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THE ROLE OF LEGITIMACY IN STRENGTHENING THE NUCLEAR NONPROLIFERATION REGIME

Nina Srinivasan Rathbun

The nuclear nonproliferation regime and its essential foundation, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), are currently under grave stress. The challenges that have plagued the regime since its inception—universal adherence and the pace of disarmament—persist. But new threats raise questions about the effectiveness of the treaty in preventing the spread of nuclear weapons. These include: clandestine pursuit of nuclear weapons by some NPT parties without the knowledge of the international community and the International Atomic Energy Agency in violation of their obligations; the role of non-state actors in proliferation; and renewed interest in the full nuclear fuel cycle, technology necessary to create fissile material for weapons. This article considers recent prominent proposals to address these three threats and assesses them according to their ability to gain legitimacy, a crucial element in strengthening a regime's overall effectiveness.

KEYWORDS: Nuclear nonproliferation; NPT; Legitimacy; Disarmament; PSI; Export controls; IAEA

The nuclear nonproliferation regime and its essential foundation, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), are currently under extreme stress. The challenges that have plagued the regime since its inception—universal adherence and the pace of disarmament—persist. But several new threats raise questions about the effectiveness of the treaty in preventing the spread of nuclear weapons. The first, what U.S. Ambassador to the United Nations (UN) John Bolton has called the “crisis of compliance,” stems from the clandestine pursuit of nuclear weapons by some NPT parties in violation of their obligations and without the knowledge of the international community and the International Atomic Energy Agency (IAEA).¹ These instances of noncompliance call into question the effectiveness of safeguards and export controls in preventing proliferation.² Second, several proliferators have received significant assistance from a clandestine international network.³ The fear is that nonstate actors, most importantly terrorists, could gain access to nuclear material or weapons, either through the assistance of a newly capable state, the nuclear black market, or theft. The third threat, long latent, has increased in significance in recent years. The technology necessary to create fuel for nuclear power reactors can be quickly converted to produce fissile material for weapons. Several states, including Iran, are pursuing this enrichment and reprocessing capability.

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This article considers recent prominent proposals to address these three concerns and strengthen the nonproliferation regime. Two different plans address the issue of limiting mastery of the full nuclear fuel cycle. President George W. Bush has suggested a ban on any new state acquiring the ability to enrich and reprocess uranium, while Mohamed ElBaradei, director general of the IAEA, has recommended the “multinationalization” of the nuclear fuel cycle. United Nations Security Council Resolution (UNSCR) 1540 creates international standards for export controls to prevent nonstate actors and others from acquiring sensitive nuclear materials or weapons of mass destruction (WMD). And the Bush administration’s Proliferation Security Initiative (PSI) creates informal coordination among like-minded states to interdict illegal shipments of controlled items that can be used for WMD programs.

The initiatives are assessed according to their ability to increase legitimacy. Legitimacy, in this context, is the acceptance of rules because they are viewed as right and correct, in distinction to acceptance based purely on self-interest or coercion.⁴ Legitimate agreements or regimes have numerous advantages. They attract membership of relevant parties and they provide the most cost-efficient and potentially effective mechanism to encourage rule-compliant behavior; states are more committed to ensuring that these types of regimes are successfully implemented. Legitimacy is no substitute for self-interest. The most stable basis for assuring compliance with the nonproliferation regime is the tangible security benefit it provides. Yet legitimacy can be a relatively inexpensive and important supplement.

Legitimacy can be defined in many different ways. In this article, legitimacy refers to the degree to which regimes ensure sovereign equality. Legitimate regimes are universal and nondiscriminatory. They allow equal participation and decisionmaking for all and do not discriminate among their members in terms of rights and obligations. The four proposals mentioned above, and the nonproliferation regime itself, vary in this regard.

The article is divided into three sections. The first defines legitimacy and analyzes how a regime can encourage acceptance and internalization of its rules. The second section analyzes the legitimacy of two fundamental institutions in the nuclear nonproliferation regime—the IAEA and the NPT. The third evaluates the various proposals to reinforce this regime and proposes ways to strengthen their claim to legitimacy.

Modes of Authority and Legitimacy in International Regimes

International regimes require mechanisms to encourage compliance with their rules.⁵ Drawing on Max Weber, Hurd notes that authority in the international realm ultimately rests, as it does in the domestic arena, on three modes of social control: coercion, self-interest, and legitimacy.⁶ Every system relies on a varying mixture of all three. Coercion involves enforcement, in the form of actual or potential punishment, to compel actors to obey. This is the mode of authority generally associated with realist approaches to international relations. In the domestic realm, the government generally provides this enforcement power. In the international realm, there is no clear enforcer to play this role. However, within a regime, rules may be enforced by other more powerful parties or by an international organization to which parties have delegated this enforcement authority. In regimes based predominantly on self-interest, actors follow the rules because doing so

provides tangible gains.⁷ As there is no incentive to violate the agreement, no costly enforcement is needed. States do not enter agreements if they do not expect to comply.

Coercion and self-interest are both powerful mechanisms of ensuring compliance with agreements. However, both have weaknesses that legitimacy can help to address. While often effective in ensuring the desired outcome, coercion is not necessarily efficient because surveillance and punishment to ensure that parties comply are costly. Especially in the international system, this mode of control is unlikely to be effective across large areas and for long periods of time. No state or international organization has the ability to watch all actors' behaviors at all times in all places, nor do they have the resources to punish all violations.⁸ Enforcement is much more effective when it can be directed specifically at a limited number of situations. In terms of self-interest, the substance of any agreement is not the entire basis of ensuring its acceptance. How decisions are made is often important as well.

Legitimacy helps supplement these other modes of authority. Under legitimate regimes, actors accept and support the rules as "desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions."⁹ This involves internalization of the rules of the regime as desirable in their own right.¹⁰ Legitimacy therefore is a moral or normative concept. There is no such process in the other two mechanisms. Without enforcement, states that can and wish to cheat will do so. If interests change, they will depart from the rules. Legitimacy matters both for compliance and commitment. States will both be less likely to violate the terms of a legitimate agreement and will also be more committed to holding others to their obligations in the case of violation.

Two components of legitimacy are commonly discussed—substantive and procedural. Substantive legitimacy applies to the outcome, content and product of deliberations, while procedural legitimacy pertains to the process by which agreement was reached. Outcomes and process are regarded as legitimate if the states involved believe they are right and correct or just and fair. Ruggie's notion of "qualitative multilateralism" contains both substantive and procedural legitimacy. The multilateral process coordinates national policies of states "on the basis of 'generalized' principles of conduct . . . without regard to the particularistic interests of the parties or the strategic exigencies that may exist in any specific occurrence."¹¹

Legitimacy, both substantive and procedural, can be very difficult to distinguish from interests narrowly defined. States might characterize outcomes as legitimate simply when they serve their interests, or when the procedure by which they are reached gives them disproportionate weight. This can be consciously deceptive but just as easily unconscious and natural. Both analysts and negotiators have a difficult time agreeing on what constitutes fair and just outcomes and procedures independent of interests. There are multiple plausible notions of how to define fair and just.¹²

Is there a standard of substantive and procedural legitimacy that can command consensus and serve as a benchmark for evaluating different agreements and the processes used to arrive at them? I argue it is sovereign equality.¹³ This principle of conduct provides equal legal rights to states regardless of their material capabilities. Sovereign equality is an attempt to limit the exercise of power in international relations. It

has two faces, universality and nondiscrimination. In terms of process, universality means that all, or nearly all, states concerned have a right to participate and a voice in rule creation and management of the regime. Nondiscrimination in procedure means that states have an equal voice in decisionmaking. Nondiscrimination in terms of substance means that rules, once promulgated, apply equally to all.

Regimes that create rules for uniform treatment of all states or members are generally more substantively legitimate than those that do not. However, when equal treatment would affect other important norms detrimentally, then substantive legitimacy may be enhanced by creating a rational basis for distinction among states. For example, equality in outcomes can mean rebalancing benefits in a way that does not simply reflect the power distribution of members. Therefore, regimes can improve their substantive legitimacy by giving less powerful states greater benefits while not requiring as much of them. Discrimination against powerful states can enhance rather than detract from substantive legitimacy. A good example of this is the differential treatment of developing and developed countries in the World Trade Organization (WTO).¹⁴ However, any inconsistency must be consistent with the underlying principle of the norm as well as other principles of international society, rather than as a consequence of power differentials.¹⁵

Agreements and institutions can be procedurally but not substantively legitimate. For example, the negotiations over the United Nations Charter allowed the participation of weaker members, but their concerns about power differentials were ultimately not included in the final agreement, which created a system in which the great powers possessed a veto and a permanent place on the Security Council. Nevertheless, some argue that because smaller states were given a voice in the process, they regarded the outcome as acceptable.¹⁶

Legitimacy and effectiveness have a difficult relationship.¹⁷ States are more likely to join and comply with regimes they regard as legitimate. Legitimacy has a "compliance-pull," argues Franck.¹⁸ However, expanding participation on an equal basis and requiring equal treatment forecloses the option of exclusion and often leads to lowest-common-denominator solutions. A proper balance must be struck between legitimacy and effectiveness. The move toward lowest-common-denominator consensus must be balanced by the ability of the regime to achieve its ultimate goals. By working to improve a regime's legitimacy, it might be possible for actors to create, manage, or reform it in such a way as to ensure a broader degree of compliance, commitment, and participation. This could require more time and compromise than needed for exclusive or coercive agreements, since states of all different types and capabilities must be involved from an early stage. The next section will analyze how legitimacy developed historically in the nuclear nonproliferation regime, the IAEA and the NPT. It provides a benchmark to measure the legitimacy of any new efforts to strengthen the regime.

The Nuclear Nonproliferation Regime

While some political scientists argue that the very destructiveness of nuclear weapons promotes international stability due to their deterrent effect on rational governments

concerned about the risk of escalation during crises, policymakers tend to believe that the proliferation of nuclear weapons leads to increased insecurity in international relations because of the greater likelihood of use, accident, or theft by nonstate actors.¹⁹ The nuclear nonproliferation regime developed in response to this perceived threat. The main goal of the NPT has been and continues to be to reduce the likelihood of a devastating nuclear war by preventing the proliferation of nuclear weapons to countries beyond the five already possessing them in 1967 (the United States, the Soviet Union, Great Britain, France, and China), while permitting all parties to share in the benefits of the peaceful uses of nuclear energy and simultaneously working toward the ultimate elimination of nuclear weapons. Preventing the spread of nuclear weapons required balancing the enormous potential destructive power of nuclear energy with its significant potential to provide energy and technology for development.²⁰ Nuclear energy was believed for several decades after its discovery to be the solution to all future energy needs. It would be, in the now famous words of Lewis L. Strauss, chairman of the U.S. Atomic Energy Commission, "too cheap to meter."²¹ This prospect was not possible without significant international cooperation.

On November 15, 1945, the United States, Britain, and Canada declared that they were considering international action to prevent the use of nuclear energy for destructive purposes while promoting the use of atomic energy for peaceful and humanitarian ends. The three nations offered to share scientific information with any UN member state provided that effective and enforceable safeguards against diversion to non-peaceful purposes could be devised. They called for the UN to establish a commission based on three principles: extending peaceful nuclear cooperation, eliminating all nuclear weapons, and devising effective inspection safeguards to protect compliant states against the hazards of cheating. The Soviets, French, and Chinese later joined this call, which resulted in a UN General Assembly Resolution in 1946 establishing the United Nations Atomic Energy Commission (UNAEC).²² This initial foray into addressing the dilemma provides a baseline for a regime based on procedural legitimacy and embodying universal and nondiscriminatory principles that gained the support of the UN General Assembly.

In June 1946 at the UNAEC, the United States introduced its ambitious Baruch Plan (after U.S. representative to the UNAEC Bernard Baruch, who wrote and presented it) based on the same three principles.²³ The plan proposed an International Atomic Energy Development Authority that would control all aspects of the development and use of nuclear energy that could present a danger to international security. This would include controlling all raw material as well as managing and owning potentially dangerous nuclear activities, most notably the enrichment and reprocessing processes. The proposed authority would also have been responsible for inspecting and licensing all other nuclear activities. All states would participate equally in its decisionmaking, giving it a high degree of universality. Rules would be applied without discrimination. Decisions made by this organization would not fall under the purview of the Security Council, thereby eliminating the possibility that the five permanent members could use their veto powers.

The plan would even have eliminated any inequality in nuclear weapons capability. The United States, the only state possessing nuclear weapons at the time, was willing to destroy its own nuclear weapons stockpile, but only after all states renounced the bomb as

a weapon and established an adequate system of control, including international punishments for violations. However, the Soviet Union, having not yet acquired nuclear weapons, refused, proposing instead a declaration outlawing nuclear weapons with no international control regime to prevent their production.²⁴ The plan consequently failed as a result of this and the insistence of the United States that the consequences of noncompliance be automatic and not subject to Security Council veto or review.

Subsequently, two less ambitious institutions were able to gain the necessary support of the international community: the IAEA and the NPT. Established in 1957, in the wake of President Dwight D. Eisenhower's December 1953 "Atoms for Peace" initiative, the IAEA promotes the peaceful use of nuclear energy by offering technology and materials to interested countries while safeguarding those same supplies against diversion to weapons programs and thereby alleviating some of the member states' proliferation fears. As stated in Article II of its statute,

the Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world. It shall insure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose.²⁵

However, the IAEA mandate did not include any obligation of member states to refrain from developing nuclear weapons through efforts not involving IAEA assistance. Under this safeguards formulation, the IAEA would not seek out clandestine operations but provide assurance by monitoring, auditing, and reporting on the specific nuclear facilities or materials declared by members to the agency.²⁶

The IAEA would take on new roles under the NPT, which came into force in 1970. This treaty was the first international agreement that addressed the question of nuclear weapons proliferation.²⁷ It embodies a "grand bargain" and rests on three pillars: (1) the nonproliferation of nuclear weapons to states not already possessing them by January 1, 1967, (2) the promotion of the development of peaceful uses of nuclear energy, and (3) the ultimate elimination of all nuclear weapons. Cooperation was possible because states agreed to the three pillars, even though different states were interested in different pillars. The NPT embodies most of the principles articulated in at the beginning of the atomic age in UNAEC and the Baruch Plan, but it does not achieve the same degree of legitimacy.

While the NPT places similar obligations on both nuclear weapon and non-nuclear weapon states to prevent the proliferation of these weapons, it discriminates between them. Nuclear weapon states are permitted legally to retain nuclear weapons (while negotiating in good faith toward their elimination), while non-nuclear weapon states are prohibited from acquiring them. Nuclear weapon states are bound not to transfer nuclear weapons or in any way assist, encourage, or induce any non-nuclear weapon state to acquire nuclear weapons. Non-nuclear weapon states are similarly bound not to receive or acquire nuclear weapons or seek or receive any assistance with their manufacture. However, non-nuclear weapon states are not expressly prohibited from assisting another non-nuclear weapon state from acquiring nuclear weapons. All NPT parties are bound not to supply nuclear material or equipment without proper safeguards, and an export control regime developed to support NPT obligations.²⁸

In contrast to the earlier IAEA arrangements, non-nuclear weapon states are additionally bound under the NPT to accept full-scope safeguards by the IAEA on all their nuclear facilities and materials rather than just those received through participation in the IAEA. The discrimination between those states that have and those that do not have nuclear weapons is the major factor reducing the legitimacy of the treaty. This type of discrimination cannot be justified as promoting another important principle, as for example, the exceptions from Most Favored Nation requirements for developing countries in the WTO can be. They are the result of pragmatism and power differentials, rather than principle. In fact, the NPT is the only treaty dealing with WMD that discriminates in this way. The Chemical Weapons Convention and the Biological Weapons Convention both require all parties to eliminate all existing stockpiles and pledge not to acquire any new banned weapons.

This discrimination is ameliorated somewhat by the other pillars of the regime, as well as by the voluntary acceptance of full-scope safeguards by the nuclear weapon states. They accept inspection of selected civilian nuclear facilities and programs to ensure that they are not being used for weapons purposes.²⁹ Yet because of their nuclear weapon status, they are legally permitted to have such weapon programs. Under these same agreements, any program the nuclear weapon state declares to be military is exempt from inspection. Therefore, these additional voluntary agreements serve only to strengthen claims of nondiscrimination and strengthen the legitimacy of the regime. They have no other functional purpose.

The disarmament pillar dilutes the discriminatory effects of the nonproliferation pillar and strengthens the legitimacy of the regime by creating the expectation that the special rights of the nuclear weapon states will end at some point in the future. All parties pledge to create the conditions that will facilitate the cessation of nuclear weapon manufacture, liquidation of all nuclear stockpiles, and elimination of all nuclear weapons. The parties agree to work toward ending the nuclear arms race and to achieving both nuclear and general and complete disarmament. The "peaceful uses" pillar binds the discrimination to the possession of nuclear weapons only, while reiterating that all states are on an equal legal footing for benefiting from the peaceful uses of nuclear energy and technology. States acknowledge each party's "inalienable right" to develop and use nuclear energy for peaceful purposes and promise to facilitate the fullest possible exchange of equipment, materials, and scientific and technological information, particularly to promote the development of peaceful nuclear applications in developing countries.³⁰ Nevertheless, the inherent discrimination between nuclear weapon states and non-nuclear weapon states remains.

The history of the nuclear nonproliferation regime demonstrates both the benefits and the drawbacks of relying on consensual, multilateral processes to address international security threats. All interested states were involved in the negotiations, fulfilling the universality requirement of procedural legitimacy. In joining, states gained a voice in the decisionmaking process, leading to healthy debates in both the IAEA and the NPT about the goals of each institution and the nuclear nonproliferation regime generally. While the reliance on consensus in decisionmaking sometimes leads to an inability to act, the legitimacy inherent in both the IAEA and the NPT make it very difficult to withdraw and

has been conducive to creating a norm against nuclear weapons that did not exist previously.³¹

For nearly 36 years, the NPT appears to have worked quite well.³² President Kennedy predicted in the early 1960s that there would soon be 20 to 30 states with nuclear weapons, yet only a handful of states have acquired nuclear weapons and only one state bound by the NPT may have done so.³³ Indeed, more states have given up nuclear weapons or weapons programs than have acquired them.³⁴ Before the NPT, several dozen states were openly considering acquiring nuclear weapons. The nuclear nonproliferation regime has had a high success rate with relatively low external enforcement costs over the past several decades.³⁵ Today only a small handful of states are suspected to have nuclear weapon ambitions, and only one state has withdrawn from the treaty.³⁶ There have been very few violations or suspected violations of IAEA or NPT obligations. Some might argue that the regime merely monitors and ratifies what states' interests would have ensured in any case. The role of the nuclear nonproliferation regime in states' decisions whether to develop nuclear weapons is a difficult question and beyond the scope of this article, but there does appear to be a significant case for the NPT's contribution.

Analysis of New Initiatives to Strengthen the Regime

Despite these successes, new threats to the nonproliferation regime and treaty have recently emerged. India and Pakistan both conducted underground nuclear tests in 1998 and have openly developed numerous nuclear weapons delivery systems. North Korea expelled the IAEA inspectors monitoring its nuclear facilities in 2002 and announced its withdrawal from the NPT in 2003. While the IAEA Board of Governors referred North Korea to the Security Council, NPT parties were unable even to censure North Korea's withdrawal because of divisions among the five permanent members.³⁷ North Korea recently claimed to have reprocessed enough plutonium for several nuclear weapons, yet the Security Council remains unable to act. Libya announced in 2004 that it had a secret nuclear weapons program for the past 20 years and had received nuclear technology, equipment, and materials, including a nuclear bomb design (all of which it subsequently turned over to the United States) from a clandestine supply network run by Dr. Abdul Qadeer Khan, known as the "father" of the Pakistani bomb. Information provided by Iranian dissidents in 2002 led to the exposure of a 20-year-old, clandestine uranium enrichment program, a violation of Iran's IAEA and NPT safeguards obligations. Since 2002, the IAEA has not been able to determine authoritatively that Iran has admitted the full scope of its program and continues to call for more cooperation from Iran.³⁸ Iran restarted its enrichment program in August 2005, breaching its November 2004 agreement with the United Kingdom, France, and Germany to suspend such activities. Iran also rejected the European offer of political, economic, and other incentives if it ended its pursuit of the nuclear fuel cycle.³⁹

Iran was reported to the Security Council in March 2006, which subsequently passed a unanimous presidential statement calling on Iran to take the steps required by the IAEA Board of Governors and the director general to report on Iran's actions.⁴⁰ Following the IAEA director general's report of April 28, 2006 underlining continuing concerns regarding Iran's actions, the five permanent members of the Security Council and Germany offered a

new proposal for direct negotiations with Iran in early June 2006.⁴¹ On August 22, 2006, Iran rejected U.S. and European demands that it freeze its uranium enrichment program as a precondition for negotiations, although officials said it was willing to discuss the possibility of a freeze even as enrichment activities continue.⁴²

Several initiatives have been proposed in response, particularly by the Bush administration, to confront the threat posed by states of concern and terrorists acquiring nuclear weapons through clandestine supply networks or from other rogue states, what Braun and Chyba call second-tier nuclear proliferation or "proliferation rings."⁴³ Three are particularly important: (1) limiting the proliferation of technology for mastery of the complete nuclear fuel cycle, most importantly enrichment and reprocessing-related activities; (2) UNSCR 1540 mandating international standards for national controls to prevent nonstate actors' involvement in the proliferation of sensitive nuclear materials or nuclear weapons; and (3) the PSI, promoting cooperation to interdict the illegal supply of items that may be used for WMD programs. This article will analyze each in terms of its legitimacy and offer suggestions for improvement.⁴⁴

Controlling the Fuel Cycle

Mastering the full fuel cycle, including uranium enrichment or reprocessing to separate plutonium, is the most time-consuming and arguably most difficult step in the process of developing nuclear weapons. Building weapons components requires much effort and expertise, but the vast majority of time is spent obtaining fissile material. Centrifuge enrichment has become the method of choice for proliferators. Thus, proliferation concerns are heightened when a state gains this ability because the process of enriching uranium to low levels for civil reactors is the same as for enriching uranium to weapons-grade levels. Indeed, the enrichment process is not linear. It takes as much separative work to enrich uranium from 0.7 percent (the natural concentration) to 2 percent as it does to enrich it from 2 percent to 93 percent (weapons grade).⁴⁵

Likewise, the technology for reprocessing fuel to separate plutonium for reactors and for weapons is quite similar. Once a country masters the technology necessary to develop fissile material for peaceful purposes through enrichment or reprocessing, it gains the capability to develop the key ingredient for nuclear weapons in a relatively short time. While this capability does not include the critical weaponization technology, it shortens the timespan considerably. Nevertheless, gaining this fuel cycle capability, as opposed to demonstrating an intent to manufacture, does not violate any NPT obligation and, if properly safeguarded, does not violate any IAEA obligations, either. Should a country then decide to withdraw from the NPT, it would already possess this critical capability without breaking any legal commitments. This is the scenario that both the Bush administration and IAEA Director General ElBaradei, among others, are trying to render substantially more difficult, and costly.

Concern over the nuclear fuel cycle is not new. The new initiatives bear a striking resemblance to those pursued in the mid-1970s, so we can learn from previous efforts. Following India's 1974 test of a self-described "peaceful nuclear explosive," which major nuclear suppliers perceived as a failure of existing export controls, significant effort went

into preventing the further spread of sensitive enrichment and reprocessing technologies.⁴⁶ The London Group, comprising major nuclear suppliers within and outside the NPT at the time, met in secret to hammer out guidelines to strengthen the existing nuclear export controls.⁴⁷ These guidelines called for “restraint” in the transfer of enrichment and reprocessing technology, even for peaceful uses, and for suppliers to “encourage recipients to accept, as an alternative to national plants, supplier involvement and/or other appropriate multinational participation in resulting facilities.”⁴⁸ The London Group’s members were further increasing the discriminatory nature of the nonproliferation regime. Not only were non-nuclear weapons states not in the group prohibited from acquiring an actual nuclear weapon, they were also to be prevented from acquiring enrichment and reprocessing capabilities, which are generally seen as included in the right to “peaceful uses” in Article IV of the NPT.

The broad interpretation of this right is clear from the historical record, even on the U.S. side. William Foster, then-director of the Arms Control and Disarmament Agency, stated in his testimony before the U.S. Senate during the NPT ratification debates in 1968,

Neither uranium enrichment nor the stockpiling of fissionable material in connection with a peaceful program would violate Article II so long as these activities were safeguarded under Article III. Also clearly permitted would be the development, under safeguards, of plutonium-fueled power reactors, including research on the properties of metallic plutonium⁴⁹

Germany also went to great lengths when signing the NPT to emphasize that:

no nuclear activities . . . for peaceful purposes are prohibited nor can the transfer of information, materials and equipment be denied to non-nuclear weapon states merely on the basis of allegations that such activities or transfers could be used for the manufacture of nuclear weapons or other nuclear explosive devices.⁵⁰

Non-Aligned Movement members, including most developing countries, interpret this right in the same way.⁵¹

Because of the discriminatory nature and lack of universality and transparency of these efforts to curtail the transfer of nuclear technology, less-developed countries responded unfavorably. Recipient countries were neither invited to participate, nor informed of the group’s deliberations. This led to accusations by those outside the group of cartelism on the part of those possessing the technology.⁵² The London Group reemerged as the Nuclear Suppliers Group (NSG) 12 years later when no consensus could be reached for further tightening of the guidelines following the revelations on the Iraqi nuclear program after the 1991 Gulf War. The NSG continues to bear the stigma of its early non-universal and discriminatory foundations.⁵³

While the NSG has provoked significant opposition by some NPT parties, the Zangger Committee, in contrast, has remained relatively uncontroversial as a consequence of its acceptance of universal and nondiscriminatory rules in clarifying NPT obligations. The Zangger Committee developed to interpret Article III of the NPT, obligating parties not to provide “source or special fissionable material” or “equipment or material especially designed or prepared for processing, use, or production” of this material without the

application of safeguards. Rather than preventing the acquisition of sensitive technology, the committee defines the types of activities requiring safeguards, and these definitions apply equally to all states.⁵⁴ Unlike the NSG, it does not aim to prevent access to nuclear technology and equipment, so it treats all states similarly. It involves all interested NPT parties in its deliberations to determine which materials and equipment require safeguards.

Supplier Restraint—The Bush Administration's Proposal

In his February 2004 speech at National Defense University, President George W. Bush renewed the call for a halt in the transfer of sensitive nuclear technology "to any state that does not already possess full-scale, functioning enrichment and reprocessing plants."⁵⁵ At the same time, he proposed to provide assurances of the nuclear fuel supply at a reasonable price. This plan encountered many of the same difficulties gaining legitimacy as the previous NSG effort because supply-side efforts are by their very nature discriminatory. The Bush proposal creates a new layer of discrimination in addition to the existing distinction between those with and those without nuclear weapons and only affects those states not already possessing these technologies. Several countries already possess enrichment and reprocessing capabilities, and not only have no plans to give them up, but are actively expanding them.⁵⁶ Furthermore, implementation would require agreement in the NSG, an exclusive group that does not include technology recipients, bypassing many NPT parties. While the assurances of the sale of nuclear fuel are intended to reduce the fundamentally discriminatory nature of the proposal, it would still freeze the current status of nuclear "haves and have-nots" in yet another area.

Like the NSG's original efforts, this proposal goes to the heart of the NPT bargain that states agreeing to forego nuclear weapons would not be limited in any way from pursuing peaceful nuclear programs, as verified by IAEA safeguards. While all recognize that amending the peaceful uses article of the NPT (Article IV) would be impossible, some do not recognize or agree that the Bush proposal would have this de facto result. The NPT's claim to legitimacy, as demonstrated in the previous section, is based on a fine balance of interests and principles that work together to circumscribe and limit the fundamental discrimination inherent in the treaty. Recognition of the inalienable right to the peaceful uses of nuclear energy is essential to this process. All states, regardless of their power or particular situation, retain the right to pursue peaceful nuclear programs that they have as sovereign states and gain the possibility of assistance with these programs to the degree that such cooperation is feasible. Proposals that undermine this principle weaken the legitimacy of the NPT itself.

Lack of legitimacy will inhibit broader participation and therefore the ultimate ability of this proposal to succeed. It only takes one capable state to share sensitive technology. The suppliers of enrichment and reprocessing technology in the last few decades have not been NSG members. Rather, technology has been transferred by developing countries outside the export control system and by clandestine black market networks, like A.Q. Khan's.⁵⁷ Any effective attempt to address this problem must engage all potential suppliers, which can best be achieved through more universal processes. Criticism based

on legitimacy provides a powerful disincentive for states to sign on, even for those that support the goals. Efforts to reinterpret this inalienable right are counterproductive because they unify developing countries (as well as some developed countries) on a principled rather than a purely self-interested basis, which impedes implementation necessary for reaching the goal of preventing the spread of enrichment and processing capabilities. The Bush proposal has not yet even gained the support of the NSG.

This is not to say that the problem of limiting the fuel cycle cannot be addressed in a more legitimate manner, as the next section shall demonstrate. Such changes must recognize the important principled role of peaceful uses for the NPT's legitimacy and moderate challenges to the principle by returning to a universally negotiated approach, which provides all states a voice, and relying on a voluntary mechanism. Such a focus could undermine Iran's principled position and thereby encourage more states to support the effort. This may eventually lead to a fruitful restructuring of states' interests by changing incentives.

Multinationalizing the Fuel Cycle—The Approach of the IAEA Director General

In a 2003 article in the *Economist*, IAEA Director General ElBaradei proposed limiting the use and production of weapons-usable material in civilian nuclear programs. In one proposal, he recommended restricting enrichment and reprocessing operations to facilities under multinational control, combined with an assurance of nuclear supply.⁵⁸ While negotiating to multinationalize the nuclear fuel cycle, he recommended that all states, both those holding and those pursuing the technology, agree to a five-year moratorium on building enrichment and reprocessing facilities. ElBaradei then appointed an expert group to develop options for addressing the problem of proliferation in sensitive technology.⁵⁹ That group proposed several alternatives to increase certainty of the availability of nuclear fuel to encourage states not to develop their own enrichment and reprocessing facilities and to put such facilities under multilateral control. The director general's proposal for a five-year moratorium while multilateral negotiations consider multinationalizing the fuel cycle presents a logical way forward that would prevent the further spread of this sensitive technology in the short term without creating any additional discrimination. Unlike the Bush proposal, it would affect both aspiring and existing technology holders in the same way. It involves both suppliers and recipients of technology in negotiating the creation of these facilities, a prerequisite for gaining legitimacy.

In terms of supply concerns, the group proposed to reinforce nuclear fuel supply guarantees by strengthening existing national commitments on the part of suppliers through longer-term contracts and government guarantees of commercial agreements or to develop and implement international fuel supply guarantees, possibly through an IAEA-administered fuel bank. These proposals assure a nuclear fuel supply to encourage states voluntarily not to pursue their own indigenous enrichment and reprocessing facilities. Strengthening existing national fuel supply arrangements would fall in line with possible U.S. initiatives, but the Bush proposal would add a ban on seeking or providing enrichment and reprocessing capabilities. Should the first proposal be combined with

this supplier-driven embargo, it would encounter the same legitimacy problems as the Bush proposal. If the supply assurance stands alone as a positive incentive, it would avoid this stumbling block. While it would then likely be viewed as more legitimate by non-technology holders and thereby more likely gain their general support, it might not be as effective at limiting the spread of enrichment and reprocessing technology, should that prove possible, since the incentive might not dissuade countries determined to acquire these technologies from doing so.

Involving the IAEA in assuring supply through some type of fuel bank has more legitimacy, since parties would negotiate this agreement through multilateral processes and be involved in the management of the bank. Should this be accompanied by an agreement to give up national rights to develop these technologies indigenously from this point forward, as would likely be necessary for U.S. participation, this agreement would at least have procedural legitimacy even if it would maintain *de facto* discrimination between nuclear haves and have-nots. Furthermore, this would still not necessarily prevent states from proceeding with national development of sensitive technologies since participation would be voluntary. Nevertheless, if states continue to refuse to support a ban on the further spread of sensitive nuclear technology, this alternative provides a more effective solution. However, many technical issues remain to be resolved regarding the creation of a fuel bank.⁶⁰

Converting existing national facilities to multinational ones, another idea offered by the expert group, has a stronger claim to legitimacy. It reduces the discriminatory aspect of the first two proposals by providing ownership to non-technology holders while assuring supply. This concept of international ownership and management of enrichment and reprocessing facilities for nonproliferation reasons originated in the 1940s with the Baruch plan, and it was reexamined in the 1970s within the IAEA in the Committee on Assurances of Supply and the International Fuel Cycle Evaluation.⁶¹

A few real-world examples exist, the most promising being EURODIF (European Gaseous Diffusion Uranium Enrichment Consortium), composed of Belgium, France, Iran, Italy, and Spain.⁶² All participate in the ownership of an enrichment facility located in France, while France retains control over the sensitive technology. The other participants receive enough fuel to meet domestic requirements and an equity share in the production enterprise but do not have access to the technology itself.⁶³ The fuel recipients participate fully in management and supply decisions, without the proliferation concerns of an arrangement that would allow participation in the company technology and production aspects. Ultimately, such an arrangement would necessarily be pursued only on a voluntary basis. Since it could not prohibit national enrichment and reprocessing activities by states not participating in these facilities, it would not necessarily prohibit a country such as Iran (if it chose to remain outside of the multinational enterprise) from pursuing its own national facilities. It therefore remains open to some criticisms on effectiveness grounds. On the other hand, it provides the most comprehensive supply assurances and, compared with other alternatives, is more likely to gain the necessary support for implementation due to its legitimacy, making it potentially more effective.

The expert group also suggested the creation of new multinational or IAEA-managed facilities. This would have the same strengths and weaknesses as transforming

the existing facilities, as long as they maintained a strict division between management and ownership on the one hand and control of the technology on the other, as was the case in EURODIF. However, if the example of the British-German-Dutch consortium Urenco is followed, where all three countries both shared in the development and ownership structures and mastered the enrichment and reprocessing technology, they confront the fundamental proliferation problems inherent in multinational control. Indeed, such arrangements could hasten the proliferation of sensitive technologies because they could encourage countries that would not otherwise enter the enrichment and reprocessing business to do so. These proposals would gain greater legitimacy because the final aspect of discrimination—technological capability—would be eliminated. Yet in this case, the proposal that gains the most legitimacy is also the least likely to address the problem.

All of ElBaradei's expert group proposals rely on the willingness of states to participate, which gives them some of their legitimacy. They are aimed at the demand side, affecting state incentives to pursue technology related to nuclear weapon production. The dilemma of the demand-side approach is similar to the problem posed by India, Israel, and Pakistan in relation to the NPT. They choose to remain outside the regime and refuse to accept an obligation not to possess nuclear weapons. In contrast, the Bush proposal is aimed at the supply side, preventing the acquisition of these sensitive materials and expertise. While lacking legitimacy, it only requires the consensus of the suppliers. However, as seen in the NSG's gridlock, even this limited range of support is difficult to achieve when faced with strong criticisms based on legitimacy.

Strengthening Export Controls—UNSCR 1540

The NPT predates concerns over nuclear terrorism and thus does not explicitly address the issue of proliferation to and by nonstate actors. The UN Security Council recognized these new challenges to international peace and security with the passage of UNSCR 1540 in April 2004. The resolution, which invokes Chapter VII of the UN Charter, obligates all states to refrain from providing any support to nonstate actors attempting to acquire, transfer, or use a nuclear, chemical, or biological weapon or their means of delivery; to adopt and enforce "appropriate effective" laws to prevent nonstate actor involvement in these activities; and to establish national export, accounting, border control, physical protection, and transshipment controls over these weapons, their means of delivery, and related materials. The resolution also invites states to assist those experiencing difficulties implementing these provisions and establishes a committee to report on the resolution's progress.⁶⁴ The newly established obligations apply universally and equally to all states without discrimination. Finally, while states are legally obliged to comply, the resolution explicitly recommends that those states with more advanced controls assist states deficient in them, rather than detailing any means to coerce laggards.

While nearly all countries publicly support the goals of the resolution, some have raised concerns regarding the process by which the new obligations were mandated. In particular, some question the right of the Security Council to "legislate" commitments for the rest of the members of the UN. The Security Council itself lacks a degree of legitimacy because of its limited membership as well as the discrimination between the permanent

five members and the other 10 non-permanent members with regard to the ability to veto resolutions. When dealing with a new area of obligations for all UN members, many believed that a more legitimate process would have involved all the members and refrained from using the unequal power of the Security Council, in which the five permanent members are not only more powerful but also already possess nuclear weapons.

Article 39 of the United Nations Charter explicitly provides the Security Council with the ability to “determine the existence of any threat to the peace,” and “make recommendations, or decide what measures shall be taken . . . to maintain or restore international stability.”⁶⁵ Resolution 1540 rearticulates the Security Council’s determination that the proliferation of WMD as well as their means of delivery constitutes a threat to international peace and security and articulates for the first time the threat posed by the possibility of terrorist groups acquiring or trafficking in WMD. As such, the Security Council acted appropriately under Chapter VII in determining how to address these threats.⁶⁶ After significant debate, the council, with members from all regions representing significantly different viewpoints, agreed unanimously to both the resolution and the goal of preventing nonstate actors from gaining access to WMD or assisting with further proliferation. Following UN procedure lent the process a degree of legitimacy, although this was weakened by concerns over the Security Council’s legitimacy.

While the action was clearly legal, it lost some legitimacy because of the process of going through the Security Council rather than the General Assembly, which has universal and equal membership. The process could have been improved by going first to the United Nations General Assembly for an explicit endorsement of the goals. While such support is not required, given the unique authority of the Security Council on matters of peace and security, it clearly would have strengthened the effort’s claim to legitimacy. This may not have been as problematic as some assumed, given the assembly’s consensual adoption of the International Convention for the Suppression of Acts of Nuclear Terrorism immediately prior to this Security Council resolution.⁶⁷ The increased legitimacy resulting from such actions might encourage timelier implementation by all states.

Interdiction and the Last Line of Defense—The Proliferation Security Initiative

The ultimate goal of the PSI is to block the proliferation of WMD and related technology through interdiction, the physical seizure of illegal shipments of restricted items.⁶⁸ Interdiction forms the last line of defense to prevent states and nonstate actors from acquiring or transferring WMD or related material. It relies heavily on existing nonproliferation agreements and treaties, which provide the normative basis for PSI activities. The legal basis, however, derives from export controls and authorities, national rules regarding what sensitive items may be exported from or permitted transit through a particular country’s territory. If a state interdicts dual-use material that is permitted under international treaties and not captured by its national control legislation, a relatively independent judicial branch would require the equipment or material be permitted to proceed to its final destination. For example, in December 2002, the United States had no legal basis to retain the impounded cargo of the *So San*, an unflagged merchant ship

carrying 15 Scud B missiles with warheads from North Korea to Yemen. It was therefore forced to release the ship and her contents.⁶⁹ The PSI aims to improve the odds by promising to strengthen national export controls, sharing intelligence, and participating in joint interdiction training exercises. While relying on interdiction as a last resort is not new, standing (but still informal) coordination on interdiction is.

While some accuse the PSI of breaking international law, illegality is not the main problem. Legal issues involve the United Nations Convention on the Law of the Seas (UNCLOS), ship-boarding agreements, and national export control legislation.⁷⁰ While some critics argue that the PSI violates the principles of freedom of the high seas and right of innocent passage through territorial waters, PSI participants have been careful to address these problems by signing bilateral and multilateral ship-boarding agreements with flag states to permit reciprocal boarding of suspect vessels in international waters.⁷¹ Separate efforts to encourage states with important ports to strengthen their regulations against transshipment of WMD and related materials also strengthen the PSI's claim to legality. Furthermore, PSI participants have been very careful in the group's plenary statements to enunciate their commitment to act in a manner "consistent with national legal authorities and relevant international law and frameworks, including the UN Security Council."⁷² Ultimately, if the flag state permits the boarding of its vessel or a port state exercises its right to enforce its regulations against the transshipment of WMD and related materials through its jurisdiction, the PSI action has a solid basis in international law. While a few legal issues remain, the most serious criticisms have been addressed.⁷³

Although legality is a necessary prerequisite for legitimacy, it is not sufficient. The PSI raises serious legitimacy concerns in many states because of the perceived move away from multilateral, consensus-based processes. Proponents of the PSI have emphasized that it is "an activity, not an organization."⁷⁴ This and other similar oft-repeated statements signal that the PSI aims to solve the new problems of proliferation among rogue states and nonstate actors by decentralizing the effort and shifting it away from "failing" multilateral institutions. Such a move creates significant legitimacy problems by undermining multilateral institutions and questioning their usefulness. The PSI is described as unilateral, not because only one state acts, but rather because decisions are made without the full and equal participation of others. States are welcome to indicate their support for the principles, but not to influence them. No priority is given to meetings to exchange views or for all participating states to be involved, or even informed, of any particular activity undertaken.⁷⁵ Furthermore, interdiction is applied in a discriminatory manner, separating "good" guys from "bad" guys. Not all suspicious transfers uncovered are interdicted, only transfers to and from states and nonstate actors of "proliferation concern." To the degree that the PSI aims to enforce multilaterally agreements and treaties, it does so on a case-by-case basis. As one analyst put it, "Context reigns supreme."⁷⁶

While the Bush administration has spent considerable effort in shoring up the legal basis for interdiction, it has ignored the legitimacy concerns raised by the PSI's exclusive and discriminatory character. A focus on legitimacy would lead to different recommendations for improving the initiative than would a focus on legality. Remedying the former would require emphasizing the importance of, and making explicit the PSI's basis in,

multilateral nonproliferation, arms control, and disarmament treaties. Some U.S. officials seem to emphasize the PSI over the underlying treaties.⁷⁷ Plenary statements in the past have not specifically mentioned the international conventions governing the possession of nuclear, chemical, and biological weapons and the spread of missile technology. They should now do so. This would help to dispel concerns that the PSI is intended to replace, rather than shore up, these multilateral treaties. If interdiction efforts were combined with a renewed emphasis on strengthening, through multilateral processes, the universality and nondiscrimination of the NPT, for example, it is likely that some concerns would be allayed, which may encourage states to participate, or at least make it less costly to do so.

Arranging regular meetings with greater involvement of all participants in decisionmaking would provide added legitimacy. Broadening the explicit focus from states of proliferation concern to all states would also be helpful. These changes would not necessitate deep changes in PSI activities but would require participant states to clearly acknowledge existing legal and political commitments and recognize the role of the UN and other multilateral bodies.

The PSI must legally rely on national export control legislation and preexisting nonproliferation treaties and agreements, so combining interdiction with broader efforts beyond the participants to strengthen and universalize these authorities would enhance not only its legitimacy, but also its effectiveness. Interdiction is only as successful as the legislation and treaties it attempts to enforce. Efforts such as UNSCR 1540 to create universal national export control standards provide a good example. An ongoing effort to embed PSI activities in a more multilateral process by amending the International Maritime Organization's Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation is also helpful. This would specifically criminalize the maritime transport of WMD, their delivery systems, and related materials.⁷⁸

Grounding the PSI in a new Security Council resolution clearly permitting interdiction of suspected WMD shipments in international waters would weaken the criticism based on legitimacy and thereby encourage more neutral parties to participate. This would also be a stronger legal basis for strengthening the national export control legislation necessary for the PSI's success.

Even if the United States undertook efforts along these lines, discrimination problems would remain. The PSI Statement of Principles does not define "related materials," likely because of the participants' focus on the intent to proliferate rather than on the nature of the item itself.⁷⁹ Intent is not normally an acceptable criterion in international law since it is difficult to demonstrate objectively. The lack of specificity gives discretion to any PSI participant and creates significant difficulties for attempts to legitimize PSI activities. Multilateral supplier groups and national export control laws must clearly define which items would be lawful to export, transport, or transship.

Toward a More Legitimate Nonproliferation Regime

Legitimacy continues to bedevil new initiatives in nonproliferation. The July 2005 agreement between India and the United States to encourage cooperation on civilian nuclear power raises the issue of nondiscrimination, but in a different way from those

discussed above.⁸⁰ Nondiscrimination should apply *within* the regime for it to remain legitimate. However, this does not imply that parties and non-parties to the NPT should be treated equally. Already under strain because of the special prerogatives of parties with nuclear weapons, the regime would be weakened by the creation of a separate category of states outside the regime whose possession of nuclear weapons is recognized and accepted. The joint agreement does just that. While India promises to strengthen its control over nuclear material to prevent its theft or sale as well as meet nuclear safety standards to prevent catastrophes, among other commitments, these positive aspects come at a high cost. The agreement effectively recognizes India, a state that has openly declared its possession of nuclear weapons and refused to adhere to the NPT, as deserving the same treatment that any other nuclear power receives. India would gain benefits to peaceful nuclear cooperation, as do parties to the NPT, without the obligations of non-nuclear weapon states, provided that the United States can convince the NSG to drop its ban against trading in civilian nuclear components with India as a non-NPT party. India agrees to separate its civilian from its military nuclear program and allow IAEA inspections in its civilian nuclear program, as all other nuclear-weapon states do. Additional details were provided on March 2, 2006.⁸¹

This recognition seriously weakens the legitimacy of the regime. The agreement does not violate the legal obligation of either India or the United States, since the NPT does not ban cooperation on civilian nuclear energy (properly safeguarded) with non-parties. Legality is not the same as legitimacy, however. If states outside the treaty receive the same benefits as do those within, without the concomitant obligations, then the incentive to join and remain in the treaty is severely diminished. Combined with the slow progress toward nuclear disarmament, it may encourage some states that only joined the NPT in the 1990s, such as Brazil, to reconsider their support.

It is not possible to pursue special exceptions to general principles on the basis of the political interests of a few states without eroding the legitimacy of the regime itself. Perhaps more crucially, the agreement undermines the effort to deny Iran the same civilian capabilities. Nonproliferation cannot only apply to certain "bad" states. Some make the argument that India should be treated differently because it has never legally violated any of its nonproliferation obligations.⁸² But this is simply because it never signed the NPT. While a legal distinction between members and nonmembers exists, it is not a firm basis for a political distinction between the two, as it lacks legitimacy.

While some of the proposed initiatives to strengthen the nonproliferation regime lack a strong legitimate grounding, there are ways to build a stronger foundation if policymakers choose to do so, even while maintaining tangible security benefits as the cornerstone. The new initiatives can be made more inclusive and less discriminatory. Instead of proposing a supplier-controlled ban on enrichment and reprocessing-related technology combined with an assurance of nuclear fuel supply, states could negotiate in the IAEA to provide an international fuel bank to assure supply to those states that have renounced their right to develop national enrichment and reprocessing capabilities. The principles underlying UNSCR 1540, which addresses the acquisition of WMD and related materials by nonstate actors, could have first been discussed and endorsed by the UN General Assembly. And participants in the PSI could negotiate a Security Council

resolution to clearly permit interdiction of vessels suspected of carrying WMD or related materials.

It is important to remember that building legitimacy may dilute the ability of the proposal to achieve the ultimate desired goal. Nevertheless, without legitimacy, unilateral efforts will likely face difficulties in ensuring the participation and commitment of all the actors necessary for their effective functioning. Finding an appropriate balance is essential.

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NOTES

1. John R. Bolton, "The NPT: A Crisis of Compliance," Statement to the Third Session of the Preparatory Committee for the 2005 Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons, New York City, April 27, 2004, <www.state.gov/t/us/rm/31848.htm>.
2. The safeguards regime was greatly strengthened following the 1991 Gulf War, with the adoption of the Model Additional Protocol. With the unveiling of long-standing Iranian and Libyan covert nuclear programs, however, new questions have been raised.
3. For a background on the network, see David Albright and Corey Hinderstein, "Unraveling the A.Q. Khan and Future Proliferation Networks," *Washington Quarterly* 28 (Spring 2005), pp. 111–128; and Esther Pan, "Nonproliferation: The Pakistan Network," Council on Foreign Relations Web Site, Feb. 12, 2004, <www.cfr.org/background/nonpro.php>.
4. Ian Hurd, "Legitimacy and Authority in International Politics," *International Organization* 53 (Spring 1999), pp. 379–408.
5. For different perspectives on compliance, see Beth Simmons, "Compliance with International Agreements," *Annual Review of Political Science* (1998), pp. 75–93; Abram Chayes and Antonia Handler Chayes, "On Compliance," *International Organization* 47 (Spring 1993), pp. 175–205. Chayes and Chayes emphasize that noncompliance can be due to very different reasons. While some noncompliance may be due to a state's active decision to derogate, other instances of noncompliance could be due to administrative failures of a weak state. Chayes and Chayes argue that the latter is more common.
6. Hurd, "Legitimacy and Authority in International Politics"; Max Weber, *Economy and Society*, vol. 1 [1925] (Berkeley: University of California, 1978).
7. Hurd makes an important point that in order for the concept of self-interest to be potentially falsifiable, its boundaries need to be clearly drawn. Self-interest involves self-restraint rather than external enforcement. However, it must also be distinguished from merely "interested" behavior. It is "egoistic," in that the rules or relations with others do not themselves generate any loyalty on behalf of the self-interested actor. In each and

every situation, the actor assesses its expected payoff and is ready to abandon any rule should an alternative provide greater benefits. Hurd, "Legitimacy and Authority," pp. 386–387.

8. See Abram Chayes and Antonia Handler Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Cambridge, MA: Harvard University Press, 1995), for a good explanation of why agreements in which many parties cheat are unsustainable regardless of sanctions.
9. Mark C. Suchman, "Managing Legitimacy: Strategic and Institutional Approaches," *Academy of Management Review* 20 (1995), p. 574.
10. Ernst Haas labels this process of internalization "learning." See Ernst Haas, *When Knowledge is Power: Three Models of Change in International Organizations* (Berkeley: University of California Press, 1991).
11. John G. Ruggie, "Multilateralism: The Anatomy of an Institution," *International Organization* 46 (Summer 1992), p. 571.
12. For an exhaustive account of different notions of justice and fairness, see Cecilia Albin, *Justice and Fairness in International Negotiation* (Cambridge, UK: Cambridge University Press, 2001), ch. 2.
13. The United Nations, as the League of Nations before it, was based on this norm, which was further reinforced through the decolonization process of the 1950s and 1960s. See Robert H. Jackson and Carl G. Rosberg, "Why Africa's Weak States Persist: The Empirical and Juridical in Statehood," *World Politics* 35 (Oct. 1982), pp. 1–24.
14. Albin, *Justice and Fairness*, pp. 45–46, and pp. 100–140.
15. Thomas M. Franck, *The Power of Legitimacy Among Nations* (Oxford: Oxford University Press, 1990), ch. 10.
16. Ian Hurd, "Legitimacy and Power in International Relations" (unpublished manuscript), ch. 4.
17. Different measures of effectiveness lead to vastly different conclusions on the historical effectiveness of the nonproliferation regime. Critics of the regime tend to overlook its success in persuading states other than the few "rogue" states not to pursue nuclear weapons, and rather judge the regime solely in terms of its effectiveness in preventing North Korea and Iran from pursuing nuclear weapons. This difference leads to very different conceptions of how to "fix" the regime. For a good analysis of the consequences of these different measures, see Phillip C. Saunders, "New Approaches to Nonproliferation: Supplementing or Supplanting the Regime," *Nonproliferation Review* 8 (Fall–Winter 2001), pp. 123–136, <<http://cns.miis.edu/pubs/npr/vol08/83/83saund.pdf>>.
18. Franck, *The Power of Legitimacy Among Nations*.
19. While Waltz is the most outspoken, arguing that the proliferation of nuclear weapons to many states would increase stability in international relations, many view nuclear weapons as making the bilateral relationship between the United States and the Soviet Union during the Cold War more stable. Kenneth Waltz, *The Spread of Nuclear Weapons: More May be Better*, Adelphi Paper #171 (London: International Institute for Strategic Studies, 1981); John J. Weltman, "Nuclear Revolution and World Order," *World Politics* 32 (Spring 1980), pp. 169–193. See national statements to the 2005 NPT Review Conference

- for a comprehensive overview of parties' positions on nuclear weapons, <www.un.org/events/npt2005/statements02may.html>.
20. Nuclear technology has a wide variety of applications beyond energy, including increasing agricultural yields, treating cancer, and managing water resources, among many others. See the IAEA Web Site for more peaceful applications of nuclear science and technology, <www.iaea.org>.
 21. Lewis L. Strauss, Chairman, U.S. Atomic Energy Commission, "Remarks Prepared for Delivery at the Founder's Day Dinner, National Association of Science Writers," September 16, 1954.
 22. Lawrence Scheinman, *The International Atomic Energy Agency and World Nuclear Order* (Washington, DC: Resources for the Future, 1987), pp. 49–51. For the original proposal, see "Joint Declaration by the Heads of Government of the United States, the United Kingdom, and Canada, Nov. 15, 1945," in U.S. Dept. of State, Historical Office, Bureau of Public Affairs, *Documents on Disarmament 1945–1957*, Pub. No. 7008, 2 vols. (Washington, DC: U.S. Government Printing Office, 1960) vol. I, pp. 1–2, as cited in Scheinman, *International Atomic Energy Agency*.
 23. Baruch was originally appointed by President Harry Truman to present what became known as the Acheson-Lilienthal report, after Undersecretary of State Dean Acheson and Atomic Energy Commission chairman David Lilienthal. Instead, Baruch "who had a famously monumental ego, decided to make significant changes and promote the plan as his own. In particular, Baruch scuttled the notion of international ownership of the means of production of nuclear materials because it was not in keeping with the American free enterprise system." See Leonard Weiss, "Atoms for Peace," *Bulletin of the Atomic Scientists* (Nov./Dec. 2003), pp. 31–41, 44, <www.thebulletin.org/article.php?art_ofn=nd03weiss>.
 24. Scheinman, *International Atomic Energy Agency*, pp. 52–55.
 25. See the IAEA Web Site <www.iaea.org/About/statute_text.html> for the full statute.
 26. Scheinman, *International Atomic Energy Agency*, pp. 123–124.
 27. See <<http://disarmament2.un.org/wmd/npt/npttext.html>> for the text of the NPT.
 28. The Zangger Committee <www.zanggercommittee.org/Zangger/default.htm> was established in the early 1970s to define the materials and equipment that required controls. The Nuclear Suppliers Group (originally the London Group, see below), founded in 1975, also formed to ensure that materials and equipment would not be misused for prohibited purposes.
 29. While the United States and the United Kingdom provide a list of all civilian facilities from which the IAEA may choose several to safeguard, Russia, France, and China name only a select few civilian facilities for safeguards.
 30. NPT, Article IV.
 31. Tannenwald writes about a norm against the use of nuclear weapons, rather than the acquisition. Nina Tannenwald, *Nuclear Taboo: The United States and the Non-use of Nuclear Weapons Since 1945* (Cambridge, UK: Cambridge University Press, 2005).
 32. See Joseph S. Nye, "Maintaining a Non-Proliferation Regime," *International Organization* 35 (1981), pp. 15–38. Some, however, argue that the decision to pursue nuclear weapons is a national decision that is unrelated to the nonproliferation regime. For different

- perspectives on why states pursue nuclear weapons, see Mitchell Reiss, *Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities* (Baltimore, MD: John Hopkins University Press, 1995); Scott Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21 (Winter 1996/97), pp. 54–86; and Jacques Hymans, *The Psychology of Nuclear Proliferation: Identities, Emotions, and Foreign Policy* (Cambridge, UK: Cambridge University Press, 2006).
33. India, Pakistan, and Israel never joined the NPT and therefore are not bound by its legal obligation not to acquire nuclear weapons or assist others in doing so. All three are all believed to have nuclear weapons, although Israel maintains a purposefully ambiguous position. North Korea is the only NPT party believed to have possibly acquired nuclear weapons. While U.S. intelligence estimates that North Korea could have as many as six to eight nuclear weapons, this cannot be confirmed. See Joseph Cirincione, Jon Wolfsthal, and Miriam Rajkumar, *Deadly Arsenal: Nuclear, Biological and Chemical Threats*, 2nd ed. (Washington, DC: Carnegie Endowment for International Peace, 2005), ch. 14, pp. 279–294, for a more detailed analysis of the North Korean program.
 34. South Africa, Kazakhstan, Ukraine, and Belarus all gave up nuclear weapons, while Libya, Argentina, and Brazil, among others, gave up weapons programs. Many others including Japan, West Germany, Sweden, Italy, South Korea, and Switzerland gave up nuclear weapons ambitions. See Cirincione, et al., *Deadly Arsenal*, Part V, pp. 315–418, for a detailed factual account of these success stories. See Francis J. Gavin, "Blasts for the Past: Proliferation Lessons from the 1960s," *International Security* 29 (Winter 2004), pp. 100–135 for a full account of the countries considering nuclear weapons and the possible proliferation waves the Johnson administration faced before negotiating the NPT.
 35. The IAEA provides the predominant enforcement cost through its safeguards budget, which in 2004 was a little over US\$100 million, a very small amount relative to the amounts countries invest in their military budgets. For the 2004 IAEA budget, see <www.iaea.org/About/budget.html>. Other costs would include the cost of maintaining export controls.
 36. North Korea announced its withdrawal from the NPT on Jan. 10, 2003. See Jean du Preez and William Potter, "North Korea's Withdrawal from the NPT: A Reality Check," Research Story of the Week, Center for Nonproliferation Studies Web Site, April 8, 2003, <<http://cns.miis.edu/pubs/week/030409.htm>>.
 37. See IAEA Board of Governors Resolution on Safeguards in North Korea, adopted Feb. 12, 2003, <www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise_048.shtml>.
 38. See IAEA Board of Governors, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran and related Board Resolutions," adopted on Nov. 29, 2004, GOV/2004/90, and the earlier resolutions: GOV/2004/79, adopted on Sept. 18, 2004; GOV/2004/49, June 18, 2004; GOV/2004/21, March 13, 2004; GOV/2003/81, Nov. 26, 2003; and GOV/2003/69, Sept. 12, 2003, <www.iaea.org/NewsCenter/Focus/laealran/index.shtml>.
 39. For the IAEA Board's response, see IAEA Board of Governors, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran and related Board Resolutions," GOV/2005/64, adopted on Aug. 11, 2005, <www.iaea.org/Publications/Documents/Board/2005/gov2005-64.pdf>.
 40. United Nations Security Council, S/PRST/2006/15 (March 29, 2006).

41. See IAEA Board of Governors, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran: Report by the Director General," GOV/2006/27, April 28, 2006, <www.iaea.org/Publications/Documents/Board/2006/gov2006-27.pdf>.
42. Dafna Linzer, "Iran Rejects Offer for Nuclear Talks," *Washington Post*, Aug. 22, 2003, p. A11; Dafna Linzer, "Iran Pushes for Talks Without Conditions," *Washington Post*, Aug. 23, 2006, p. A1.
43. Chaim Braun and Christopher F. Chyba, "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime," *International Security* 29 (Fall 2004), pp. 5–49.
44. Other proposals persist to strengthen the legitimacy of the nonproliferation regime by requiring the nuclear weapon states to move seriously to pursue nuclear disarmament. Such a move would undoubtedly increase the legitimacy of the NPT and the larger regime by reducing the substantive discrimination between nuclear haves and have-nots. It could also potentially increase the willingness of some to accept new discriminations. However, until the nuclear weapon states are ready to consider such a proposal, it remains theoretical. This article will focus on proposals currently under active consideration to confront the new threats of proliferation.
45. See International Atomic Energy Agency, *Multilateral Approaches to the Nuclear Fuel Cycle: Expert Group Report to the Director General of the IAEA* (Vienna: International Atomic Energy Agency, 2005), pp. 56–60, for an analysis of the different techniques for enriching uranium.
46. Although India was and is not a member of the NPT, its actions would have been permitted under NPT Article V. This article is now effectively defunct following agreement on the Comprehensive Test Ban Treaty. For an analysis of the India case and Western, particularly U.S., response, see Scheinman, *International Atomic Energy Agency*, pp. 174–178.
47. The group included Belgium, Canada, Czechoslovakia, the Federal Republic of Germany, France, the German Democratic Republic, Italy, Japan, the Netherlands, Poland, Sweden, Switzerland, the Union of Soviet Socialist Republics, the United Kingdom, and the United States. For a history of the Nuclear Suppliers Group, see Tadeusz Stulak, "The Nuclear Suppliers Group," *Nonproliferation Review* 1 (Fall 1993), pp. 2–10; and Scheinman *International Atomic Energy Agency*, pp. 190–192. For a review of the internal dynamics of the NSG, see M.J. Wilmshurst, "The Development of Current Non-Proliferation Policies," in John Simpson and Anthony G. McGrew, eds., *The International Nuclear Non-Proliferation System: Challenges and Choices* (New York: St. Martin's Press, 1984), pp. 28–38.
48. For the original guidelines agreed to by all 15 members in 1977 and transmitted to the IAEA in 1978, see <www.iaea.org/Publications/Documents/Infcircs/Others/infcirc254.shtml>.
49. U.S. Arms Control and Disarmament, *Documents on Disarmament* (Washington, DC: U.S. ACDA, 1969), p. 504, as cited by Scheinman, *International Atomic Energy Agency*, pp. 28–29.
50. *Ibid.*, pp. 609–610, as quoted in Scheinman, *International Atomic Energy Agency*, p. 182.
51. See, for example, the "Working Paper presented by the Members of the Group of Non-aligned Movement States parties to the Treaty on the Non-Proliferation of Nuclear

- Weapons," NPT/Conf.2005/WP8, submitted to the 2005 NPT Review Conference, <<http://daccessdds.un.org/doc/UNDOC/GEN/N05/323/10/PDF/N0532310.pdf?OpenElement>>.
52. Stulak, "The Nuclear Suppliers Group," pp. 5–6. These charges are also frequently made during NPT Review Conferences and its Preparatory Committee meeting. For records of recent NPT Review Conferences, see <<http://disarmament.un.org:8080/wmd/npt/index.html>>.
 53. The NSG now comprises 45 countries. For a full list of the NSG members, see the NSG Web Site, <www.nsg-online.org/member.htm>. For the updated guidelines, see <www.nsg-online.org/guide.htm>.
 54. This list of material and equipment forms the Zangger Committee's "trigger list" and has been continually updated by the committee as needed. See Zangger Committee Web Site, <www.zanggercommittee.org/Zangger/default.htm> for more information.
 55. For the full text of the President's speech, see White House Web Site, <www.whitehouse.gov/news/releases/2004/02/20040211-4.html>.
 56. For an overview of various suppliers' plans, see International Atomic Energy Agency, *Multilateral Approaches to the Nuclear Fuel Cycle*, pp. 62–66.
 57. Braun and Chyba, "Proliferation Rings"; and Saunders, "New Approaches to Nonproliferation." These authors recognize this change in supply mechanisms.
 58. Mohamed ElBaradei, "Towards a Safer World," *The Economist*, Oct. 18, 2003. ElBaradei also made two other proposals to use proliferation-resistant technology to limit the use of weapons-usable material, especially in research reactors and to consider multinational approaches to the management and disposal of spent fuel and radioactive waste. The former proposal has been adopted by the Bush administration in its Global Threat Reduction Initiative (GTRI) program, whereby research reactors are converted to use low-enriched uranium rather than highly enriched uranium, and unused fuel is removed. For a further elaboration of the Department of Energy's GTRI program, see <www.nsa.doe.gov/na-20/na21_index.shtml>.
 59. The results of the expert group analysis are contained in International Atomic Energy Agency, *Multilateral Approaches to the Nuclear Fuel Cycle*.
 60. These include the question of whether it would be an actual bank or a virtual bank, addressing the different types of fuel used by reactors around the world, the financing of the bank, the pricing mechanism, the location, the location of the decision to stop supply on nonproliferation grounds, and the arbitration process for appealing decisions to stop supply, among many others. I am grateful to Lawrence Scheinman of the Center for Nonproliferation Studies, Monterey, CA, for detailing the many technical issues that would have to be overcome to create an international fuel bank.
 61. For a comprehensive analysis of various historical multinational proposals, see Lawrence Scheinman, "Multinational Alternatives and Nuclear Nonproliferation," *International Organization* 35 (Winter 1981), pp. 77–102. For a brief review of the work of these bodies, see International Atomic Energy Agency, *Multilateral Approaches to the Nuclear Fuel Cycle*, pp. 146–184.
 62. Some of these participants have since withdrawn from the partnership and given up their share of the enriched fuel.

63. See International Atomic Energy Agency, *Multilateral Approaches to the Nuclear Fuel Cycle*, pp. 61–68 for an analysis of the strengths and weaknesses of various historical multilateral arrangements, including EURODIF.
64. See “United Nations Security Council Resolution 1540,” S/RES/1540, April 28, 2004, and “Statement by the President of the Security Council,” S/PRST/2005/16, April 25, 2005.
65. *Charter of the United Nations*, Chapter VII, Article 39, United Nations Web Site, <www.un.org/aboutun/charter/>.
66. Some fear that invoking Chapter VII authorities implies a willingness to use force against states that violate the newly established obligations by a small group of powerful states; the resolution does not include any explicit reference to military action. Without the Chapter VII authority, the Security Council would simply not have the ability to create these obligations.
67. “International Convention for the Suppression of Acts of Nuclear Terrorism,” A/59/766, April 13, 2004, <www.un.int/usa/a-59-766.pdf>.
68. See White House, Office of the Press Secretary, Fact Sheet, Sept. 4, 2003, “Proliferation Security Initiative: Statement of Interdiction Principles, <www.state.gov/t/np/rls/fs/23764.htm>.
69. See Jofi Joseph, “The Proliferation Security Initiative: Can Interdiction Stop Proliferation?,” *Arms Control Today* (June 2004), <www.armscontrol.org/act/2004_06/Joseph.asp>. As Joseph notes, some skeptics argued “that Yemen’s importance to the U.S. buildup of forces in preparation for the Iraq war, not international law, was the trump card in the U.S. decision to release the missiles.”
70. This is the focus in Thomas D. Lehrman, “Rethinking Interdiction: The Future of the Proliferation Security Initiative,” *Nonproliferation Review* 11 (Summer 2004), pp. 1–45.
71. See bilateral agreements with Liberia, Panama, Croatia, and the Marshall Islands for examples of these ship-boarding agreements. These can be found on the State Department Web Site, <www.state.gov/t/np/c12386.htm>. These agreements draw heavily from the experience of fighting drug trafficking and “shiprider agreements” that provide a mechanism for law enforcement officials of either party to receive preauthorization to board and search flag vessels of the other state for the purpose of curbing illicit drug traffic.
72. “Proliferation Security Initiative: Statement of Interdiction Principles,” Sept. 4, 2003.
73. See Lehrman, “Rethinking Interdiction,” for a more in-depth argument of potential violations of the UNCLOS.
74. See U.S. Dept. of State, “Proliferation Security Initiative Frequently Asked Questions,” State Dept. Web Site, May 26, 2005, <www.state.gov/t/np/rls/fs/46839.htm>.
75. *Ibid.*
76. Joseph, “The Proliferation Security Initiative.”
77. See Maggie Farley, “Nuclear Talks End in Discord,” *Los Angeles Times*, May 28, 2005, p. A1; “Nuclear Holes to Be Filled,” *Christian Science Monitor*, May 31, 2005, p. 8; Stephen Fidler, “Testing Times: How the Grand Bargain of Nuclear Containment is Breaking Down,” *Financial Times*, May 23, 2005, p. 15; David E. Sanger, “Month of Talks Fails to Bolster Nuclear Treaty,” *New York Times*, May 28, 2005, p. A1.

78. For a brief review of the proposed amendment, see "Proliferation Security Initiative: Chairman's Statement at the Fifth Meeting," March 5, 2004, State Dept. Web Site, <www.state.gov/t/np/rls/other/30960.htm>.
79. Joseph, "The Proliferation Security Initiative."
80. See White House, "Joint Statement between President George W. Bush and Prime Minister Manmohan Singh," July 18, 2005, <www.whitehouse.gov/news/releases/2005/07/20050718-6.html>.
81. See White House, "U.S.-India Joint Statement," March 2, 2006, <www.whitehouse.gov/news/releases/2006/03/20060302-5.html>, and U.S. Dept. of State, Fact Sheet, "United States and India: Strategic Partnership," <www.whitehouse.gov/news/releases/2006/03/20060302-13.html>. For a good analysis of the issues, see "Nonproliferation Issues Raised by U.S.-India Nuclear Deal," Research Story of the Week, March 2, 2006, Center for Nonproliferation Studies Web Site, <<http://cns.miis.edu/pubs/week/060302.htm>>.
82. For an alternative perspective, see Joseph Cirincione, "Oh Canada!," March 13, 2006, Carnegie Endowment for International Peace Web Site, <www.carnegieendowment.org/npp/publications/index.cfm?fa=view&id=18116>.