the size of the military establishment and the supporting budget were cut about 30%, but preparation to defeat imperial aggression remained the central purpose. With the disappearance of any plausible immediate instance, hedging against the return of such a threat became the central justification, and higher standards of performance were set. During the final stages of the Cold War, U.S. conventional forces were officially expected to resist a Soviet assault on Western Europe only for three days before bringing the supposedly decisive effect of nuclear weapons to bear. Even though it was informally understood that they could and should expect to do much better than that, official doctrine and actual operational preparations were predicated on that assumption. In the aftermath of the Cold War with the windfall acquisition of global superiority, the standards were set higher. U.S. forces were to be able to defeat imperial aggression simultaneously occurring in two separate but unspecified theaters more rapidly and more decisively with fewer casualties.

The setting of higher performance aspirations despite an overall reduction in forces was not merely or even primarily an acknowledgment of weaker opposition but

rather an endorsement of technical innovation. By the 1990s after more than a decade of dedicated investment, the application of dramatic advances in basic information processing technology had given U.S. forces substantially improved capability to perform traditional combat missions derived from the ability to identify and attack critical targets with unprecedented speed and precision. The significance of that development was demonstrated in the 1991 liberation of Kuwait and in yet more advanced form in the 2001 assault on Afghanistan and the 2003 assault on Iraq when U.S. forces won field battles with extraordinary efficiency. For attentive military planners throughout the world, the central reality after 1991 was the progressive and increasingly effective pursuit of combat superiority by the United States, reflected not only in technical investment but in operational training and other essential features of policy. With advanced capabilities for battlefield surveillance, precise delivery of munitions, and global operational reach, the American military could expect to detect an imminent imperial threat in time to undertake a preemptive attack that would defeat it in advance – a far more efficient use of force than liberating territory after it had been aggressively occupied.

That principle was demonstrated in 1995 when Iraq moved two of its relatively elite Republican Guard divisions to positions near the Kuwait border suggesting a reprise of its earlier attempt to annex the country. In response, both the United States and Great Britain undertook a counter mobilization and issued an ultimatum, backed by a UN resolution, warning Iraq to move the two divisions back to their normal deployment areas near Baghdad and threatening to attack them if they did not. The Iraq government complied with the ultimatum thereby setting a precedent in support of both the legitimacy and the effectiveness of preemptive action against impending attack.

The question of legitimacy depended heavily on the credibility of the indictment, however. Saddam Hussein's largely unprovoked attack on Kuwait in 1991 and his brutally repressive form of rule within Iraq had made him a prototype imperial aggressor in the judgment of most of the world. There was no dispute over the hostile intention attributed to the movement of forces within his own sovereign jurisdiction in 1995. But that does not mean that any assertion of imperial intent

issued by the United States would be broadly accepted in all instances as justification for preemptive action. Preemptive attack undertaken against a country with exclusively defensive intentions would itself be an act of aggression. Since the attribution of intention is usually a matter of disputable judgment, response to aggression is far more readily justified than preemption. There is some inherent tension between efficiency and justification in the use of force.

For that reason the attribution of intention, disputable as it might be, is a central feature of security policy, especially for Russia as principal heir of the Soviet legacy and implicit candidate for eventual peer competitor of the United States. Russia embarked in the aftermath of the Cold War on a massive internal transformation involving the fundamentals of social and political organization. It embraced the basic principles of consensual government and worked out election procedures for determining who would hold power. It embraced the basic principles of a market economy as well, dismantled the institutions of central economic direction and committed itself to global economic engagement featuring its oil and gas resources. It absorbed the remnants of the Soviet military establishment, including all of its nuclear weapons, but did not attempt to sustain the investment required to preserve the Soviet capacity for conventional power projection. It clearly aspired to accommodation with the industrial democracies.

But within the United States, Russia has not been credited with constructive intention or good faith effort. Instead it has been held to advanced standards of performance and generally found to be insufficiently democratic and incompletely reformed. It has not been removed from the focus of U.S. deterrent force operations. As NATO expanded eastward, against assurances that had been given at the time of German unification, Russia has not been considered eligible for membership. The unspoken but clearly conveyed implication is that Russia is to be indefinitely held in potential adversary status and hence potentially subject to American preemptive capability. The implicit attribution of imperial motives is a natural source of resentment and a significant practical concern for Russia – and similarly for China and any other country the United States chooses to consider a potential enemy.

The reasons for concern have intensified, moreover, in the aftermath of the 2001 terrorist attacks. The highly emotional American response to that provocation reinforced the fear of implacable hostility that has anchored the prevailing operational consensus since the formative encounters with Germany and Japan in WW II. It also set a presumption that terrorists should be hunted down wherever they can be found and attacked before they themselves are able to attack. That reaction has extended military operations into the smaller scale forms of violence traditionally assigned to law enforcement agencies and has reinforced the principle of preemption. In a series of documents and pronouncements, the Bush administration declared that sovereign states will be held responsible for terrorist actions emanating from their territory, that those states suspected of sponsoring terrorist operations or of otherwise being hostile to the United States would not be allowed to acquire weapons of mass destruction and that preemptive attack, including nuclear weapons if necessary, would be considered in instances of defiance.² Iran, Iraq and North Korea were explicitly named as the principal suspects, and Iraq was in fact attacked in an exceedingly prominent application of the doctrine, even though it posed no immediate threat. More generally and less explicitly, military planning documents prepared with apparent administration approval proclaimed the intention to acquire “global dominance” by developing the capability for decisive attack against any state indulging in what the United States considers to be threatening behavior. The implication was that the rise of a peer competitor would be prevented by force if reason and natural inclination prove to be insufficient.

Literally interpreted, the Bush administration security policy was an inherently provocative doctrine of preventive war, and it presented military professionals throughout the world with the problem of judging just how literally it was to be taken. They could readily discern that it would not be feasible for the United States to achieve the degree of dominance required not merely to preempt against

²Transcript: Bush Delivers Defense/Terrorism Speech at West Point, December 9, 2008 (available at: <http://www.clipsandcomment.com/2008/12/10/transcript-bush-delivers-defenseterrorism-speech-at-west-point-december-9/>).

imminent threat but also to prevent the acquisition of competitive capabilities by any other country. They could also discount for the emotional effects of terrorist provocation within the American political system. They could not entirely ignore, however, the implications of extending the preemption doctrine beyond the justifying context of imminent threat. The attack capability of U.S. nuclear and conventional forces already poses a significant threat both to Russian and to Chinese deterrent forces that is not balanced by any corresponding threat of their own. That disparity will increase under projected rates of military investment and will not be contained by any protective agreement currently in force or under official consideration. The Bush administration's diplomacy essentially repudiated the framework of treaties originally designed to stabilize the confrontation between American and Soviet-era nuclear forces and generally denigrated the basic idea of negotiated restraint. The invasion of Iraq documented the U.S. willingness to initiate the use of force without international authorization and the ability to do so with minimal domestic scrutiny.

The declaratory policy of the Obama administration has been more accommodating but has not explicitly repudiated the preemption doctrine and has not significantly redirected military investment. In his speech in Prague in 2009, the President reaffirmed more prominently than his predecessors the commitment to eliminate nuclear weapons that was legally enacted in the Nuclear Non-Proliferation Treaty (NPT), and he promised to pursue some of the incremental measures long associated with that commitment. His administration subsequently negotiated the New START treaty implementing one of the promises – a reduction in the deployment of strategic-range nuclear weapons – but the terms of the treaty do not meaningfully redress the underlying imbalance in capability and exposure. The National Security Strategy document issued in May of 2010 emphasized the intention to “engage nations, institutions and peoples around the world on the basis of mutual interests and mutual respect,” and it generally subordinated the

prospective use of force to the announced policy of comprehensive engagement.³ But it did “reserve the right to act unilaterally if necessary.”⁴

The awarding of the Nobel Peace Prize to President Obama in 2010 documented the extent to which his more accommodating tone has been noted and appreciated, but the underlying operational realities still impose a burden on those countries who believe they have reason for concern. The National Security Strategy statement extends preferential protection to formal allies, but it puts Russia, China and India into a separate category. Without directly threatening the use of force, it issues stern warning to Iran and North Korea. The preemption doctrine is no longer being starkly declared, but the capacity is being retained and the right to exercise it has been explicitly asserted.

For most countries of the world, national security depends more on generally accepted rules of restraint than it does on their own exercise of military force. They cannot afford to act as if anarchy prevailed beyond their borders. The United States is the primary exception in that regard. With its military establishment far more capable than any other and its national territory far less vulnerable to intrusive threat, the principal security problem for the United States is justifying the privileged situation that circumstances have conferred. And the key to solving that problem is understanding that the security of the United States cannot be separated from that of the rest of the world and cannot be based on an exceptional standard. Advantage can be tolerated depending on how it is used; absolute privilege aggressively exercised will not be tolerated.

³ National Security Strategy May 2010
http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf p. 11.

⁴ Ibid. p. 22.

SUBSTANTIVE ISSUES

Despite its dependence on consensual formulation of fundamental interest and on widely accepted operating principles to organize coherent policy, the American political system is not configured to decide those matters directly. Typically it makes specific decisions about budgets, military deployments and particular force applications leaving the underlying implications to be worked out informally and indirectly. If fundamental redirection of operational practice is to occur, it will happen in the process of engaging specific issues, and there are at least seven strong candidates for that catalytic role:

- A transformation of deterrent force operations.
- The establishment of a global system for accounting and physical control of nuclear weapons and explosive isotopes that would eventually enable higher standards of managerial control.
- Resolution of the two principal problems of nuclear weapons proliferation, Iran and North Korea.
- The development of new reactor designs, fuel cycle management practices and fundamental security relationships necessary to enable a large expansion of nuclear power generation in response to global warming.
- The development of arrangements for oversight and reassurance sufficient to prevent the application of advanced biotechnology to destructive purposes.
- The development of rules regulating the use of long-range, high-precision attack capability.
- The engagement of forces in instances of civil conflict.

The first four of these priorities are so closely related that they might be considered to constitute a single topic – the management of nuclear technology. Although that topic has only sporadically been the focus of prominent attention in recent years, it remains by far the greatest potential source of physical danger to the United States and to all other countries as well. Because of the potential consequence involved,

the disposition of nuclear weapons determines the fundamentals of security policy more than any other aspect of policy. The protective management of biotechnology and the regulation of precision attack have distinctly different features, but would have to be included in a comprehensive arrangement for the control of nuclear weapons. Engagement in civil conflict has been the principal application of military force in recent years, and that is likely to continue. All of these issues involve a similar revision of basic principles and the development of new techniques of protection.

Deterrent Force Operations

As a practical matter, the respective deterrent forces of the United States and Russia set the basic condition of global security in that they jointly wield the largest potential source of destruction. The two coupled forces are widely considered to have established a stable balance of power arrangement, with each providing a global check on the other. Since that assumption has self-reinforcing features, there is an incentive to preserve it as long as the forces are active, but in fact it is doubtful that the deployment configuration meets the technical requirements of stability. The U.S. force has sufficient preemptive capability to put the Russian capacity for retaliation under some question, a fact that during the Cold War period would have been the occasion for very active diplomacy. Under its recent, assertively self-reliant policy, the United States has so far considered the disparity to be a legitimate advantage and at any rate has not accepted any direct discussion of mitigating it. As best can be judged from the public record, the Russian government has not pressed the issue directly, but it is evident that its sensitivity to U.S. ballistic missile defense deployments is related to the underlying problem.

Institutionalized policy in the United States currently envisages indefinite continuation of legacy operational practices under which American deterrent forces:

- systematically prepare massive attack plans independent of any immediate circumstance of possible use;

- direct those attack plans primarily against Russian and Chinese military forces; and
- maintain thousands of weapons on immediately available alert status capable of covering primary targets.

It has long been recognized that those forces are technically configured and operationally inclined for preemption, despite the commitment to retaliation required by formal deterrence doctrine, for the basic reason that the priority counterforce purposes of the underlying attack plans can only be achieved if most of their specific missions are preemptive in character. Given the disparity in investment, the U.S. capacity for preemption will continuously improve, forcing Russia into increased reliance on rapid reaction of its deterrent force and even anticipation of attack in order to assure itself that an American preemptive attack could not be completely decisive.

Since it is extremely unlikely a preemptive attack could ever be reliably enough decisive to be either strategically or morally justified whatever the circumstances, the growing disparity is as much a problem for the United States as it is for Russia. Legacy deterrent practices entangle the two countries in an operational relationship that begs for revision for three basic reasons.

First, the magnitude of threat embedded in the deployed forces does not remotely fit the deterrent rationale. Under current political circumstances it is not credible to claim that an adequate deterrent effect – that is, one necessary to dissuade a rational actor from initiating attack – requires threatening massive retaliation from thousands of nuclear weapons. To the extent that an operationally displayed retaliatory threat is required at all, an adequate deterrent effect could be achieved with tens of weapons targeted in response to immediate circumstances and probably less than ten would be sufficient. The wielding of thousands of preprogrammed weapons projects an intention to preempt rather than to deter, and that intention will never be practical and never legitimate from a global perspective. The United States is not independently strong enough to defy global opinion indefinitely.

Second, the continuous coupling of large alert forces programmed for massive attack certainly enables a catastrophic accident to occur. One can argue about the probability of such an event and one can hope that it has indeed been rendered very small by measures designed to assure prudent central control, as responsible officials regularly assert. There can be no credible categorical assurance, however. Indefinite continuation of legacy practices entails some risk of catastrophe that is essentially impossible to quantify and difficult to judge. The risk arises not from hostile intent but rather from the inherent difficulty of managing dispersed operations involving thousands of individuals. The categorical discounting of this risk bears some loose but ominous analogy to the spectacular failure to understand the dynamics of risk in the global financial markets. If adequate deterrence can be achieved without running the risk of active deterrent operations, there is no justification for doing so.

Third, the dispersed pattern of weapons deployment resulting from legacy operations entails a greater risk of terrorist access than would be the case in a more protected configuration of forces. To the extent that deliberate assault from apocalyptic terrorists who could not be identified or located in advance is considered more likely than deliberate attack from any state leader who could be so identified, there is reason to shift to a more protected deployment pattern.

Most individuals not embedded in the contemporary security bureaucracies readily identify an inherently superior configuration of deterrent forces involving hundreds rather than thousands of weapons that are not programmed for attack, are held in secure storage and are never put on immediately available alert status unless their actual use is immediately required. Suitably designed and supported by continuous monitoring, that configuration of forces would render any residual disparity in preemptive capacity far less threatening, would essentially eliminate the risk of catastrophic accident and would provide robust deterrent potential that could be specifically activated in any situation that appeared to require it. Moreover, by putting all nuclear weapons into secure, continuously monitored storage, that force configuration would also establish much higher standards of protection against unauthorized access.

Although such a transformation of prevailing practice is easily conceptualized, it would be difficult to accomplish. It would involve extensive institutional adjustments in Russia and in the United States and those adjustments would have to be carefully coordinated. Direct discussions between the two governments would be an essential first step, and formal negotiations would eventually be necessary. A complete arrangement would ultimately require the agreement and alignment of the other nuclear weapons states as well, but it would be important for Russia and the United States as the main protagonists to initiate a process of progressive restraint on their forces. That would logically entail:

- Gradual and explicitly scheduled removal of fabricated weapons from operational status to secure storage separated from delivery systems with associated verification arrangements.
- Initiation of an international identification and continuous monitoring arrangement that in full maturity would provide the basis for accurate accounting and assured security of all fabricated weapons and explosive isotopes.
- Reduction in the size of total stored national weapons stockpiles significantly **below** the asymptotic limit of mass social destruction (variously estimated in the range of 1000 – 1500 targets).
- Categorical prohibition of any initial use or threat of use of a nuclear weapon for any purpose.
- Corresponding prohibition on the **unauthorized** initial use of conventional weapons for any offensive mission.

A revision of American security policy in response to emerging circumstance would require the organized pursuit of these measures, including formal negotiations designed to bring them about.

*Global Accounting*⁵

In the process of developing the existing deterrent forces, more than 60,000 nuclear weapons are believed to have been fabricated over the course of six decades, and a network of facilities has been established to produce the explosive isotopes they contain. Those facilities are embedded in the larger network that supports the 442 nuclear power reactors currently in operation throughout the world. Although nine principal isotopes have been identified that can sustain an explosive chain reaction well enough to be the basis for weapons designs, Plutonium 239 and Uranium 235 have so far been by far the most extensively used for that purpose. The combined global stocks of Plutonium and Highly Enriched Uranium (HEU) are estimated to be at least 1,800 metric tons, in principle enough for more than 150,000 weapons.⁶

Accounting and physical security for weapons actually fabricated and for their dedicated materials has been handled by separate national governments who do not inform each other in authoritative detail. As a result no one knows the total inventory. The United States government estimates of the number of nuclear weapons that currently exist has an uncertainty range of numbering in the 1,000s, even though each single weapon is itself an agent of mass destruction. The International Atomic Energy Agency (IAEA) monitors most but not all of the materials involved in nuclear power generation but does not claim to provide a comprehensive, exactly accurate account of the current global inventory let alone the history of explosive isotope production. The uncertainties of historical production are such that it is inherently doubtful a global account accurate to a single weapons unit of material could ever be constructed. Legacy practices have disseminated nuclear explosive materials to an extent that apparently precludes exact knowledge of the threat they represent.

⁵ Adapted from John Steinbruner, “Burdens of Proof,” Bulletin of the Atomic Scientists, vol. 63 # 1, January/February 2007, pp. 59 – 61.

⁶ Fissile Materials and Nuclear Weapons, International Panel on Fissile Materials (available at: http://www.fissilematerials.org/ipfm/pages_us_en/fissile/fissile/fissile.php).

During the period when deliberate mass attack was considered to be the dominant form of threat, uncertainty about individual weapons did not appear to be significant. With thousands of weapons arrayed in active confrontation, there was no reason to believe that the viability of deterrence depended on the exact number. If terrorist use is admitted to be a serious concern, however, the accounting and physical security of every weapon and the equivalent amount of explosive material become matters of priority. Although it may never be possible to achieve an exactly accurate global system of managerial control, substantial improvement in current practice is definitely possible and is likely to become an insistent demand if ever there is an incident that validates fear of a terrorist threat.

It is technically possible to devise a common accounting and physical security system that would assure continuous monitoring of weapons and materials in secure storage and would make unauthorized and undetected diversion extremely difficult to accomplish. Such a system could establish international standards while controlling access to the details of design and location that national governments are dedicated to protecting. The development of such a system lies outside the bounds of political tolerance at the moment, but if the imagined threat of terrorism is ever demonstrated to be real prevailing attitudes would presumably be revised.

Even a fully developed international accounting process would have to operate over many years, probably decades, before uncertainties regarding historical production receded to the point of relative insignificance and confidence in its accuracy and inclusiveness became established. For that reason it is important to begin formal diplomatic discussions of such a system, involving all of the states that are currently believed to possess fabricated weapons as well as those whose explosive isotope inventories provide the basis for rapid weapons deployment. Those discussions would be another essential first step in a process of adjusting fundamental security policy to emerging circumstance.

Control of Proliferation

The Nuclear Non-Proliferation Treaty (NPT), which was pioneered by the United States in the late 1960s, has subsequently become one of the most widely endorsed

international agreements. Since its entry into force in 1970, the NPT has gained nearly universal adherence and has been extended by consensus indefinitely beyond its original 25-year duration. There are currently 190 states parties to the treaty, at least nine of which have reversed national nuclear weapons programs that would have precluded their adherence as non-nuclear weapons states. Two instances of clandestine violation of the treaty – South Africa and Iraq – have been reversed. All four of the countries that do not currently adhere to the treaty -- India, Pakistan, Israel and North Korea -- are credited with having nuclear weapons in some sense, but that limited set of exceptions has so far not overturned the prevailing norm against the acquisition of nuclear weapons. There are many parties to the treaty who could more readily develop nuclear weapons than the four current exceptions, but none has chosen to do so.

Despite the evident strength of the NPT regime and the underlying norm it reflects, it is nonetheless considered susceptible to radical breakdown for three basic reasons. First, the five states authorized by the treaty to deploy nuclear weapons on an interim basis have not seriously pursued the obligation to eliminate them that was explicitly expressed in Article VI of the treaty. Of the 13 criteria specified at the 2000 review conference as indication of a good-faith effort, several have been explicitly repudiated by the United States, a fact that prevented the 2005 review conference from establishing an agenda, holding substantive discussions or issuing a report. The 2010 review conference did issue a consensus report reiterating the demand that the 13-step program of 2000 be seriously pursued. Second, there is an evident flaw in the treaty in that it allows any state to acquire nuclear explosive materials as long as their holdings are documented. That enables a willful rogue to develop a materials stockpile under legal protection and then abandon its obligation not to develop weapons by evoking the three-month withdrawal clause provided by Article X of the treaty. With a sufficient amount of Plutonium or HEU available, most advanced industrial states could fabricate viable weapons within a year. Third, there is perceived danger that regional resonance of the Indian, Pakistani and Israeli nuclear programs might so undermine the global arrangement that it cannot be sustained.

Serious discussion of deterrent force transformation and of a global accounting arrangement would respond to the article VI obligation. Both are almost certainly necessary conditions for any credible effort to approach ultimate elimination and would be recognized as such. Dealing with the other two concerns, however, will predictably require some specific resolution of the Iran situation. Iran is currently suspected of intending to exploit the NPT flaw. Were it actually to do so, the regional reverberations would be extensive and dangerous.

In terms of technical capability, Iran is a much less immediate a threat to the NPT regime than is North Korea. The DPRK, which formally withdrew from the treaty in 2006, is credited with having some 40-50 kilograms of separated plutonium and has at least nominally demonstrated the capacity to fabricate weapons out of that material. In 2005, North Korea agreed in principle to dismantle its entire nuclear program and did shut down its 5 MW reactor at Yongbyon. The detailed schedule for pursuing the dismantlement process has been delayed by a dispute regarding disclosure of all the DPRK's nuclear activities, and the entire deal may be endangered by the failing health of the central leader, Kim Jong il. The agreed arrangement does not provide any direct benefit for the North Korean military whose compliance in the absence of authoritative political leadership cannot be assumed. Nonetheless, the core logic of the agreement has survived repeated political assault for fifteen years – implicit testimony to the fact that it provides a superior outcome for all the countries involved. If continuity in North Korea's policy is preserved, reasonable accommodation by the United States should enable the agreement to be completed. Up to this point at least, the difficulties of implementation have had as much to do with undisciplined political antagonism in the United States as with intransigence in North Korea.

In the case of Iran there is no agreement in principle on the terms of a settlement and no direct negotiations with the United States. Iran has repeatedly denied any intention to develop nuclear weapons but since 2006 has also defied all international appeals to suspend its uranium enrichment and plutonium reprocessing activities, including UN Security Council resolution 1696 issued in July 2006. Iran had earlier admitted to the IAEA in 2003 that it had conducted uranium enrichment and plutonium separation experiments dating back to 1981

and had failed to disclose them as required by its safeguards agreement. Iran suspended its enrichment and separation efforts in 2003 and agreed to comply with the more intrusive IAEA inspection procedures established by the Advanced Protocol. The U.S. intelligence community recently stated that Iran also terminated a clandestine nuclear weapons design program at that time. The defiance that began in 2006 thus reversed an earlier policy of accommodation. One can speculate about the reasons, but it is worth noting that over its two-year duration, the policy of accommodation elicited no commensurate reaction from the United States.

The current impasse creates an inherently volatile situation. Because of Iran's extensive exposure to IAEA inspection, a great deal is definitively known about the state and location of Iran's enrichment activities. The IAEA reported in September of 2010 that the gas centrifuge cascades operating at Natanz had produced 2,803 kilograms of low enriched uranium (< 5% U 235) since beginning production in February of 2007.⁷ There was no accounting discrepancy suggesting that additional material had been produced but not recorded. Under reasonable assumptions about the exact product and waste tails assays that suggests that Iran could obtain 25 kg of HEU – the IAEA definition of a significant quantity – from the same centrifuge cascade in less than 2 months. The IAEA also reported smaller scale operations of more advanced centrifuge designs which would reduce the processing time required. But even those designs are less capable by a factor of 100 or more than the centrifuges currently used in state-of-the-art facilities and hence are very far from being commercially competitive.

Those observations do suggest that the production of HEU for weapons application might be the ultimate intention and that Iran is approaching the capacity to do so with limited warning time. They also suggest that an attack on the Natanz facility and perhaps on the uranium conversion facility as well would significantly delay Iran's acquisition of weapons capability. Since both the United States and Israel have the capacity to undertake such an attack and are believed to have some

⁷ IAEA report GOV/2010/46 6, September 2010

inclination to do so, there is some urgency in devising a more constructive solution.

As with the transformation of deterrent operations, the basic elements of a solution are readily apparent, and in fact they are officially outlined in the agreement with North Korea – the September 19, 2005 Joint Statement of Six Party Talks. The basic requirement accepted by North Korea in that document is complete dismantlement of their nuclear materials production facilities and transfer of their accumulated plutonium stocks to international control in exchange for security assurances from the United States and normalization of political and economic relations. Implied in the outline of the arrangement is the requirement that North Korea cede the right to national control over nuclear materials in exchange for assurances of equitable – that is, de-politicized – access to international fuel cycle services. Were that to become the new standard for any additional country proposing to develop nuclear reactor technology, it would close the loophole in the NPT.

Extending that formula to Iran would require the United States to offer security assurances – that is, a commitment not to initiate attack – which Iran would probably insist be ratified by the international community generally. It would probably also require some adjustment for the fact that Iran has not yet completely mastered uranium enrichment technology and therefore has not established the hedge of knowledge that North Korea has established with regard to plutonium production. One can imagine an outcome in which Iran is allowed to operate the Natanz facility under Advanced Protocol inspection provided that enrichment levels do not exceed, say, 5%, that overall production does not exceed, say, 50 kg/year and that all enriched product is placed under international control.

Since the United States has not offered to Iran the security assurances and full normalization of relations it has offered in principle to North Korea, there has not as yet been a fair test of Iranian intentions. If that offer were credibly made along with assurances of access to nuclear fuel cycle services, there would be no good reason for Iran to refuse it. Even if Iran does harbor some underlying inclination to pursue a nuclear weapons option, it has in fact very little prospect of accomplishing an overt, operationally capable deployment of nuclear weapons it

could rely upon for deterrent protection. Given the repeated denials that Iran's leaders have issued and given the regional reverberations that would result, a suddenly announced or independently discovered nuclear weapons development effort would not be considered legitimate and would be exposed to preemptive attack. Given those circumstances accommodation with Iran using the formula developed for North Korea has very good prospect of succeeding and of thereby solidifying the NPT regime to the extent that any additional defections become very unlikely.

Global Warming⁸

The problem of global warming has some potential to become the dominant, organizing concern that fear of massive imperial assault was from WWII up to the end of the Cold War. Although the forces of nature are not considered to be a willful enemy capable of deliberate aggression, they are in principle capable of yet greater destructive consequence, and it is becoming apparent that the effects of aggregate human activity on global ecology are posing major issues of strategic protection for reasons that are evident from a few basic observations.

We are in the midst of a surge in the size of total human population. Barring some unusual calamity, by 2025 six billion people will have been added to the two billion total of 1950 when the surge began. That has driven global economic growth which has in turn intensified the accumulation of greenhouse gases in the atmosphere. It has been determined at a high level of scientific confidence that human induced greenhouse gas concentrations will double over pre-industrial (1750) levels by 2050 and that a significant rise in average surface temperature will result unless offset by some phenomenon not yet identified with anything like the

⁸ Portions of this section have been adapted from John Steinbruner and Tim Gulden, "The Security Implications of Global Warming" in *Public Policy: Current Thinking on Critical Issues*, Winter 2008, Maryland School of Public Policy, University of Maryland.

same level of confidence. The amount of the increase is expected to fall in the range of 2-4 degrees Celsius with much larger local variations.⁹

The geological record indicates that substantial changes in global climate patterns could result from average temperature increases in that range, but the magnitude, timing, probability, consequence and even the basic character of those changes cannot be determined with the same level of confidence. By the time such determinations could be made, it would be too late to prevent the more serious of the possibilities that might threaten human societies on a truly massive scale – rapid rises in sea levels, for example, or sudden releases of frozen gas hydrates. To protect against calamity potentially greater than the worst of history's wars, prudence seems to require preventive efforts directed at energy production and use well before the exact dangers can be defined.

Tolerable preventive efforts must assure sufficient energy production, however, to enable rising standards of living among the poorest segments of the world population where more than 95% of the population increase has been occurring. Since the globalizing economy has been concentrating wealth among the very rich, there is good reason to worry about the consequences for social coherence and for the incidence of civil violence and associated terrorism if the poor do not at least experience improvement. In addition to a shared commitment to prevent global destruction, concern for standards of equity creates a strong connection between global warming and security policy as do the potential means for transforming energy production.

In order to keep climate disruptions down to a level to which we can be reasonably confident that humanity can adapt, atmospheric concentrations of greenhouse gasses will have to be held at the doubling over pre-industrial levels that is already essentially unavoidable – that is, at about 500 ppm – by 2050. That in turn will require a transformation of the technical basis for energy generation from sources that emit greenhouse gasses (roughly 80% at the moment) to those that do not

⁹Climate Change and Water, Technical Paper VI, International Panel on Climate Change (IPCC), June 2008 (available at: <http://www.ipcc.ch/ipccreports/tp-climate-change-water.htm>).

(currently 20% -- much of which is hydropower which has limited potential for expansion). In order to assure some economic progress at all income and wealth levels as a basic standard of equity, this transformation will have to be accomplished as the overall level of energy production is increased by a factor of 2 – 3 and large efficiency gains are also achieved.

There are five technologies that can in principle enable such a transformation to be accomplished in the time required – wind, solar, biomass, nuclear fission and carbon sequestration. Of these, carbon sequestration is currently the most popular, but the scale on which sequestration techniques can be responsibly applied is a major question. Any sequestration scheme associated with carbon-based energy generation must demonstrate to a high level of confidence that over the course of several centuries it will not produce slow leaks or sudden surges. If it did, extensive commitment to that technique would be disastrous. There are some techniques that might provide highly reliable sequestration but because of cost and scale limitations those are more likely to be supplements to a mitigation strategy than prime methods. Those that might be applied at the cost and scale required of a prime method are unlikely to be able to demonstrate reliable endurance.

Of the other options, nuclear power generation is intrinsically the most promising but would have to meet its own burden of proof; namely, that utilization could be safely expanded by a factor of 5 – 10 without enabling a ruinous process of nuclear weapon proliferation. Concern about proliferation applies not only to potentially belligerent states but also to assuredly belligerent terrorist organizations.

The option of nuclear power generation cannot meet that burden of proof on the basis of current reactor designs, current fuel cycle management practices and current international security relationships among the critical participants – the United States, the European Union, Russia, China and India. Expansion on that basis would entail too grave a risk of dangerous proliferation to be sustained. There are technically viable reactor designs, however, that would be substantially more resistant to proliferation dangers, in particular designs in which the fuel would be sealed within the reactor for the duration of its service. Those could be manufactured in small 50 or 100 MW units at a few internationally managed facilities, shipped to the location of use in whatever numbers would be required for

that location, and then returned to the original manufacturing facility for disposition of the used fuel. Development of those designs in combination with internationalized control of fuel services, a comprehensive nuclear materials accounting system, and transformation of deterrent force operations would create conditions under which the burden of proof could be met. That combination of circumstances would make the expansion of nuclear power generation a viable option, and it will be difficult to contain global warming without it. Although wind, solar and biomass will undoubtedly be developed and utilized, they are unlikely to be alone sufficient.

Of all the substantive incentives for a more accommodating reformulation of security policy, global warming seems likely to be the most powerful over the longer term. It is reasonable to expect both that the problem itself will become a riveting concern at the head of state level over the next decade and that the implications for the management of nuclear technology will become sufficiently imposing to override the entrenched resistance of legacy policies.

Biotechnology¹⁰

Progress in understanding basic life processes at the molecular level has been especially dramatic in recent years as intricate details have been revealed about operations of the human immune system and strong hints about the regulation of cognitive, emotional and reproductive functions have emerged as well. The degree of understanding achieved is certainly not complete, but it is advanced enough to indicate that extraordinarily powerful applications are likely to become possible. One can plausibly imagine the eradication of historical diseases, but unfortunately one can even more plausibly imagine the creation of diseases far more destructive than those that have naturally evolved. Similarly one can imagine both constructive therapy and malign manipulation of behavior on a mass scale.

¹⁰ For more extensive discussion see John Steinbruner, Elisa D. Harris, Nancy Gallagher, Stacy M. Okutani, *Controlling Dangerous Pathogens: A Prototype Protective Oversight System*, Center for International and Security Studies at Maryland, University of Maryland, March 2007.

Fundamental science undertaken by a globally dispersed biomedical research community for compellingly justified reasons is enabling highly destructive application as an unavoidable byproduct.

This circumstance imposes an extraordinary burden of management. The momentum of discovery is driven almost entirely by very strong constructive intentions whose legitimacy is beyond question. It would be infeasible and undesirable to try to interfere in any fundamental way. But the destructive implications loom as a danger too massive to be ignored indefinitely. As it becomes evident how hundreds of millions or even billions of people might be put at risk by the deliberate creation of an advanced pathogen, it also becomes important to devise some systematic means of preventing such a development even if no one currently appears to intend it. And there are two competing impulses in that regard. The first is to try to sequester all of the enabling information under national security classification. The second is to force systematic transparency so that the very powerful established norm against destructive application can be applied in timely fashion.

In reaction to the anthrax letters in 2001, the United States has indulged both impulses. It has added more than a billion dollars annually to protective research to be conducted within the public health establishment largely under transparency rules. But it has also initiated a threat assessment program within the Department of Homeland Security designed to identify the technical opportunities that terrorists might exploit. And to prevent said terrorists from exploiting the opportunities identified, a substantial portion of the work is to be classified. The underlying supposition is that the primary threat is posed by implacable terrorists who cannot be restrained by any norm.

As a practical matter, however, that supposition is so questionable that it will not be readily accepted by the rest of the world, particularly given the fact that the 2001 anthrax attacks were generated from within the United States apparently by an individual intimately involved in what is supposed to be protective research. It is not widely believed that terrorists are capable of developing advanced pathogens. The research apparatus required to do such a thing entails too much of an investment and too great a risk of exposure for that to be the principal concern.

If terrorists do attempt to use biological agents, the overwhelming probability is that they will rely on known agents that can be far more readily acquired, in which case the threat posed is comparable to that of naturally occurring infectious diseases and the appropriate measures of protection involve strengthening standard public health provisions. The greatest concern in that regard does involve anthrax, an agent that is readily found in the natural environment but not in a form that enables aerosol dissemination over a large area. By appropriating standard commercial equipment, a terrorist organization might be able to make a preparation of anthrax spores that would put up to a million people at risk in an urban area, but early detection and rapid dissemination of antibiotics would defeat such an attack. It does not qualify as a threat of mass destruction comparable to nuclear explosives or a spontaneously infectious pathogen.

The greater risk is that government sponsored threat assessment programs having identified the method for creating a pathogen that could not be defeated by advanced public health measures will generate programs for exploiting the possibility, most plausibly out of fear that some other government is doing so. Classified threat assessment programs risk triggering that perverse dynamic, which could ultimately have massively ruinous consequences. If that outcome is to be reliably avoided, transparency measures will have to be applied to all threat assessment activities in order to convey reassurance.

In all other human activities where very large consequences are at stake – the handling of nuclear weapons, for example, or the disposition of large sums of money— requirements for independent oversight are imposed as a standard method of protection, and it is predictable that that method will eventually be applied to sensitive areas of biological research as well. Since that has to be done on a global basis to be effective, the imperative to work out a robust but acceptable oversight arrangement promises to give some considerable impetus to a redirection of American security policy.

*Precision Attack*¹¹

The aspiration to dominate space for national military advantage has been stated in a series of United States military planning documents which also discuss the programmatic implications in extensive detail.¹² The documents express the intention to develop space assets that can observe threats as they arise, attack them before they are able to inflict harm on the United States, protect the assets that do this and deny similar capability to any other country. Those who understand the physics and economics of space operations can readily conclude that those aspirations cannot be accomplished, in particular that the United States could not prevent the destruction of its space assets if other countries with space launch capability considered them to be unacceptably threatening. It is apparent, however, that advanced sensing, communications relay and navigation services based in space are enabling precision strike missions to be performed at global range. In addition to making standard bombardment missions substantially more efficient, those developments are also enabling forms of retribution and coercive intrusion that were not possible in previous eras.

As the leading and so far the nearly exclusive practitioner of that emerging capability, the United States has been circumspect about it, but there have been some notable demonstrations. In November of 2002, a remotely piloted drone aircraft believed to have been operated by CIA personnel destroyed a car traveling in the desert in Yemen that was said to be carrying a known terrorist along with several other people. More recently there have been reports of similar attacks on houses in the remote tribal areas of Pakistan where al Qaeda leaders were said to have gathered. The Yemen incident did not stimulate any prominent reaction and

¹¹ For more extensive discussion see Nancy Gallagher and John Steinbruner, *Reconsidering the Rules for Space Security*, Occasional Paper, American Academy of Arts and Sciences, 2008.

¹² United States Air Force, *Joint Vision 2020* (June 2000); Report of the Commission to Assess United States National Security Space Management and Organization (Rumsfeld Space Commission), (January 11, 2001); Joint Chiefs of Staff, *Joint Doctrine for Space Operations*, Joint Publication 3-14 (August 9, 2002); Air Force Space Command, *Strategic Master Plan FY04 and Beyond*, (November 5, 2002); United States Air Force Transformation Flight Plan, November 2003; AFDD 2-2.1 *Counterspace Operations* (August 2004).

the attacks in Pakistan so far generated some strong expressions of concern about sovereign jurisdiction but not yet aggressive reaction. It is evident, however, that missions of this sort are inherently controversial and that repetition is bound to generate very sharp dispute. The Yemen incident was in effect a summary execution apparently unconstrained by any legal deliberation. It will not be indefinitely acceptable to evade the due process of law simply by evoking the word terrorist. Nor will it be indefinitely acceptable to conduct clandestine lethal attacks on someone else's sovereign territory. Development of remote attack capability without formal legal restraint would subject prominent individuals throughout the world to a continuous threat of assassination and critical infrastructure assets to a corresponding threat of damage. When the United States comes to realize that it cannot indefinitely exercise that capability and also monopolize it, it will itself become exceedingly interested in rules of restraint.

It is not evident what the most appropriate venue for working out rules of restraint would be, but the regulation of space activity would certainly have to be prominently involved. Whether or not space assets are absolutely necessary for precision strike missions, there is a strong presumption that navigation and communication relay services are important, and that makes them vulnerable to antagonistic reaction. For many years virtually the entire international community has been attempting to mandate formal negotiations to update the rules that currently regulate space activity, and the United States has alone been blocking that effort lest it impose restraint on ballistic missile defense development efforts. That stance, which reflects the ideology of self reliance, ignores the broader American interest in protective regulation. United States space assets are the most capable, the most expensive and most vulnerable of those that share the environment. They cannot be defended by belligerent, self-reliant means. They depend on the tolerance of other countries. That fact, in context of the other above mentioned issues, gives very strong incentive not only to agree to formal negotiations but to seek to establish robust rules against interference with space assets. In order to acquire that protection, the United States will have to accept some restraint on its own actions, as a security policy revised in response to emerging circumstance would recognize.

Civil Conflict

During the formative period of the Cold War, the primary danger of global imperial aggression was focused in Central Europe where the two opposing alliances maintained large concentrations of conventional forces prepared to initiate attack or undertake active defense within a few weeks. There was also a second confrontation of that sort on the Korean peninsula that still remains in some sense but is no longer connected to a broader confrontation. In retrospect it appears that the Soviet Union's security policy was less aggressive and more defensive than assumed at the time and that for both sides their main forces deployments were contingency preparations for battles they expected to prevent by undertaking the preparations. The two alliances did engage in proxy battles throughout the world, however, by providing material support for rival factions contesting control of immature or otherwise unstable sovereign governments. Although the massive battles that could have occurred in Central Europe did not, the magnitude of conflict increased throughout the world, especially between 1960 when the stalemate in Central Europe had become established and 1990 when it dissolved. Since 1990 the global magnitude of conflict has declined back down to the 1960 level, reflecting in significant part the termination of Cold War proxy battles.¹³ The basic ideological division between authoritarian socialism and market democracy that provided the ostensible justification for the proxy conflicts has more or less been settled, and the Soviet alliance has disappeared as a major patron.

The United States military establishment emerged from that formative period with extreme reluctance to engage in indigenous civil conflict, a reluctance forged primarily by its experience in Vietnam. At operational levels there was intense frustration at the restraints imposed by political context, including the performance of drafted troops. The reaction was, first, to shift to an all volunteer force better trained to conduct the major battles associated with the primary Central Europe contingency and, second, to promote what came to be known as the Powell

¹³ *Peace and Conflict 2008*, CIDCM, University of Maryland (available at: <http://www.cidcm.umd.edu/pc/>).

doctrine – use force decisively and with full political support or not at all.¹⁴ That set a strong presumption against committing United States forces in situations where its large-scale combat capabilities could not be effectively applied. Those capabilities, which were designed for field engagements against a similarly configured opponent largely outside of urban areas, were not suitable for civil conflict requiring counterinsurgency operations inextricably entangled with civilian populations.

The American political system as a whole turned out to be more ambivalent, however. The Powell doctrine was generally endorsed and transmitted in those instructions that were officially issued. There was a series of very prominent exceptions, however, as United States combat forces came to be engaged in indigenously generated civil conflicts in Bosnia, Somalia, and Kosovo and even more seriously in ones that it generated itself in Afghanistan and Iraq as a result of applying decisive force in the occupation of those two countries. That extended sequence of events forged a domestic consensus that the United States military should systematically prepare for civil conflict contingencies, but consensus emerged only in response to the 2001 terrorist attacks. Authoritative instructions to train for civil conflict missions were first issued in late September of that year – much too late to shape the extensive engagements in Afghanistan and Iraq that were undertaken in the ensuing two years.¹⁵

Having plunged into these engagements on the basis of an operational doctrine that was very successfully implemented in both cases, the United States is now in the process of contending with the limits of its validity. As should have been anticipated but was not, decisive force is not alone sufficient to produce a successful outcome in any situation and especially not in situations of civil conflict. Consensual legitimacy, the critical ingredient of effective justification, plays a comparably important and at least partially competitive role. In the case of Afghanistan the initial operation enjoyed presumptive legitimacy under the

¹⁴ Colin Powell, “US Forces: Challenges Ahead,” *Foreign Affairs*, vol. 71, No. 5, Winter 1992/93.

¹⁵ Quadrennial Defense Review Report 2001, U.S. Department of Defense, September 30, 2001 (available at: <http://www.defenselink.mil/pubs/pdfs/qdr2001.pdf>).

principle of self-defense in the estimation of most of the world, but as even a cursory examination of history would suggest that was not sufficient within Afghanistan. The United States did not commit resources adequate to provide local security throughout the country or to regenerate viable government in a country intensely resistant to any authority extending beyond the local level. It is now encountering active insurgency entrenched in the Pashtun area that extends into Pakistan, and it is not able to contest local legitimacy in those areas.

The U.S. operation in Iraq was undertaken in defiance of prevailing international judgment, and the justification offered – alleged possession of weapons of mass destruction in violation of international agreements – proved to be specious. The operation triggered extensive internal violence reflecting a fundamental breakdown of legal order throughout the country that activated local predators and organized insurgents. The initial surge of violence has now been contained but hardly eliminated, and the method used makes it susceptible to reoccurrence. Previously predatory militia are being paid by the United States to establish security in their area of control thereby endorsing in effect their extraction of resources from those areas. The more broadly organized insurgent operations have been defeated or at least suppressed, but the resulting situation of balkanized control makes it difficult to form an effective central government from the fragments of a completely shattered political system. In response to the experience, the United States has revised its operational doctrine to feature counterinsurgency missions, but it has not yet generated a credible policy of stabilization and reconstruction either for Iraq or for Afghanistan.

Since the ultimate outcome is in doubt in both instances so also are the enduring implications, but there are some strong presumptions. Complete disengagement of U.S. forces does not appear feasible any time soon. Especially in Iraq, they provide protection against external incursion that will continue to be necessary and that national forces will not be able to assure. The date for complete withdrawal specified in the recently concluded Status of Forces agreement is questionably realistic. Nonetheless, disengagement from counterinsurgency missions is likely to become a practical imperative. United States forces and those currently allied with them do not have and cannot expect to acquire the legitimacy required to master

the dynamics of internally generated violence. That basic fact implies that a successful reconstruction process would have to be managed by a much broader international consortium that could credibly represent the interests of the world as a whole and might be able to command consensual acceptance for that reason.

However the details work out, it is prudent to assume that adequate stabilization in Iraq and Afghanistan will require substantial international assistance from sources currently considered to be antagonistic. Constructive engagement with Iran would certainly be required, as would the active cooperation of Russia and China. All three countries would in turn require credible reassurance, not only about basic purposes in Iraq and Afghanistan but about global security policy generally. The management of civil conflict and associated terrorism cannot be disentangled from the management of nuclear weapons, biotechnology and advanced precision-strike capability.

SECURITY RELATIONSHIPS

If the leading substantive issues provide the specific focus necessary to engage the operating principles of security policy, relationships among the principal military establishments are the more fundamental determinants of those principles. As reflected in all of the substantive issues, the security relationship between Russia and the United States is still based on active confrontation as an extension of the Cold War pattern. As far as the United States security bureaucracy is concerned, that is also the prevailing and projected character of the security relationship with China, although in that case confrontation is less reciprocal, less actively practiced and more starkly contradicted by the fact of extensive economic engagement. If the basic principles of policy are to be revised in response to the process of globalization, then there will have to be explicit accommodation with Russia and China subordinating the practices of active confrontation in order to establish collaboration for mutual protection as the dominant mode of operation. That is an emotional as well as a conceptual matter and is correspondingly more difficult to bring into focus. It is nonetheless the central question.

In terms of surface rhetoric, accommodation has already been proclaimed. Speaking at official diplomatic events or in broad public venues, U.S. officials have repeatedly declared that they do not consider Russia or China to be immediate enemies even as they continue in congressional testimony to cite the rise of a peer competitor as justification for continued investment in the capacity for direct confrontation. Substantive provisions of accommodation have not been developed, however, and the natural means of doing so – the diplomatic process that supported the bilateral arms control provisions during the Cold War—has largely been dismantled. The declarations of benign intent are contradicted by the preventive/pre-emptive doctrine and are compounded by refusal to acknowledge the implicit implications for candidate “peers.” A threat that is wielded but not mentioned is distinctly ominous for those who might be subjected to it.

The U.S. political system presents impediments to an accommodating revision of security relationships at least as significant as those inhibiting specific revisions of policy. There are intense minorities axiomatically antagonistic to Russia and to a lesser extent to China as well. Neither country has an actively supportive internal constituency of any major political consequence. An explicit program of accommodation would assuredly encounter active opposition not balanced by assertive support. Proponents would be burdened by antagonistic reactions to Russia’s recent military action against Georgia and its assertive sponsorship of independence for the ethnic enclaves of Abkhazia and South Ossetia. Majority American sentiment appears to endorse the basic idea of accommodation, however, and that suggests there is permissive leeway for leadership on the question. Security relationships are intuitively more comprehensible, moreover, than are the substantive issues of policy. As compared to the Cold War period, a much greater portion of the United States electorate has been directly exposed to Russian and Chinese society, and some degree of constructive social engagement has occurred as a result. Fundamental security accommodation is reasonably judged to be feasible. The requirements are certainly worth a discussion.

Russia

The emergence of the Russian Federation as principal heir to the Soviet security legacy provided an initial opportunity for fundamental accommodation. While absorbing the bulk of Soviet military assets – all of its nuclear weapons and roughly half of its conventional forces – Russia set a context of policy that precluded dedication to imperial aggression. Its initial defense budget was a small fraction of what the Soviet's had been, and its primary concern was that of securing political jurisdiction and operational control over the inherited forces. As they embraced the basic principles of market democracy and began the process of internal transformation, the founding leaders of the Russian Federation apparently hoped and even expected that their evident redirection would qualify them for inclusion in the ascendant economic and security arrangements of the industrial democracies.¹⁶

The extent of their responsiveness was not tested, however, since the United States was not prepared to undertake or even seriously consider the revision of its policy that fundamental accommodation would have required. In response to the attempted coup against the Soviet Premier Mikhail Gorbachov in August of 1991 the George H.W. Bush administration did initiate a rapid, unilateral reduction in the number of deployed nuclear weapons designed primarily to deactivate shorter range systems controlled by forward commanders. That action was inspired by fear that the Soviet political leadership might lose control of their short-range systems deployed along the front in Central Europe, and it revealed some appreciation of the dangers of active deployment. Nonetheless the partial deactivation of forces, which was reciprocated by Gorbachov after the coup attempt had failed, did not alter the basic character or destructive potential of deterrent operations. It may have mitigated the risk of inadvertent catastrophe but did not eliminate it.

The issues of internal control were also recognized as the Russian Federation emerged from the dissolution of the Soviet Union, but again they were

¹⁶ Alexander Lukin, "From a Post-Soviet to a Russian Foreign Policy," *Russia in Global Affairs*, No. 4, October – December 2008.

subordinated to the main thrust of American policy. The United States provided financial and material assistance to Russia for the deactivation of some of its inherited nuclear weapons, but did not relieve the underlying preemptive threat posed to their active forces. Quite the contrary, it relentlessly enhanced that threat in Russian estimation through the process of NATO expansion which extended its area of operational jurisdiction up to the Russian border and provided formal assurances of protection to countries that have historically been antagonistic to Russia. That context not only marginalized but counteracted the U.S. contribution to the strengthening of internal control over Russia's inherited forces -- arguably its own most compelling interest. Moreover, it completely preempted any question of broader security assistance, a basic requirement of fundamental accommodation.

That history is now part of Russia's formative experience and will certainly make accommodation more difficult to achieve than it would originally have been. The background incentives still make it presumptively feasible nonetheless despite accumulated grievances and residual distrust. The United States is in position to assure Russia's legitimate security requirements at a much higher standard of protection and efficiency than Russia alone could achieve. A serious commitment to do so on equitable terms would be difficult to resist.

Admittedly a security relationship is a diffuse notion involving social attitudes and broad public impressions as well as official policies, formal agreements, military deployment patterns and operational practices. It is generally considered to be the consequence of circumstance, perceived interest and substantive policies rather than the direct focus of policy itself. And indeed if active confrontation is the fundamental operating principle, then the state of a security relationship is primarily determined by relative operational capability and by a categorical presumption of potential conflict. Apart from a few crisis episodes, even the Cold War opponents did not generally proclaim hostility and did express the desire for accommodation as they engaged in active confrontation. The disposition of forces was nonetheless understood to be the real measure of the relationship.

If reassurance is to become the dominant principle, however, then the unavoidable disparity in military capability that currently prevails cannot be the central measure of merit or the principle determinant of the U.S.- Russian security relationship. A

mutual understanding of purpose and intention would have to be developed that is robust enough to override traditional contingency planning principles. Those principles require a military establishment to prepare a defense against any threat a potential enemy is capable of undertaking regardless of its estimated inclination to do so. Russia inherited that planning standard from the Soviet Union but cannot reasonably meet its requirements in confrontation with the United States. In order to establish an understanding considered reliable enough to be an alternative basis for security, the relationship itself would have to be the principal focus of attention.

Since the determinants of a security relationship are diffuse, so also are the opportunities for shaping it, and a successful process would probably involve some creativity that is difficult to anticipate. The central features of a serious effort are nonetheless evident.

- As the stronger party and recently the more aggressive one, the United States would have to initiate the process by conveying at the outset a credible intention to accomplish fundamental security accommodation. That would have to be presented as a basic change of policy and would have to be documented by suspending both the further expansion of NATO and implementation of the agreement to deploy ballistic missile defense technology in central Europe pending a mutually acceptable understanding with Russia. A declaration of intent would probably also have to be supported by agreement in principle to open negotiations on legally binding regulatory rules of mutual interest.
- Both countries would have to endorse the principle that no offensive operation be undertaken without international authorization. Especially at the outset, before acceptable specification is worked out, that might require some qualification to the effect that a good faith effort to secure authorization would be undertaken under all circumstances and that any exception would be based on credible determination of imminent threat.
- Both countries would have to commit themselves in principle to the termination of active deterrent operations under conditions of reliable verification.

- Both countries would have to commit themselves in principle to the joint conduct of protective operational missions; most notably, military air traffic control, ballistic missile tracking and space surveillance.

The central purpose of those provisions is to regulate the threat of preemptive attack. If nuclear forces are not immediately available, if their return to active status could be reliably detected and if air and space surveillance of conventional forces operations were joint operations, then the critical element of surprise would be precluded and reassurance would be conveyed on a continuous basis. The mobilization of an imminent threat would still be possible but the requirement for international authorization and the assurance of timely warning would make the potential less immediately imposing. That would affect expectation more than capability, but with an equitable balance of capability essentially infeasible anytime soon the management of expectations is the essence of the matter. The members of NATO have considerable offensive potential against each other, but their separate national operations are sufficiently well integrated that they do not consider that fact to be relevant. Given their historical antagonisms and some smoldering contemporary ones, that is a very significant accomplishment – an obvious model for the world as a whole.

The extension of those provisions to Russia and ultimately to China as well would be a radical change of operational policy requiring very extensive negotiations to specify and lengthy time to implement. Even the initial thought would undoubtedly inspire howling protest and categorical rejection from the defenders of institutionalized practice on both sides. Again the question is whether the respective political systems are able to discern and develop their underlying interest in provisions of this sort.

The primary interest in question is the risk of massive catastrophe inherent in the operational coupling of the deterrent forces. As noted, that is by far the greatest source of physical danger to both societies that cannot be justified by any credible deterrent requirement. A comprehensive conception of risk would have to acknowledge the irreducible danger and would have to concede that the continuously increasing pressure imposed on the Russian command system by the United States investment program and the preemptive doctrine increases the risk

by an amount that cannot be accurately measured. Standard rules of prudence of the sort applied in other areas – the licensing of nuclear reactors, for example – would impose the burden of proof on those who declare the risk to be negligible, and they could not meet that burden. The practical fact that the burden currently goes the other way is an unmistakable sign of pathology in the political process. If the United States and Russia are to eliminate the threat of catastrophe before experiencing it, they will have to terminate active deterrent force operations and will have to do so in direct collaboration.

And that is not the only strong interest in question. With the global financial crisis demonstrating the entanglement of national economies, security accommodation is becoming an increasingly important condition for vital economic cooperation. Russia's fate is tied to the market, and that fact sharply constrains any adventures in coercive intimidation it might be tempted to undertake. Those in Russia who have imagined that wealth extracted from international energy and primary commodity markets enables a reversion to Soviet era behavior and those in the United States who have imagined that development as well are neglecting the imperatives of economic performance in a global market. Since Russia is heavily dependent on energy exports, it must maintain its reputation as a reliable supplier and could not tolerate the economic isolation that a significant imperial adventure might trigger. Russia has too small an economy to be a major factor in the global economy on grounds of scale, but its energy resources and technical capacity confer consequence as does its potential for internal disintegration. An effective response to global warming would have to include Russia as an integral partner. Serious engagement is warranted from both national perspectives quite apart from the question of immediate physical danger.

As a practical matter, the Russian military action against Georgia in August of 2008 will undoubtedly be an enduring political impediment to accommodation. From the U.S. perspective, it readily evokes traditional images of imperial aggression and appears to justify the underlying policy of deterrent confrontation. From a Russian perspective, it was a legitimate reaction to provocation initiated by Georgia and encouraged by NATO. Were there a truly fair court to judge such things, available details suggest that Russia would have a strong case short of

completely compelling. Underlying resentment and nostalgia for great power status appear to have played some role in their failure to invite international mediation and in their aggressive reaction to perceived provocation. But whatever the appropriate allocation of blame, the event was not significant enough to override the reasons for accommodation. Apart from its nuclear arsenal, Russia's capacity for offensive operations outside its own territory is restricted to a few border areas against modest opposition. It simply does not have the military establishment, the economic base or the fundamental incentive to indulge in global or even regional power projection. Its aggressive behavior is far more plausibly seen as a response to perceived threat than as a manifestation of imperial zeal. Political emotion aside, reassurance is a far more appropriate response than countervailing threat, which will be available at any rate.

China

China's relevant formative experience has sufficiently different character that it is more difficult to comprehend from an external perspective, perhaps even from an internal one as well. As compared to the United States and Russia, civil war is a more recent experience for China, and its military establishment has had a greater role in establishing and preserving the authority of the state. External confrontation has also been less prominent. In political terms China was a major participant in the Cold War and was an active combatant in the Korean War but did not engage thereafter in the global confrontation of forces focused on Central Europe or in a regional equivalent. In general, China's security policy has been subordinated to priorities of internal economic development, and it has not made the broad investment in external power projection that would be expected of an aspiring imperial power. Instead, China's leaders originally advanced the phrase "peaceful rise" as the summary formulation of their global aspiration and then revised it to the yet more circumspect "peaceful development."

More specifically, however, China has been intensely committed to defending its claim to sovereign authority over Taiwan -- one of the world's most prominent unresolved issues of territorial jurisdiction -- and has repeatedly warned it would

initiate the use of force to defend that claim if compelled to do so by a unilateral declaration of independence. Harmonizing that specific commitment with the global formulation while attempting to meet its operational requirements has been the dominant problem of China's security policy.

China's deployment of nuclear weapons has been consistent with the global formulation. China was the last of the five states to test and deploy nuclear weapons before the 1967 cutoff date of the NPT, and during the ensuing decades it has not attempted to match the operational capability of the other four despite what would appear to be justifying fears. At the time of its initial deployment China believed it faced a threat of war both from United States forces fighting in Vietnam and from Soviet forces arrayed along its Northern border, with the latter considered to be more immediate and more serious problem. In 1969, Chinese and Soviet forces fought regiment sized battles over disputed islands in the Ussuri river; and the Chinese leadership under Mao Zedong, extrapolating from the invasion of Czechoslovakia the previous year, suspected those border clashes to be the precursor of a massive assault.¹⁷ The collective apprehension of the Chinese leadership resulted in an alert of the nuclear armed missile forces China then had available, apparently without the knowledge or explicit authorization of Mao or even his chief military commander and political rival, Lin Bao in whose name the alert order was issued.¹⁸ When Mao himself and his ultimate successor, Deng Xioping, realized the compromise of political control that had occurred and came to appreciate the vulnerability to preemption the alert order had created, they evidently determined that China's nuclear forces would henceforth operate under reliable subordination and would not risk the dangers of operational engagement. At any rate, since that episode China has maintained the smallest of the official nuclear forces, and as best can be judged from remote observation none of its weapons is ever brought to an operational state from which it could immediately be launched. Moreover, alone among the nuclear weapons states, China has repeatedly issued a categorical declaration that it would not initiate the use of

¹⁷ John Lewis and Xue Litai, *Imagined Enemies: China Prepares for Uncertain War*, Stanford University Press 2006, Chapter 3.

¹⁸ *Ibid.* p. 65 ff.

nuclear weapons or threaten to do so “at any time under any circumstance.” China’s deployment pattern is by far the most restricted of the officially sanctioned nuclear weapons states, particularly in comparison to the United States and Russia.

Over the nearly four decades during which its minimal nuclear weapons posture has been maintained, China has made a sustained diplomatic effort to resolve its peripheral border disputes by compromise agreements and has succeeded in 15 of the 17 instances, including an agreement with Russia in 2004 to divide control of two of the river islands that had been the focus of the 1969 confrontation with the Soviet Union.¹⁹ That effort, which has the effect of disengaging all military forces from potential triggers of conflict, is a natural complement to the restrained nuclear weapons deployment policy, and it reinforces the global formulation of peaceful development.

Again, however, Taiwan is a stark exception. China’s categorical refusal to consider any compromise of its *de jure* claim to Taiwan despite not having *de facto* control puts an implicit burden on its military establishment that is difficult to reconcile with its main line of policy. China would have to initiate military action to reverse a declaration of independence, and it could not rely on its nuclear forces even for background deterrent protection. The advanced reconnaissance and navigation capabilities of American forces put those forces in considerable jeopardy. As a practical matter, it would be yet more dangerous for China to activate its nuclear forces in a contemporary confrontation with the United States than it was in the 1969 confrontation with the Soviet Union. The United States could credibly threaten a preemptive attack with conventional weapons alone and

¹⁹ M. Taylor Fravel, “Regime Insecurity and International Cooperation: Explaining China’s Compromises in Territorial Disputes”, *International Security*, vol. 30, No. 2, Fall 2005, pp. 46 – 83. Fravel argues that the effort has been primarily motivated by fear of insurgency among ethnic minorities in the border areas and that explanation fits the espoused objective of Chinese security policy to preserve internal coherence. Fravel acknowledges, however, that the Ussuri river disputes had no direct connection to internal dissention and even for those that did the desire to prevent active confrontation is a plausible contributing motive.

might command global justification in doing so if China were perceived to be the aggressor in the immediate situation.

Although the internal deliberations of China's leadership are effectively protected from external scrutiny, judging from their investment priorities they appear to have concluded that defense of their legal claim to Taiwan will primarily depend on conventional missile and tactical air capabilities. China has deployed more than 1,000 conventional missiles in range of Taiwan, and at a moment of tension in 1995, it bracketed the island with tests of those missiles.²⁰ The point effectively made on that occasion was that military tension would disrupt the trade and investment markets on which Taiwan depends. That effect would be compounded by physical damage if the missiles were actually used against port facilities and other infrastructure assets, but it would not confer control over the island. The ability to sustain that disruptive threat would depend, moreover, on the ability to defend the missile installations and China's own infrastructure assets against counterattack, especially from United States tactical air forces.

In the aftermath of the 1991 Gulf War, in which the United States first demonstrated its advanced capabilities, China increased its own military investment focusing on an array of measures evidently designed to cope with potential U.S. tactical air engagement in a Taiwan crisis. Measured against their historical base, the effort has been substantial, involving double-digit percentage increases in the estimated defense budget over the past decade. The historical rate was so low, however, that the enhanced rate of expenditure is still only about 10% of the U.S. annual defense budget. Moreover, technical and operational mastery of military missions is a process of sequential learning determined as much or more by organizational adaptation to combat experience as by rates of expenditure. Assuming that China is able to do a realistic assessment, they would have to be pessimistic about their ability to prevail in a military confrontation over Taiwan occurring any time soon.

²⁰ Annual Report to Congress, Military Power of the People's Republic of China (2007).

Fortunately the probability of such a confrontation has substantially receded with the victory of the Kuomintang party in Taiwan's parliamentary elections in January of 2008 and with the inauguration of Ma Ying-jeou as President in March. Combined with the results of two relevant referenda, the transfer of power essentially eliminated the immediate possibility that Taiwan would attempt formal independence, as Ma's predecessor, Chen Shui-bian, had threatened. President Ma's formula for cross-strait relations – "no independence, no unification, no fighting" – is acceptable to the PRC, and direct constructive contact has significantly improved. The underlying issue is not resolved, however, and the dynamics of politics on Taiwan could return it to an acute phase. Although the DPP leader, Chen Shui-bian, mishandled the independence question, the idea does enjoy popular support on the island, and at some point it could find legitimate expression that would be awkward to frustrate. Security reassurance for China will continue to revolve around the Taiwan situation.

China's major historical grievance in that regard has to do with United States arms sales to the Taiwan government. In a joint communiqué issued by the U.S. and PRC governments on August 17, 1982 – the third of the three foundation documents establishing the basis for normalization – the US stated that it:

“...does not seek to carry out a long-term policy of arms sales to Taiwan, that its arms sales to Taiwan will not exceed, either in qualitative or in quantitative terms, the level of those supplied in recent years since the establishment of diplomatic relations between the United States and China, and that it intends to reduce gradually its sales of arms to Taiwan...”

China considers this commitment to have been systematically violated, and in fact from 1982 through 2002 the total value of U.S. government arms deliveries to Taiwan exceeded \$17 billion, with an additional \$2 billion in commercial sales.²¹ In October of 2008, the Bush administration announced a new arms sales package

²¹U.S. Conventional Arms Sales to Taiwan, Fact Sheet, Arms Control Association, June 2004 (available at: <http://www.armscontrol.org/factsheets/taiwanarms>).

of \$6.5 billion. The United States has typically justified the sales by claiming the weapons and equipment provided are defensive in character as mandated under the Taiwan Relations Act of 1979, enacted prior to the joint communiqué. For many of the armaments sold, however – especially F-16 tactical aircraft – the distinction between offensive and defensive capability is hardly categorical, and at any rate the 1982 joint communiqué makes no mention of the distinction. Much of the impulse for the sales has come from domestic American constituencies with extraneous interests in mind; but, however much China may discount for that effect, the arms sales record remains a fundamental issue of reliability. An effort to establish security accommodation would have to address it.

Despite that irritant, however, as compared with Russia, China and the United States have a far more developed economic relationship to set an enabling context for security accommodation. China's sustained rate of rapid economic growth, which the political leadership considers vital to the preservation of internal coherence, has been driven in significant part by the manufacture of products for the American consumer market. China has invested a major portion of its resulting trade surpluses in the United States, in effect balancing its abnormally high domestic savings rate against the abnormally low American savings rate. Annual trade between the two countries was \$ 385 billion in 2007, and the United States made \$75 billion in direct foreign investment in that year. As of the end of 2006, China had accumulated over \$1 trillion in currency reserves about \$400 billion of which were invested in U.S. treasury bonds.²² Those numbers indicate that the economies have become so intertwined that it is reasonable to speak of a symbiotic relationship despite their different operating rules.

Recognizing their degree of entanglement, in 2006 the two governments initiated a strategic dialogue between their top economic officials to discuss the coordination and harmonization of their respective policies.²³ The differences between the two economic systems present many contentious issues, the most prominent of which

²² U.S. – China Trade Statistics and China's World Trade Statistics, The U.S. – China Business Council (available at: <http://www.uschina.org/statistics/tradetable.html>).

²³ Henry M. Paulson, Jr., "A Strategic Economic Engagement: Strengthening U.S. - China Ties," *Foreign Affairs*, vol. 87, No. 5, September/October 2008, pp. 59 – 77.

are the subject of formal trade negotiations, but the organization of a dialogue and the commitment of time at the head-of-state and cabinet level reflect an appreciation of underlying common interest. Negotiations are typically organized to work out compromise between competing interests. Dialogue connotes shared interest.

The relationship between economic and security interest is one of the more important conceptual issues presented by the process of globalization, and the particular relationship between the United States and China is arguably the most significant instance. As noted, the traditional “realists” that have dominated American security policy assert the inherent priority and immutable conflict of security interests on the basis of their interpretation of historical experience. In setting internal economic development as the explicit priority of its security policy and in projecting the formula of peaceful rise, China’s leaders have advanced a different conception that appears to allow and even require fundamental security accommodation. Again the basic question is whether the United States will prove to be willing and capable of responding to that conception and developing its implications.

As in the case of Russia, the initiative for accommodation would have to come from the United States as the inherently stronger party – a natural principle of etiquette that the American political process has yet to recognize or master. It would also have to involve an explicit reformulation of policy replacing the preemptive doctrine. In the context of the Taiwan situation, that doctrine is yet more threatening to China than it is to Russia. For that reason, a commitment by the United States not to initiate the use of force without international authorization is likely to be the central provision of accommodation from China’s perspective, but because of the reciprocal implication of that principle it would have to be accompanied by reassurance that China itself would not be put in the position of having to initiate force to defend its claim to Taiwan. In all three of the basic normalization documents, the United States explicitly committed itself to the principle that “there is but one China and Taiwan is part of China,” and it has

officially adhered to that principle ever since.²⁴ In China's estimation, however, the U.S. security relationship with Taiwan has not been harmonized with that principle, and it is doubtful that any general reformulation or elaboration of policy will accomplish that. Adequate reassurance is likely to require a continuously active security dialogue among all three of the engaged governments and collaborative management of military operations in the strait area.

In extending a policy of accommodation beyond the priority topic of Taiwan, regulation of space activities provides, perhaps, the most significant immediate opportunity. China has led the international effort to initiate negotiations that the United States has been resisting. China has also demonstrated its capability to attack satellites as an implicit warning. The destruction of hostile space assets would be a logical means for China to counteract a preemptive threat from the United States that is not credibly restrained. Negotiating a rule against interference with space assets would reinforce the accommodating element of China's space policy and contain the confrontational element that more recently appeared. As noted, explicit legal protection is the fundamental long-term interest of the United States as well.

But fundamental security accommodation with China would eventually have to extend to its global security posture as well. The process of terminating active deterrent force operations and of providing for accurate accounting of explosive isotope inventories would have to include China in its advanced stages and that means that China would have to be consulted at the outset. That process would not involve the radical transformation of Chinese nuclear weapons operations that it would for the United States and Russia, but China would eventually have to adopt the disclosure rules and monitoring arrangements necessary to document compliance with comprehensive deactivation. Transparency is a very sensitive matter for China, and some participation in the design and initial implementation of global arrangements is likely to be necessary for their eventual participation.

²⁴ "The Joint U.S. - China Communiqué," Shanghai, February 27, 1972; "Joint Communiqué on the Establishment of Diplomatic Relations between the United States of America and the People's Republic of China," January 1, 1979; "U.S. PRC Joint Communiqué," August 17, 1982.

Along the way, China would undoubtedly be interested in global rules for the deployment of ballistic missile defenses as well. Again assuming China's ability to do accurate technical assessment, their concerns in that regard are likely to be related to the preemption doctrine. Their technical experts can readily discern that ballistic missile defenses have no significant prospect for performing stand alone missions against a competent nuclear deterrent force, but there is some potential for providing a meaningful supplement to preemptive attack plans. Given China's essentially unique commitment to a strict policy of retaliation, that is a natural concern.

For the United States, the problem of global warming provides the primary motivating interest for security accommodation with China. There is little hope of mastering the problem unless China is diverted from its current trajectory of reliance on coal as an energy generating source, and that almost certainly will require extensive development of nuclear power generation. China's recently announced plans for a major expansion of nuclear power are doubtfully realistic and at any rate would not be adequate. Again expansion on the scale required could only be accomplished on the basis of reactor designs not yet available and would require global technical and financial engagement on a scale and at a level of detail that current security policies, based on a presumption of potential hostility, would not permit. But there are more immediate incentives as well. In particular the United States has a strong interest in not driving China's nuclear forces into active alert operations. That would compound the misconception of risk and the resulting underlying danger that is currently confined to interactions with the Russian deterrent force.

Iran

The relationship between the United States and Iran is burdened by a legacy of unresolved antagonism arguably more intractable than any of the more mainstream Cold War residues. The United States was directly implicated in the overthrow of the democratically elected political leader, Mohammed Mossadeq, in 1953 and in the subsequent, highly repressive rule of the Shah – a sustained intervention in

Iran's domestic politics undertaken with global confrontation primarily in mind. The Islamic revolution that overthrew the Shah in 1979 was explicitly directed against the United States as well, and the seizure of American diplomats that followed shortly thereafter was as much a countervailing intervention in United States domestic politics as Iran was capable of undertaking. There have been no diplomatic relations since that episode, and many informal efforts to initiate reconciliation have been officially spurned by one side or the other.

From a detached perspective, there is plenty of blame to be shared, but in recent years the United States has been the more intransigent. In the aftermath of the invasion of Afghanistan in 2001 to remove the Taliban regime, Iran joined an international conference in Bonn to reconstitute the government and was publicly praised by the U.S. special envoy to Afghanistan as being especially helpful. Despite that effort, the axis of evil allegation was made barely a month later in President Bush's State of the Union Address. Then in 2003, as Iran suspended its uranium enrichment program and admitted past violation of IAEA disclosure rules, it made an overture to the United States for direct discussion of the full range of outstanding issues. That overture was rejected, and Libya was subsequently advanced as the standard against which Iran should be judged – essentially a model of nearly complete acceptance of American policy demands implicitly but only implicitly in exchange for acceptance of the Libyan political regime.²⁵ And then again in the spring of 2007, Iran reportedly made an overture to discuss the impasse over the enrichment program with the same result – a demand to suspend the program and resolve outstanding issues of IAEA inspection before any discussion of normalized relations could be held.

The Obama administration initially extended its general principle of engagement to Iran but the process has broken down in mutual recrimination. In October of 2009 negotiations through the IAEA in Vienna formulated a deal whereby Iran would export a portion of its low enriched uranium stock in exchange for fabricated fuel

²⁵ Bruce W. Jentleson and Christopher Whytock, "Who 'Won' Libya? The Force-Diplomacy Debate and Its Implications for Theory and Policy," *International Security*, vol. 30, No. 3, Winter 2005/2006, pp. 47 – 86.

for a research reactor in Teheran that produces medical isotopes. By reducing the LEU stock under direct Iranian control, such an arrangement would extend the time required to produce the amount of HEU required for a nuclear weapon. The Iranian leadership subsequently insisted either that the reactor fuel be delivered at the same time the LEU was exported or there be some escrow provision or contract guarantee if the LEU was exported, as the United States insisted, a year or more before the reactor fuel would be delivered. The United States rejected both conditions. In the Spring of 2010 the sequence was repeated when a variant of the arrangement was negotiated in Teheran by Turkey and Brazil following what they had taken to be a letter of endorsement written to the President of Brazil by President Obama himself only to have the United States again reject the terms.

Whatever the underlying bargaining calculation might be, it is quite unlikely that the United States can exercise sufficient coercive pressure to force Iranian capitulation, and an overly menacing effort to do so might readily backfire. The critical battle is over justification and the only legitimate outcome is evident. Iran can reasonably be asked to submit its uranium enrichment and plutonium production activities to reliable inspection and to put the product under international control as the initial stage of fuel management arrangement that would ultimately apply to all countries. It can reasonably demand in exchange internationally ratified assurances that it will not be attacked if it does not itself initiate attack and that it will have equitable access to nuclear fuel cycle services. But a full agenda for accommodation would have to include matters that extend beyond the bilateral relationship between Iran and the United States and are not under the realistic control of either government; most notably, insurgency in Afghanistan and Iraq, the Israeli-Palestinian conflict and security relationships in the Persian Gulf region. That means that accommodation would have to be a staged process not entirely dependent on settled outcomes and correspondingly more difficult to manage.

Thirty years of mutual antagonism have definitely limited the scope of what even the most constructively inclined in both societies are currently willing to imagine. Accommodation between the United States and Iran has to labor against unusually strong resistance, but it cannot be responsibly declared infeasible in the name of

“realism.” Accommodation is in fact powerfully propelled by underlying interest in the context of globalization. If it loses the battle of legitimacy over its nuclear materials program, Iran cannot afford the economic isolation and direct physical damage the United States is capable of imposing. In order to win the battle of legitimacy and therefore wield decisive leverage, the United States must credibly convey tolerance of Iran’s political regime, in effect abandoning the recently declared project of imposing its form of democracy by force. Those are the larger dictates of realism, and they present a test of competence for both political systems.

THE SIGNIFICANCE OF TRANSPARENCY

The central problem in transforming historically antagonistic security relationships and in establishing mutual reassurance as the primary operating principle is that of dealing with irreducible forms of intrinsic hostility – that is, the impulse for violence not generated or justified as a response to direct threat. For large-scale aggression that is not an intractable problem. The norm against imperial intrusion is sufficiently strong and the effort required to seize control of defended territory sufficiently demanding that vigilance and preparations for contingent reaction can reasonably expect to succeed. Current news flows and national intelligence capabilities already make it quite difficult to prepare a major combined arms assault without being detected and even more difficult to execute it if the United States chooses to contest the matter. With some dedicated effort to extend the deployment restrictions and military exercise reporting requirements developed in Europe, that *de facto* situation could evolve into a global arrangement.

As the operational scale of potential violence decreases, however, the burden of vigilance and contingent reaction increases. At some point on that scale, the character of the problem shifts from defending territory to defending legal order, and the scope of reasonable expectation shifts as well. The instruments of violence are so ubiquitously available and the impulse to indulge in it so deeply rooted that severe disruption cannot be entirely prevented even if classic imperial aggression can be.

In principle, interstate antagonisms can be pursued at the lesser scales of violence, and that is occurring to some extent in South Asia and the Middle East regions. That has not been the recent historical tradition of the non-contiguous major powers, however. The Soviet Union and the United States did indulge in proxy battles throughout the developing world but did not attempt to engage in terrorist violence directed against the opposing society. They were not intrinsically hostile to each other to that extent. The more reasonable judgment is that equitable accommodation is now both the dominant interest and the principal inclination of the major societies entangled in the process of globalization and that intrinsic hostility is largely confined to sub-state organizations in the context of unresolved territorial disputes. To the extent that judgment is correct, it supports the basic idea of accommodation and identifies an additional incentive to pursue it; namely protection against a common threat of violent disruption.

Fortuitously, the principal method of mutual reassurance—organized transparency – applies across the entire spectrum of violence. Disclosure rules and active monitoring arrangements provide the means of reassuring Russia, China and ultimately Iran that the United States capacity for preemption will not be directed against them as long as they themselves adhere to agreed rules. Disclosure is also the basic method for counting and securing nuclear explosive inventories, for controlling the use of all other potentially destructive technologies and generally for constraining the scope of destructive violence. Timely revelation of developing threat is the key to effective prevention, and there is enormous potential for forced disclosure and protective monitoring techniques to assure timely revelation well into the spectrum of disruption. The technical capacity to acquire, store and process detailed information has developed to the point that systematic application of those techniques could dramatically reduce the scope for violence and for many forms of criminal activity as well by tracking critical commodities, financial transactions and personal activities, provided that the global community could agree to rules making them continuously observable. The central question is the degree of intrusiveness to be tolerated in the name of protection.

That question engages core human values and does not admit to any consensus answer, but the threat of severe disruption does appear to be serious enough to

compel some development of protective monitoring techniques as a major, perhaps even dominant method of security. That in turn would require a fundamental reassessment of traditional intelligence services. Those services have historically relied primarily on methods of secret observation and illegal penetration that lock the respective national agencies providing them into intrinsically hostile relationships with each other, despite some experience with expedient collaboration. For the United States, at least, those traditional methods have enabled its intelligence community to perform their main mission with high confidence – that is, warning of large-scale surprise attack timely and definitive enough to support preventive action. But none of the others could be as confident of their ability to detect a surprise attack the United States might initiate, and even the United States loses its confidence against lesser forms of threat, as the events of 9/11 illustrated. No extension or elaboration of traditional intelligence methods can reasonably expect to provide assured warning of small-scale clandestine threats under current rules for operating the global economy. In order to accomplish higher resolution warning with confidence, mandatory transparency measures would have to be systematically imposed, and detailed monitoring information would have to be exchanged by legal agreement. Given their history of intrinsic hostility, the existing intelligence agencies are very unlikely to be trusted with managing protective monitoring information of that sort.

There are a number of international agencies currently engaged in gathering and managing protective monitoring information, most notably the IAEA and the WHO. But all of these agencies operate as supplements to national intelligence services – or public health services in the case of WHO – and none of them have the degree of detail or comprehensiveness required for protection against small scale but highly disruptive threats. Systematic development of protective monitoring as a central method of global security would require much more advanced arrangements, in all probability entirely new institutions specifically designed to assure responsible custody. At the extreme, for example, if details of expenditure, commodity use, travel and communication were to be tracked down to the individual level, procedures for managing the resulting data base would have to be very robust indeed. In order to prevent misuse of the information, rules of legitimate access and use would have to be defined and enforced to a high standard

of fidelity. Even so, no single institution is likely to be given comprehensive jurisdiction.

It is not evident that appropriate institutions could be created or that the threat of violent disruption is actually severe enough to warrant them. But it is evident that those questions will have to be considered. One clear implication of the financial crisis is that global prosperity depends on effective regulation not yet assured. As the implications are pursued and global dynamics are better understood, it is reasonable to expect that the traditionally separate topics of security and economic management are likely to blend together. Violence appears to be both a cause and a result of economic austerity. The coherence of human societies appears to depend on preserving some standard of equity. If the capacity for destruction is to be contained, the full spectrum of threat will have to be addressed in a plausibly integrated fashion. Imperial aggression blends into civil violence, terrorism, criminal assault and corruption. There is no guarantee that governing institutions can successfully adapt to the burdens being imposed, but there will surely have to be serious effort to do so. For the United States especially, that will require revision of policies, operating principles and underlying attitudes well beyond anything yet visible in the political process. Having advanced the basic idea of fundamental change, we need now to contend with what it really means.