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# Assessing Nuclear Maturity: Determining Which States Should Have Access to What Nuclear Technology

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The international community faces critical challenges from a variety of recent nuclear proliferation cases, including verifying weapons of mass destruction (WMD) programs in Iraq; handling revelations about Iran, Libya, and the Democratic People's Republic of Korea's (DPRK) nuclear programs; curbing activities stemming from Pakistan's nuclear weapons program; and addressing the DPRK's withdrawal from the Nuclear Non-Proliferation Treaty (NPT). Despite the particularity of each situation, they all call attention to several fundamental weaknesses in the nonproliferation regimes related to the norm of equal treatment of all states, the right to peaceful uses of technology, and compliance and enforcement mechanisms.

The need to address urgent proliferation challenges and the Bush administration's deep-seated negative attitudes toward multilateral instruments have contributed to a shift in the discourse on the threat of WMD. The debate has shifted from threats inherent in the possession and acquisition of WMD to threats posed by certain states gaining access to these weapons. Following President Bush's 2002 State of the Union address, in which he characterized several proliferating states as forming "an axis of evil," recent proposals on nonproliferation policy—such as those by Bush in his February 2004 National Defense University speech and by

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Lee Feinstein and Ann-Marie Slaughter in *Foreign Affairs*<sup>1</sup>—promote the differential treatment of states by attempting to alter two fundamental norms of the nonproliferation regimes: equal treatment of states and the peaceful uses of

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technology. Consequently, much of the current debate on preventing proliferation of WMD, particularly with respect to nuclear weapons, revolves around the questions of whether certain states are qualified to have access to certain nuclear technologies and whether states possess the requisite “nuclear maturity” to act responsibly. While this shift in policy emphasis appears to offer short-term solutions to existing legal gaps—and only questionable solutions at that—it also

diverts attention from enduring weaknesses in the compliance and enforcement mechanisms of the nonproliferation regimes.

#### EQUAL TREATMENT OF STATES

The norm of equal treatment of states is a cornerstone of the nonproliferation regimes and is enshrined in the United Nations Charter as the principle of sovereign equality.<sup>2</sup> Under the norm of equal treatment, rules, obligations, and benefits apply equally to each state that is party to a particular treaty. Critics of treaty regimes argue that the objective nature of the nonproliferation regimes, which aims “at the weapons themselves rather than the states or regimes that develop or acquire them” and depends on equal treatment of all states, represents a critical flaw or loophole in these regimes.<sup>3</sup> The nonproliferation regimes do not draw a distinction between states in good standing and states suspected of proliferation activities. Though recent cases of proliferation seem to demonstrate that states should be treated differently, the one-size-fits-all approach enshrined in the treaties has been imperative to ensuring the legitimacy of the nonproliferation regimes and their overall effectiveness. As evidenced in the negotiation records of nonproliferation treaties, a country would not be willing to join a regime if it could not be guaranteed equal treatment (or at least be assured of equal benefits and obligations).<sup>4</sup> Furthermore, a country would less likely become or remain a member of a regime if it were to be singled out and punished on the basis of uncodified, and therefore unpredictable, criteria. The objective basis of nonproliferation regimes has served as its strength and ensured its legitimacy.

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## PEACEFUL USES OF TECHNOLOGY

The norm of peaceful use of technology undergirds each of the nonproliferation regimes: states renounce a class of weapons in return for a guaranteed right to peaceful use of related technology and technical assistance toward this end.<sup>5</sup> In many cases, the distinction between materials, technology, and equipment for offensive purposes and peaceful uses is limited to semantics. In this way, the nonproliferation treaties could serve as a cover for the development of the necessary components of a weapons program. For example, the NPT allows the development of proliferation-sensitive technology such as uranium enrichment or spent fuel reprocessing and does not prohibit the stockpiling of weapons-grade nuclear material. A state party to the NPT could conceivably develop the necessary components for a nuclear weapons program with the unwitting assistance of the International Atomic Energy Agency (IAEA) and its member states (from whom they could receive technology transfers), withdraw from the treaty, and develop a nuclear weapon within a short period of time with no repercussions under the NPT as it currently stands. To be in compliance with NPT and IAEA safeguards, however, the state would have to declare all of these activities. Unsurprisingly, states exploiting this loophole—such as Iran, the DPRK, and Libya—have not declared these facilities to the IAEA as required by their safeguards agreements and instead have conducted clandestinely these activities.<sup>6</sup>

### *Compliance and Enforcement Mechanisms*

Excessive focus on the equal treatment and peaceful use norms of nonproliferation regimes could cause one to overlook the real flaw or loophole in these regimes—the lack of *effective* mechanisms for investigating and responding to suspected cases of non-compliance. The compliance and enforcement processes established by multilateral treaties involve a series of lengthy diplomatic stages and interventions and have not been able to effectively address urgent proliferation cases. Enforcement of the nonproliferation regimes has traditionally rested on responses by individual states or coalitions of states and has largely been inconsistent. Yet, the current nonproliferation debate stops short of addressing these fundamental problems in order to avoid lengthy and arduous multilateral negotiations and to fill a need for quick fixes.

Policy approaches based on certain states or particular aspects of technology

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provide neither comprehensive nor long-term solutions to the threat of WMD proliferation. Rather, these approaches merely patch over more serious underlying problems, which are likely to resurface in the future. The debate about threats posed by rogue states would have us believe that certain governments possessing WMD represent the real problem. This temporal and limited approach ignores risks created by existing arsenals, the dangers of dual-use technology, and the threat of non-state actors gaining access to weapon-related materials and technology. The debate about uranium enrichment and reprocessing diverts attention from the full spectrum of dangers posed by various types of nuclear technology. In reality, many stages of the nuclear fuel cycle involve proliferation-sensitive technologies. As was recognized with the Atoms for Peace program in 1953, the policy of technology denial tends to slow but not prevent proliferation. Advances in nuclear technology will increase its accessibility and availability despite the introduction of more restrictive policies.

The systemic problems related to the compliance and enforcement of non-proliferation obligations have catalyzed a crisis mentality in which quick fixes are applied to individual states in an attempt to preserve the integrity of the system as a whole. Recent policy responses that have not addressed the underlying problems of the overall regime may further compromise fundamental norms of the nonproliferation regimes and do not represent viable solutions in the long term. Because the variety and number of proliferation cases is growing, it is time to abandon such ad hoc approaches and instead examine a comprehensive and viable future policy. This essay evaluates recent proposals, including those by President Bush and Feinstein and Slaughter, which stem from two shifts in the debate about the threat of WMD proliferation: from the weapons to the states that possess them, and from weapons to technology. It then proposes an alternative approach based on objective assessments of state behavior.

#### **SHIFTING THE DEBATE FROM WEAPONS TO POSSESSION BY CERTAIN STATES**

The shift in the nonproliferation debate from the weapons themselves to isolating and labeling certain states that possess them represents a narrow and counterproductive approach to proliferators. Modifying the standard of equal treatment simply diverts attention from the lack of effective multilateral-level crisis management mechanisms to cope with the full range of proliferation threats and enforcement of nonproliferation norms. Policy solutions that emphasize the characteristics of a proliferant state do little to address the real crux of the problem and may exacerbate the threat of WMD proliferation.

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*Creating Rogue States*

Preconceived assumptions about the “evil” nature of certain states nullify the need to address legitimate security concerns and intensify motivations for proliferation. Labels such as “outlaws,” “rogue states,” or the now infamous “axis of evil” serve only to further alienate already belligerent states and can sometimes become self-fulfilling prophecies. Policies that emphasize disengagement and isolation have typically accompanied this name game. The isolation of states suspected of proliferation activities, however, has not proven to be very effective. States that are deeply isolated from the international community have less to lose politically and more to gain for their security by engaging in proliferation activities, especially if such states feel threatened by the international community as a whole or by certain powerful states. This creates a downward spiral for those states firmly categorized as belligerent by the international community. Having already engaged in proliferation activities and been placed on a laundry list of outlaws, these states typically face further international scrutiny and possibly punitive measures. As a result, the states perceive a greater threat to their security and have even more incentive to proliferate.

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Consider the case of South Africa. In the 1970s, the United States considered South Africa an outlaw state of sorts; South Africa was guilty of human rights violations, unwilling to become a party to the NPT, and an active proliferator.<sup>7</sup> As a result, the U.S. cut off all nuclear cooperation with South Africa, balked on agreed nuclear fuel contracts, and engaged in a policy of isolation. In 1977, South Africa lost its seat on the IAEA Board of Governors and was denied participation in the IAEA General Conference of 1979. In retrospect, it is clear that this treatment at least partially contributed to South Africa’s perception of increasing insecurity and its decision to develop several nuclear devices, leading it to become a de facto nuclear state.<sup>8</sup> In 1989, South Africa voluntarily dismantled its nuclear weapons. It acceded to the NPT in 1991 and now plays a leading role in the nonproliferation regimes as a member of the New Agenda Coalition.<sup>9</sup>

In contrast, recent events in Libya provide an example of the policy of engagement. It can be argued that the decision to open up to international inspections and dismantle WMD programs was brought about as the result of years of diplomatic efforts by the U.S. and UK, combined with positive inducements in response to Libya’s willingness to accept responsibility for Lockerbie, and in concert with more immediate international events such as the Iraq war.

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Regardless of how much weight one gives to each of these factors, it is clear that engagement was needed to convince Libya that it would benefit from dismantling its programs and complying with nonproliferation obligations.

### *The Problem of Definitions*

By far the major problem with policy responses that attempt to modify the norm of equal treatment is one of definitions. The sanctity of state sovereignty represents a fundamental norm that underlies not only the nonproliferation regimes but the entire body of international law. This principle protects states from outside interference in their internal affairs. In a recent article in *Foreign Affairs*, Feinstein and Slaughter propose a new principle for the field of global security: a collective duty to prevent.<sup>10</sup> They argue that the international community should not only have a right to intervene in the affairs of a state suspected of proliferation activity, but also the responsibility to do so.

However, for collective action against states suspected of proliferation activities, a critical number of states need to agree on (a) what constitutes proliferation behavior, (b) when states should be denied access to weapons and dual-use technologies, and (c) when the use of force can be justified to respond to proliferation activities and infringe upon state sovereignty. Without objective criteria, it would be difficult if not impossible to gain agreement first on the problem and then on the remedial action to be taken—that is, of course, without some sort of political payoff. The nonproliferation regimes typically have been enforced unilaterally or through political bargaining among major players. In reality, the U.S. and its allies have intervened in the internal affairs of states suspected of proliferation activities for years. Ultimately, this has led to inconsistent enforcement and the erosion of nonproliferation norms. Any collective action taken against suspected proliferators based on an unwritten rulebook is likely to have the same effect.

Without a predetermined set of criteria, deciding which states should be denied access to weapons and related technology would be problematic for a number of reasons. First, the *raison d'être* of an individual state is to guarantee the security of its citizens. Further, it is the sovereign right of any state to defend itself and its existence from outside threats. States will meet their security needs by all possible means. Whether justifiable or not, a state might argue that it requires WMD to deter external threats posed by states with superior conventional forces or with WMD. As long as certain states possess and assign value to WMD, it will be difficult to argue against the legitimacy of such reasoning.

Second, the approach assumes that “responsible” states should be permitted to retain their WMD arsenals, or at least that a blind eye will be turned while they proliferate. This is problematic since states that are not considered to have reached maturity would then feel a greater security threat and may accelerate

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acquisition of WMD for deterrence purposes. This approach also assumes that states with adequate internal checks do not pose proliferation risks. But this is simply another way of categorizing proliferating states according to type of regime rather than by possession of weapons themselves.<sup>11</sup> Proposals based on differentiating between “responsible” or “mature” states and those that lack adequate internal checks overlook the dangers inherent in any existing arsenal, e.g., the threat of non-state actors gaining access to weapons and materials.

Lacking objective standards, the differential treatment of states would depend heavily on the threat perceptions and interests of a particular state or group of states. Who determines what states are allowed to possess WMD or related technology? Tampering with the norm of equal treatment can often result in the politicization of a threat, e.g., on whose threat assessments do we base collective action? As intelligence capacities vary from country to country, it would not be feasible to reach agreement on weapon-related activities that go undetected by multilateral inspections systems without a common source of intelligence. According to the Bush administration, any unfriendly state that has or intends to acquire WMD poses a threat to the U.S. Although many European allies can agree with the U.S. on which states pose a threat, some diverge significantly on the severity of and urgency for addressing these threats. Despite consensus on the threat of WMD, actual threat perception of states possessing WMD or related technology will vary by region and perspective.

In order for a collective intervention to occur, states would need to agree, preferably in advance, on what would merit intervention and what form the intervention would take. However, it is unclear who will define what proliferation behavior justifies an infringement of state sovereignty.

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#### SHIFTING THE DEBATE FROM WEAPONS TO TECHNOLOGY

The shift away from the weapons themselves to a focus on individual states is occurring simultaneously with other proposals to deny certain nuclear technologies to selected states. Under the proposals developed by President Bush, some states would be allowed to keep proliferation-sensitive civilian technologies while others would be denied access to them. This modification of the norm of peaceful use of dual-use technology challenges the grand bargain established under the NPT.

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### *Denying States Access to Technology*

President Bush proposed recently that the 40 states in the Nuclear Suppliers Group (NSG) should refuse to sell uranium enrichment or reprocessing technology to any state that does not already possess full-scale, operational enrichment or reprocessing plants. By denying the further spread of uranium enrichment and reprocessing technology, President Bush seeks to establish a quasi-nuclear monopoly of sorts. It is uncertain, however, whether a ban on this technology would prevent determined states from acquiring the desired capability or whether it could even be implemented in the first place.

The requisite nuclear technology for developing uranium enrichment and spent fuel reprocessing abounds in many states and will become more accessible as technology advances.<sup>12</sup> In 1945, President Truman claimed that no state could maintain a monopoly on nuclear weapons or maintain or morally defend a monopoly on the peaceful uses of nuclear energy.<sup>13</sup> At that time, there were few known deposits of uranium and only a few countries had access to nuclear technology. As it turns out, many more states had potential access to uranium

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deposits than first thought in 1945. Today, about 40 states have research reactors and 34 states from all regions of the world have well-established nuclear power industries. Although nuclear materials and technology are significantly more widespread than in 1945, one could argue that a comparable situation to uranium deposits back then exists for uranium enrichment and reprocessing technology today. While only five companies operate commercial scale enrichment plants and only five states have commercial capacity for spent fuel reprocessing, the complete picture is much more complex<sup>14</sup>—more than just these few states have dabbled in developing uranium enrichment and reprocessing technology.<sup>15</sup> At the very least, many of these states will have retained the requisite know-how and technology for their own uranium enrichment and reprocessing programs.

Nonproliferation policies involving technology denial have not worked well in the past and do not represent viable long-term solutions.<sup>16</sup> It would not be the first time that the U.S. and other nuclear suppliers have attempted to create a nuclear monopoly. In 1946, it was suggested to Secretary of State Byrnes that “the U.S. and its allies form a group that will control atomic energy through the possession of such an overwhelming proportion of the raw materials that those nations left [outside] the circle must pay the price of admission.”<sup>17</sup> And so,

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the U.S., UK, and Canada joined together to establish the Joint Development Agency in an attempt to control the uranium market by buying up all available deposits of uranium outside of the Soviet Union. The effort failed when South Africa agreed to supply France with uranium at a lower price than the Agency in 1963.<sup>18</sup> Besides the potential for internal defections from such arrangements, nuclear suppliers such as China, India, the DPRK, Iran, Israel, and Pakistan do not belong to the NSG, so even apparent collective action would be ineffectual. All of these states have developed various levels of uranium enrichment and/or spent fuel reprocessing technology. Therefore, a necessary intermediary step would be to encourage China, India, Iran, Israel, and Pakistan to join the NSG and convince the DPRK to dismantle its programs.

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Furthermore, it is not evident from the U.S. proposal whether this ban would apply to all non-nuclear weapon states or only those non-nuclear weapon states outside of the NSG. In any case, this policy would create yet another double standard in the nuclear nonproliferation regimes. At its inception, the NPT created two groups of states: nuclear-weapon states and non-nuclear-weapon states. By acquiescence of the international community, India, Pakistan, and Israel make up a third group of so-called responsible nuclear-weapon states. Now President Bush appears to be creating a fourth group of states: adolescent non-nuclear-weapon states.

Most states on the receiving end of technology-denial policies will perceive such measures as punitive and interfering with their industrial development. Uranium enrichment capability has come to represent a symbol of nuclear independence, essential for meeting energy security needs.<sup>19</sup> Additionally, the development of nuclear technology has been widely recognized as a sign of technological prowess and has been awarded influence in international politics. For example, the seats on the IAEA Board of Governors are assigned to "members most advanced in the technology of atomic energy including the production of source materials."<sup>20</sup> Denying states access to technology will be seen as excluding these states from the prestige associated with nuclear technology.

Finally, nuclear technology of proliferation concern extends beyond uranium enrichment and reprocessing technology—although these are considered the last necessary steps for producing highly enriched uranium (HEU) or plutonium for use in a nuclear weapon. For example, there are 272 operational research reactors worldwide and many more that have been shut down or decommissioned.<sup>21</sup> Research reactors are used for testing and analyzing materials, production of radioisotopes, which have applications in fusion research,

environmental science, advanced materials development, drug design, and medicine.<sup>22</sup> These reactors typically use more highly-enriched fuel (about 20 percent Uranium 235) than nuclear power reactors, though older models still use weapons-grade HEU (80-90 percent U235). Other proliferation-sensitive technologies include some types of nuclear power reactors such as heavy water reactors, fast breeder reactors, and mixed-oxide fuel fabrication. Will limits on access to these technologies be imposed in the future?

### *Reinterpreting the Grand Bargain of the NPT*

The proposal by President Bush to deny states equipment for their civilian nuclear programs if they do not ratify the Additional Protocol constitutes a brash reinterpretation of Articles III and IV of the NPT. Article III requires non-nuclear-weapon states to conclude safeguards agreements with the IAEA on all nuclear activities and materials. Article IV emphasizes the *inalienable right* of all NPT parties to develop research, production, and use of nuclear energy for peaceful purposes *without discrimination*. Notably, paragraph 3 of Article III states that “the safeguards required by this Article shall be implemented in a manner

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designed to comply with Article IV of this Treaty.” According to the accepted interpretation, the conclusion of a comprehensive safeguards agreement fulfills obligations under Article III. In other words, Bush’s proposal directly infringes upon the accepted interpretation grand bargain of the NPT—that non-nuclear-weapon states renounce nuclear weapons in exchange for peaceful uses of nuclear energy and agree to IAEA safeguards on related technologies. In

exchange for ratifying the Additional Protocol, President Bush offers what is already established as an inalienable right—access to materials and equipment for civilian nuclear programs.

As part of this proposal, President Bush calls upon the NSG to guarantee a nuclear fuel supply. States would be unlikely to accept restrictions on their civilian nuclear programs unless they could be assured of the credibility of the nuclear fuel guarantee. Without the establishment of an internationally controlled nuclear fuel bank, some states, especially those states labeled as outlaw states, would not find it acceptable to depend solely on external sources of nuclear fuel. In the past, nuclear fuel suppliers have refused to fulfill contractual supply obligations due to proliferation concerns. For example, the U.S. cut off its nuclear fuel supply to South Africa, which had already paid for the fuel upfront. Not only did

this move involve a huge economic loss for South Africa, it also served, as intended, to stall its nuclear activities. In a similar move, the U.S. refused to supply enriched uranium for Argentina's research reactors in 1974.<sup>23</sup>

Finally, any blanket restrictions on technology for peaceful uses of nuclear energy would be inconsistent with the main objectives of the NSG and would serve only to confirm the complaints of many non-nuclear weapon states that export control regimes deny them access to nuclear technology granted by the NPT.<sup>24</sup> Members of the NSG have argued that export control regimes constitute the implementation of obligations under the NPT. The proposed restriction would call this claim into question and would challenge the overall mission of the NSG.

### **ASSESSING THE PERFORMANCE OF THE COMPLIANCE AND ENFORCEMENT MECHANISMS**

Before considering an alternative approach, it is necessary to review the impetus behind recent proposals and assess the main underlying source for the problems faced by nonproliferation regimes. Many of the nonproliferation principles established during the Cold War have been grievously challenged, are becoming outdated, or are no longer applicable. In addition, recent proliferation cases have underlined the serious shortcomings of the compliance and enforcement mechanisms. Ideally, the system would work as follows in the case of treaty non-compliance. The states parties of a treaty would bring a case of suspected non-compliance to the attention of the responsible international organization. As provided by the treaty (NPT or Chemical Weapons Convention (CWC)), the international organization would conduct inspections to verify compliance with treaty obligations and refer the case to the Security Council should evidence of non-compliance be found. Member states would then act using a range of measures to enforce the obligations set forth in the respective treaty and impose penalties on the wayward state. In reality, however, the compliance and enforcement process falls far short of this description. The current shift in the debate on the threat of proliferation is related to a more profound search for new principles for judging compliance with nonproliferation rules as an alternative to strengthening the nonproliferation regimes through multilateral negotiations.

#### *Compliance Mechanisms and Procedures*

Under the treaty regimes, compliance mechanisms aim to provide evidence of compliance and detect cases of non-compliance. The compliance mechanisms in the nonproliferation regimes can be characterized as deficient both in structure and level of intrusiveness, generally including inspections regimes, systems of onsite visits, monitoring, and other confidence-building measures. Early on, states recognized the inherent limitations of compliance mechanisms. The Three Nation

Agreed Declaration on Atomic Energy noted in 1945 that "no system of safeguards that can be devised will of itself provide an effective guarantee against production of atomic weapons by a nation bent on aggression."<sup>25</sup> Reaching agreements on compliance mechanisms has proved difficult due to the intrusive nature of inspections, the need to protect proprietary information, and the dual-use nature of technology. In fact, the international community was unable to devise a comprehensive verification regime until the negotiation of the CWC in the early 1990s.

Before the CWC, the nuclear regime had by far the most robust compliance mechanism, though not without notable shortcomings. Although the NPT did not establish an organization with the authority to verify compliance with all provisions of the Treaty, it did give authority to the IAEA to verify compliance with safeguards agreements required by Article III. Until the adoption of the Additional Protocol in 1997, the IAEA did not have the authority to inspect undeclared facilities. As a result, the performance of the safeguards system depended primarily on the cooperation of individual states. Without access to intelligence, the capability of the IAEA to detect clandestine activities is significantly compromised. Although the Additional Protocol expands the authority of

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the IAEA to inspect undeclared facilities and use more intrusive inspection measures, only 38 states have ratified the protocol. Aside from several non-binding confidence-building measures, the Biological Weapons Convention (BWC) has no compliance mechanism despite more than seven years of negotiation by the Ad Hoc Group on a pro-

protocol to strengthen the convention in this regard. The CWC remains the only nonproliferation treaty that establishes an administrative organization to implement and verify compliance with all of its provisions.

The track record of compliance mechanisms in the nonproliferation regimes has been spotty at best. The intrusive inspections regime under the CWC has not been fully utilized. As time passes, the political costs associated with conducting a challenge inspection increase. The IAEA safeguards system failed to detect non-compliance in Iraq, Iran, and Libya for many years. In 1993, the DPRK refused to admit IAEA inspectors to clarify discrepancies in its state declaration. These failures must be attributed to the flaws inherent in the comprehensive safeguards system. It is not yet clear what impact the strengthened safeguards system under the Additional Protocol will have on the ability of the IAEA to detect non-compliance of determined states. Nonetheless, the compliance mechanisms have not provided the evidence necessary for the enforcement of the nonproliferation regimes on a reliable basis.

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*Enforcement Mechanisms and Procedures*

The evaluation of enforcement mechanisms and procedure for the non-proliferation regimes tells a slightly different story. The difficulties with enforcement stem less from a lack of mechanisms and procedures than an overall lack of direction. The outputs of compliance mechanisms must serve as the objective guide for enforcement. If states are determined to be in compliance while engaging in clandestine illegal activities, the enforcement mechanisms, regardless of their form, cannot take the necessary collective action. This problem has generally led to the selective enforcement of the nonproliferation regimes by individual states or groups of like-minded states.

Although the nonproliferation treaties vary in their provisions for enforcement mechanisms and procedures, all three regimes assign some role to the United Nations Security Council. The BWC authorizes the Security Council in Article VI to investigate cases of suspected non-compliance upon the filing of a complaint against a state. Under the Article, the Security Council must report the results of the investigation to the states parties. Notably, the BWC text makes no provision for Security Council enforcement in the case of non-compliance. Under the CWC, the Executive Council of the Organisation for the Prohibition of Chemical Weapons (OPCW) can refer cases of non-compliance to the Security Council for enforcement measures. Unlike the BWC and the CWC, the NPT makes no reference to a role for the Security Council. However, under its statutes, the IAEA Board of Governors may refer cases of non-compliance to the Security Council for further action.

Although both the IAEA statutes and the CWC assign a clear enforcement role to the Security Council, any action taken by the council depends entirely on the smooth functioning of the respective compliance mechanisms. States suspected of non-compliance but shown to be in compliance by the CWC inspections regime and IAEA safeguards will not be referred to the Security Council. Despite confirmed non-compliance with their treaty obligations, proliferating states (Iran, Iraq, and DPRK) have yet to face enforcement measures as a result of being referred to the Security Council by the IAEA or OPCW.<sup>26</sup> Clearly, as long as compliance mechanisms remain inadequate and politicized (that is, based on national intelligence assessments), enforcement of nonproliferation rules within the treaty regimes will be difficult on a multilateral basis.

And so, the same nonproliferation principles that protect the sovereign rights of states also allow states to appear in compliance with their obligations while they actively divert technology to clandestine offensive programs. As long as states are found to be in compliance—or, as has been the case with the DPRK since 1993, the IAEA is “unable to verify that it was in compliance”—the international community remains constrained from taking collective and decisive action against those states suspected of proliferation activity.<sup>27</sup>

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## AN ALTERNATIVE APPROACH

Although the approaches critiqued in this essay may provide short-term fixes to problems of nuclear proliferation, they do little to address the inertia that has characterized the international response to actual cases of WMD proliferation since the dawn of the nuclear age. We propose an alternative approach to proliferation threats that endeavors to address the need for new principles by developing a new multilateral framework for acting on cases of suspected non-compliance. Compliance, as defined by treaties and decided by inspections regimes, has served as the only objective measure of state behavior. In the same way, uncovering concrete evidence of non-compliance comprises the only legiti-

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mate means that can lead to the enforcement of the treaty regimes. Thus, there is no way of recognizing and responding to suspicions of proliferation short of full non-compliance. Many factors have complicated the issue of distinguishing between compliance and non-compliance with nonproliferation treaty obligations. The dual-use nature of technology obscures the distinction between

proliferation activities and peaceful uses. Time and again, states that are parties to nonproliferation treaties demonstrate their ability to circumvent inspection regimes in pursuit of illegal weapons programs.

In the long term, each of the nonproliferation treaties should be strengthened to include a comprehensive verification regime and provide for explicit enforcement procedures. In the meantime, the international community needs to establish objective criteria for the differential treatment of states to enforce nonproliferation norms more consistently and enable immediate action in cases of WMD proliferation. For effective international action against proliferation threats, it is necessary to 1) define proliferation behavior (or non-compliance) and distinguish between categories of proliferation behavior, 2) determine the appropriate sources of evidence for proliferation behavior, 3) identify types of treaty violations or non-compliance, and 4) establish a set of consequences or responses to various types of proliferation behavior. After detecting proliferation behavior, the international community must enforce the nonproliferation norms through the imposition of clear and consistent consequences for the perpetrating state.

### *Assigning the Institutional Mandate*

In spite of all its limitations, we propose that the Security Council take the lead in establishing a new framework for enforcing the nonproliferation norms

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for a number of reasons. First, the Security Council has a clear mandate under Chapter VII of the UN Charter for addressing threats to international peace and security and taking appropriate action to enforce the principles of the international system. Second, though limited in its membership and representation, the Security Council represents the only multilateral body with authority for the enforcement of its decisions. Resolutions adopted by the UN General Assembly are not legally binding. Third, the Security Council benefits from the leadership of the great powers, who would have to assume the responsibility and expend the majority of resources to enforce nonproliferation norms.

It would be remiss not to acknowledge several significant problems with this approach. First, the Security Council does not yet have a concrete mandate to address WMD proliferation. It is not clear whether the Security Council would be entitled to take up these issues. Although the Security Council President declared the proliferation of all weapons of mass destruction to be a threat to international peace and security in 1992, thus far there has been no formal resolution giving the Security Council the authority to address the proliferation of WMD as a threat to international peace and security. However, recent developments suggest this problem might be resolved.<sup>28</sup> The draft nonproliferation resolution proposed by President Bush in the General Assembly in 2003 and currently under consideration in the Security Council would assign the council a clear enforcement role.<sup>29</sup>

Second, all decisions of the Security Council remain subject to the veto power of the five permanent members. Thus, all resolutions addressing proliferation threats are subject to the political, economic, and security interests of the P-5. Already in 1946, Bernard Baruch expressed his concern that the veto power of the P-5 might serve to protect states in violation of nonproliferation norms through the politicization of proliferation activities.<sup>30</sup> Not surprisingly, the veto power of the Security Council has hampered its action against overt challenges to the nonproliferation regimes.<sup>31</sup> The P-5 have recognized that WMD proliferation is a foremost threat to their own peace and security. However, they could further demonstrate their commitment to resolute action on WMD proliferation by waiving their right to veto resolutions addressing proliferation threats. Similar measures could be considered under the current reform agenda for the Security Council. At the very least, this approach would help de-politicize the responses to specific cases. The P-5 could also try to work together in this context as they do at the NPT review conferences. Their status as nuclear-weapon-states under the NPT gives them special responsibility in this regard.

Third, many countries vehemently oppose assigning further institutional responsibilities to the Security Council due to its limited membership and inadequate representation. These countries argue that the Security Council should continue to consider threats to international peace and security on a case-by-case

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basis. Giving the mandate to the Security Council as proposed above would be controversial, especially in the developing world. In response to such criticisms, it could be argued that in the current climate, the U.S. maintains a monopoly on action against proliferation threats due to its readiness to act unilaterally or through "coalitions of the willing," with or without the endorsement of the Security Council. Thus, the argument would follow, the Security Council needs to establish objective criteria for addressing suspected cases of proliferation and appropriate actions regardless of whether the Security Council continues to address these threats on a case-by-case basis or decides to develop an ongoing institutional capacity. Developing a framework under the Security Council that enabled it to respond quickly to proliferation threats may bring the U.S. back into the multilateral fold and would answer many of the criticisms of involving the UN in resolving proliferation crises. Specifically, leadership by the Security Council could help reestablish its relevance in this key area of international security and facilitate a coherent and unified response to future proliferation threats.

Fourth, giving any type of authority to the Security Council to take action against suspected cases of proliferation activity (or, for treaty parties, cases of non-compliance) may compromise the authority and legitimacy of the IAEA and the OPCW if such measures are not implemented properly.<sup>32</sup> The grave political implications associated with sending referrals regarding non-compliance to the Security Council for consideration through the treaty regimes have typically delayed concerted action in cases of suspected proliferation. The establishment of different types of non-compliance, which could be matched up with certain types of Security Council action, could make such referrals more prompt and commonplace. As it now stands, action to be taken by the council is not predictable, and therefore the merits of referring a case to the Security Council are only politically considered. If a new framework with a wide range of inducements and penalties were in place, states could decide on referring cases to the council without implying their acceptance of punitive sanctions or military interventions that until today have been the most common responses by the Security Council.

### *A Supplementary Method for Assessing Compliance*

We propose that the Security Council utilize a three-tiered framework to help guide international responses to proliferation activities. The framework would be based on comprehensive assessments of proliferation risk for each UN member state, standards for determining various levels of proliferation behavior (or non-compliance), and sets of international responses to proliferation behavior.<sup>33</sup> This framework draws upon proposals made by Bernard Baruch in 1946, the concept of compliance assessments proposed by Michael Moodie and Amy Sands,<sup>34</sup> and the call for a menu of options by Feinstein and Slaughter. The first

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tier involves detailed proliferation risk assessments for each member of the UN. The second tier serves as a way to assess compliance, and would be linked to the third tier enforcement options.

The first tier involves the development of detailed indicators for compliance or non-compliance (proliferation activities). The evaluation of each of these indicators would result in comprehensive proliferation risk assessments for each member of the UN. The proliferation risk assessments would be carried out by a subsidiary body of experts under the Security Council similar to the Counter-Terrorism Committee (CTC), which would be facilitated by the adoption of a resolution on WMD proliferation currently under consideration. For purposes of explanation, we will call the sub-committee the Proliferation Risk Assessment Committee (PRAC). Indicators could be developed based on the following:

- compliance with treaty obligations for nuclear, chemical, and biological weapons as determined by inspections regimes, monitoring mechanisms, and confidence-building measures;
- full implementation of treaty obligations (domestic legislation, measures, export controls, standards, etc.);
- participation in treaty regimes (membership, attendance of review conferences, preparatory commissions, etc.);
- participation in additional nonproliferation instruments (export control groups, ad hoc initiatives);
- compliance and participation in related multilateral treaties and instruments (terrorism conventions, nuclear safety conventions, physical protection, missiles);
- national policies on WMD (nuclear postures, doctrines of use, etc.);
- legislation, domestic measures, export controls, etc. (for states not party to treaty regimes);
- extent of imports and exports, and use of proliferation-sensitive materials, equipment, technology;
- development, manufacture, export of technology used in weaponization;
- number and type of facilities containing proliferation-sensitive materials, equipment, or technology;
- security of existing WMD arsenals;
- industrial capabilities (nuclear, chemical, biotechnology, genetic engineering, pharmaceutical, weapon-related technologies);
- merits of weapon-related activities (nuclear power, chemical research, vaccine research, aerosol technology, laboratories with high levels of biosafety, etc.);
- level of physical protection and security over proliferation-sensitive materials;
- level of safety measures for proliferation-sensitive materials;
- material control and accounting; and
- border controls.

Each aspect should be weighted according to the associated proliferation risk. The quantification of these aspects would indeed be somewhat subjective, but would be applied to all countries in the same manner. Based on these indicators, each state would receive a proliferation-risk score.<sup>35</sup> The UN Secretary General would then review these reports during his annual consultations with Heads of State at the opening of the UN General Assembly each fall. States would have recourse by improving their scores through better implementation of treaty obligations, bolstering measures to counter the threat of WMD terrorism, or signing on to more intrusive inspections systems such as the Additional Protocol. States with inadequate resources would be able to receive assistance through PRAC. An assistance matrix of all states requiring assistance and offering assistance could be developed in order to facilitate this process.<sup>36</sup>

It should be emphasized that proliferation risk assessments would by no means constitute a substitute for intrusive compliance mechanisms. The proliferation-risk scores would merely serve as a way for the Security Council to identify those states that pose a greater risk of proliferation and set priorities on an objective and multilateral basis. In this way, the international community would no longer have to depend on the laundry list of rogue states from countries with well-developed intelligence networks such as the U.S. or the UK, but would have an objective point of comparison.

The second tier of the framework consists of progressive categories of potential proliferation behavior. This idea expands upon an idea proposed by Bernard Baruch in 1946 and a more recent call for “categories of violations” by Moodie and Sands.<sup>37</sup> In his speech to the United Nations Atomic Energy Commission, which later became known as the Baruch Plan, Baruch emphasized the need for swift reaction and fixed penalties in response to four types of nuclear violations ranging from possession or use of a nuclear weapon to interference with the inspections authority.<sup>38</sup> We propose the following as types of behavior that could indicate proliferation activity:

- acquisition of proliferation-sensitive materials, equipment, or technology disproportionate to indigenous capabilities or needs;
  - demonstrated lack of cooperation with inspections agencies (IAEA, OPCW, any Security Council inspections regime);
  - failure to declare proliferation-sensitive materials, facilities equipment, or technology to respective agency (IAEA, OPCW, any Security Council inspections regime);
  - discrepancies between state declarations and acquisition;
  - failure to declare transfers of proliferation-sensitive materials, equipment, or technology to respective agency or export control arrangement;
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- transfers of proliferation-sensitive materials, equipment, or technology to suspected proliferators;
  - refusal to admit inspectors to requested sites.

The second tier would employ a consultation and clarification process similar to that foreseen in the Comprehensive Nuclear-Test-Ban Treaty. If one country suspects another of these and other types of proliferation activity, it would be able to file a clarification request with the PRAC. The requesting state would have to provide the PRAC with information that led to its suspicions. The PRAC would consider the evidence brought to bear by the accusing state, review the proliferation risk assessment for the suspected country, and engage in consultations with the accused state. The accused state would be given the opportunity to clarify and/or rectify its behavior. The PRAC would report its findings to the Security Council, at which time the council could determine the appropriate remedial action based on the third tier of enforcement options.

The third tier entails a menu of potential measures ranging from compliance incentives and diplomatic pressure to coercive action and intervention.<sup>39</sup> The Security Council would determine the appropriate policy response from a wide range of punitive measures and inducements based on the PRAC report and the proliferation risk assessment. Then, the international community can respond to suspected proliferation activity in a way that it is tailor-made to the needs of a state or threat posed by an individual state. Some options along this response spectrum could be used in combination, and might include the following:

- diplomatic consultations and pressure;
- positive incentives (economic aid, security assurances, energy production, fuel, etc.);
- technology denial (ban on proliferation-sensitive exports, denial of certain types of technology, etc.);
- economic sanctions;
- coercive measures (technology interdictions, dismantling of undeclared facilities, blockades, etc.);
- investigations of suspected proliferation activity (ad hoc inspections);
- robust inspections regimes (Security Council UNSCOM/UNMOVIC);<sup>40</sup>
- military intervention.

The discussions should go beyond setting these standards, however, and should ideally also address what package of response measures should be used in which circumstances. If this is too politicized for the sub-committee of the Security Council, a study might be commissioned to be completed by the UN Secretariat or an experts group. This would also serve the purpose of providing policy options and some strategic planning for the Secretary General and the Security Council when they face future proliferation crises.

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## CONCLUSION

In the new post-Cold War, post-9/11 security context, there is a need for flexible yet comprehensive mechanisms that can address the cases of suspected proliferation or non-compliance before the acquisition and use of actual weapons. While the approach proposed in this essay does not address the weaknesses in the treaty regimes, it is a framework that could be useful as a basis for dealing with future proliferation dilemmas at the international level. It attempts to de-politicize the process of responding to cases of suspected proliferation activities and to determine appropriate responses by setting guidelines in advance of crisis. It is a procedural solution that reinforces nonproliferation norms, moves the debate back to its original focus on weapons acquisition rather than regime characteristics, and attempts to bring consistency in international response to diverse and changing WMD proliferation threats. This framework would help the international community develop standards on how to deal with individual cases. We propose this framework by no means as a panacea to proliferation threats, but rather to call attention to the real problems with the nonproliferation regimes that have existed since their establishment—the lack of multilateral crisis management mechanisms and international standards for enforcement—and to stimulate the debate in this direction. ■

## NOTES

- 1 “States like these, and their terrorist allies, constitute an axis of evil, arming to threaten the peace of the world. By seeking weapons of mass destruction, these regimes pose a grave and growing danger. They could provide these arms to terrorists, giving them the means to match their hatred.” State of the Union, 2002, <<http://www.whitehouse.gov/news/releases/2002/01/20020129-11.html>> (accessed March 22, 2004); White House, Office of the Press Secretary, Fact Sheet: Strengthening International Efforts against WMD Proliferation, February 11, 2004, <<http://www.whitehouse.gov/news/releases/2004/02/20040211-5.html>> (accessed March 22, 2004).
- 2 In the literature, equal treatment is also referred to as the principle of non-discrimination.
- 3 Lee Feinstein and Anne-Marie Slaughter, “A Duty to Prevent,” *Foreign Affairs* 83 (1) (January/February 2004): 136-146.
- 4 The discriminatory nature of the NPT has challenged the legitimacy of the nuclear nonproliferation regime since its inception. In 1968, many non-nuclear weapon states signed on to the NPT despite its discriminatory nature with the expectation that nuclear-weapon states would fulfill their disarmament commitments and eventually eliminate the differential treatment. This commitment was not enough for some countries including India. During the negotiation of the NPT, India strongly supported the goals behind the NPT and was actively involved in the deliberations, but refused to sign up due to the discriminatory nature of the treaty. See for further discussion, William Epstein, *The Last Chance: Nuclear Proliferation and Arms Control* (New York: The Free Press, 1976).
- 5 For the nuclear regime, see Article IV of the NPT; for the biological regime, see Article X; for the chemical regime, see Article VI.
- 6 The IAEA safeguards system was designed to detect diversions of nuclear material and technology from peaceful uses to a nuclear weapons program. However, the comprehensive safeguards system only grants the IAEA authority to inspect facilities declared by the respective state and only locations that contain safeguarded nuclear material. See comprehensive safeguards agreement, INFCIRC/153, <<http://www.iaea.org/Publications/Documents/Infircs/Others/inf153.shtml>> (accessed April 16, 2004). The IAEA strengthened its safeguards system by adopting the Additional Protocol in 1997, which expands the IAEA authority to inspect undeclared

- facilities and use more intrusive inspection procedures. See the Model Additional Protocol, INFCIRC/540, <<http://www.iaea.org/Publications/Documents/Infircs/1998/infirc540corrected.pdf>> (accessed April 16, 2004). However, so far only 38 states have ratified the Additional Protocol leaving the weaker inspections system largely intact. See status of Additional Protocol at IAEA website at <[http://www.iaea.org/OurWork/SV/Safeguards/sg\\_protocol.html](http://www.iaea.org/OurWork/SV/Safeguards/sg_protocol.html)>.
- 7 Frank V. Pabian, "South Africa's Nuclear Weapon Program: Lessons for U.S. Nonproliferation Policy," *The Nonproliferation Review* 3 (1) (Fall 1995): 1-19.
  - 8 *Ibid.*, 3-6.
  - 9 The New Agenda Coalition was established in 1998 by Brazil, Egypt, Ireland, Mexico, New Zealand, Slovenia, South Africa and Sweden to advance nuclear disarmament by putting pressure on nuclear-weapon states to fulfill their disarmament obligations under article VI of the NPT.
  - 10 Feinstein and Slaughter, 136.
  - 11 *Ibid.*, 141. Feinstein and Slaughter admit that the numbers of cases are limited when they state that "it applies to Kim Jong Il's North Korea but not to Hu Jintao's (or even Mao's) China."
  - 12 This problem was highlighted already in the 1980s by Lawrence Scheinman, "Multinational Alternatives and Nuclear Nonproliferation," *International Organization* 35 (1) (Winter 1981): 77-102, 99; See also Lawrence Scheinman, "The Nuclear Fuel Cycle: A Challenge for Nonproliferation," *Disarmament Diplomacy* Issue No. 76, March/April 2004, <<http://www.acronym.org.uk/dd/dd76/76ls.htm>> (accessed April 16, 2004).
  - 13 See William Epstein, *The Last Chance: Nuclear Proliferation and Arms Control* (New York: The Free Press, 1976), 3.
  - 14 International Atomic Energy Agency, *Country Nuclear Fuel Cycle Profiles*, Technical Reports Series No. 404, Vienna, Austria: IAEA, 2001, 5-6, <[http://www-pub.iaea.org/MTCD/publications/PDF/TRS404\\_scr.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/TRS404_scr.pdf)> (accessed April 16, 2004).
  - 15 *Ibid.* Five companies operate commercial scale enrichment plants and supply nuclear fuel: Eurodif, Minatom (Russia), Japan Nuclear Fuel Limited (JNFL), Urenco, and the United States Enrichment Corporation (USEC). Both Eurodif and Urenco represent multinational corporations. Eurodif is a joint venture between several countries (Belgium, France, Islamic Republic of Iran, Italy, and Spain) and operates one diffusion plant at Tricastin, France. Urenco is a joint venture between companies in Germany, Netherlands, and the UK and operates facilities at Gronau (Germany), Almelo (Netherlands), and Capenhurst (UK). China has two uranium enrichment plants to provide for a domestic supply of nuclear fuel in addition to its nuclear fuel imports. Pakistan operates a uranium enrichment plant for domestic use. Several other states have operational pilot plants and/or laboratories (Argentina, Australia, Brazil, and India). There is a commercial uranium enrichment plant under construction in Brazil and a pilot plant under construction in South Africa. South Africa dismantled its former commercial capacity as part of its commitment to completely disavow its nuclear weapons capability. There are eighteen countries with uranium enrichment technology. A similar situation exists for spent fuel reprocessing. Only five countries (France, India, Japan, Russia, and the UK) operate commercial spent fuel reprocessing facilities and represent commercial suppliers of mixed-oxide fuel (MOX). China plans to develop reprocessing facilities and has recently purchased an existing MOX facility from Siemens in Germany. However, additional countries with former reprocessing facilities (commercial, pilot plants, or laboratories) include Argentina, Belgium, Brazil, China, and Norway. The DPRK, Italy, and the U.S. have operational laboratories or pilot plants. Argentina has a pilot plant for spent fuel reprocessing in the works. There are thirteen countries with access to spent fuel reprocessing technology.
  - 16 Scheinman, 80.
  - 17 As quoted in David Fischer, *History of the International Atomic Energy Agency: The First Forty Years* (Vienna: IAEA, 1997), 20, <[http://www-pub.iaea.org/MTCD/publications/PDF/Pub1032\\_web.pdf](http://www-pub.iaea.org/MTCD/publications/PDF/Pub1032_web.pdf)> (accessed April 16, 2004).
  - 18 Fischer, 21.
  - 19 Julio C. Carasales, "The Argentine-Brazilian Nuclear Rapprochement," *The Nonproliferation Review* 2 (3) (Spring/Summer 1995): 45.
  - 20 See Article VII of the Statute of the International Atomic Energy Agency, <[http://www.iaea.org/About/statute\\_text.html](http://www.iaea.org/About/statute_text.html)> (accessed March 22, 2004).
  - 21 IAEA, Research Reactor Database, <<http://www.iaea.org/worldatom/rrdb/>>.
  - 22 World Nuclear Association, *Research Reactors*, Issue Brief No. 61, August 2003, <<http://www.world-nuclear.org/info/inf61.htm>> (accessed April 16, 2004).
  - 23 Mitchell Reiss, *Bridled Ambition: Why Countries Constrain their Nuclear Capabilities* (Washington, D.C.: Woodrow Wilson Center Press, 1995), 47.

- 24 The NSG guidelines aim to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices that would not hinder international trade and cooperation in the nuclear field. The NSG Guidelines facilitate the development of trade in this area by providing the means whereby obligations to facilitate peaceful nuclear cooperation can be implemented in a manner consistent with international nuclear non-proliferation norms. See Nuclear Suppliers Group, *Nuclear Suppliers Group: Its Origins, Role and Activities*, INFCIRC/539/Rev.1 (Corrected), <[http://www.nsg-online.org/PDF/INFCIRC\\_539\\_R1\\_Corrected.pdf](http://www.nsg-online.org/PDF/INFCIRC_539_R1_Corrected.pdf)> (accessed March 22, 2004).
- 25 Epstein, 5.
- 26 Iraq's non-compliance with IAEA safeguards was discovered after the Gulf War based on information from defectors, and its nuclear capabilities were later dismantled by the IAEA. In 2002, Security Council Resolution 1441 declared Iraq to be in non-compliance with SC resolutions and subjected the country to UNMOVIC, another ad hoc inspections regime established for the purpose of disarming Iraq. See S/RES/1441 (2002), "The Situation between Iraq and Kuwait," <<http://ods-dds-ny.un.org/doc/UNDOC/GEN/N02/682/26/PDF/N0268226.pdf>> (accessed April 16, 2004). In 1993, the IAEA Board of Governors on April 1, 1993, concluded that the DPRK was in non-compliance with its Safeguards Agreement and, in line with Article XII.C of the IAEA Statute, referred this non-compliance to the UN Security Council. See IAEA Factsheet on the DPRK, <[http://www.iaea.org/NewsCenter/Focus/laeaDprk/fact\\_sheet\\_8jan2003.shtml](http://www.iaea.org/NewsCenter/Focus/laeaDprk/fact_sheet_8jan2003.shtml)> (accessed April 16, 2004).
- 27 See IAEA Board of Governors Resolution of February 13, 2003, <[http://www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise\\_048.shtml](http://www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise_048.shtml)> (accessed April 16, 2004).
- 28 The statement was made in the Summit Declaration of the Security Council on January 31, 1992. See *Inventory of International Nonproliferation Organizations and Regimes*, Center for Nonproliferation Studies website, <<http://cns.miis.edu/pubs/inven/pdfs/un.pdf>> (accessed April 16, 2004).
- 29 See Reaching Critical Will website for a copy of the draft resolution, <[http://www.reachingcriticalwill.org/political/WMD\\_SCRes.pdf](http://www.reachingcriticalwill.org/political/WMD_SCRes.pdf)> (accessed April 13, 2004).
- 30 See the Baruch Plan, presented to the United Nations Atomic Energy Commission on June 14, 1946, <<http://www.nuclearfiles.org/redocuments/1946/460614-baruch.htm>> (accessed April 16, 2004).
- 31 For example, in the case of the DPRK, the U.S. and Japan were prepared to take up the matter within the Security Council in 1993, a move that was stymied by China's insistence that the DPRK's withdrawal from the NPT was legal and issues regarding its safeguards agreements should be addressed through the IAEA. See Barry Schweid, "Christopher Threatens Sanctions Against North Korea," Associated Press, March 25, 1993, in Lexis-Nexis, <<http://web.lexis-nexis.com/>>; "North Korea: Council Expresses Concern at Nuclear Situation," Inter Press Service, April 8, 1993, in Lexis-Nexis, <<http://web.lexis-nexis.com/>>. After a referral to the Security Council by the IAEA Board of Governors, the Council failed to adopt a resolution imposing sanctions on the DPRK as China threatened to veto any punitive measures. Instead, the Security Council adopted resolution 825 (1993) calling on the DPRK to reconsider its withdrawal from the NPT and honor its safeguards obligations. See S/RES/825, May 11, 1993, <<http://ods-dds-ny.un.org/doc/UNDOC/GEN/N93/280/49/IMG/N9328049.pdf>> (accessed April 16, 2004). In February 2003, IAEA again reported to the Security Council its inability to verify the non-diversion of nuclear material. See IAEA Board of Governors resolution, February 12, 2003, <[http://www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise\\_048.shtml](http://www.iaea.org/NewsCenter/MediaAdvisory/2003/med-advise_048.shtml)> (accessed April 16, 2004). This time, both China and Russia objected to the involvement of the Security Council in the DPRK issue. See "Russia, China block US UN resolution condemning North Korea nuclear programme" British Broadcasting Corporation, July 4, 2003, in Lexis-Nexis, <<http://web.lexis-nexis.com/>>. As a result, the Security Council has failed to address the violations of the DPRK of the NPT and its safeguards agreement. See also Nuclear Chronology of the DPRK, Nuclear Threat Initiative, <[http://www.nti.org/e\\_research/profiles/NK/46.html](http://www.nti.org/e_research/profiles/NK/46.html)> (accessed April 16, 2004).
- 32 As discussed in an earlier section, the IAEA Board of Governors and the OPCW Executive Council determine whether to refer cases to the Security Council. This process could be jeopardized if the Security Council has the authority to act on behalf of treaty regimes.
- 33 Michael Moodie and Amy Sands emphasize the need for multinational compliance assessments in "New Approaches to Compliance with Arms Control and Nonproliferation Agreements," *The Nonproliferation Review* 8 (1) (Spring 2001): 1-9. Our assessment entails more than compliance as a measure of state behavior.
- 34 Moodie and Sands, 6-7.
- 35 This probably would not entail a single score, but rather several scores to provide comparability across several different aspects of proliferation risk.
- 36 The CTC does not provide financial or technical assistance itself, but has developed the so-called Assistance Matrix to connect countries with assistance needs to potential donors.

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- 37 Moodie and Sands suggest five categories of noncompliance for which the international community could have a determined response: 1) minor technical or inadvertent problems; 2) different interpretations or gaps in treaty language; 3) significant, detected, overt violations; 4) significant, detected, but covert violations; and 5) suspected covert violations of possible significance.
- 38 In his speech to the United Nations Atomic Energy Commission in 1946, Bernhard Baruch called for a range of fixed violations in response to certain types of proliferation activities: 1) illegal possession or use of an atomic bomb; 2) illegal possession, or separation, of atomic material suitable for use in an atomic bomb; 3) seizure of any plant or other property belonging to or licensed by the Authority; 4) willful interference with the activities of the Authority; and 5) creation or operation of dangerous projects in a manner contrary to, or in the absence of, a license granted by the international body. See the Baruch Plan, June 14, 1946, <<http://www.nuclearfiles.org/redocuments/1946/460614-baruch.html>> (accessed April 16, 2004).
- 39 Feinstein and Slaughter, 139, recommend a menu of options but do not specify what it would be composed of.
- 40 Recent proposals have discussed establishing a permanent UN weapons inspections regime modeled on the experience of Security Council OM/UNMOVIC in Iraq. See Dafna Linzer, "Britain, France secretly plan to seek permanent U.N. weapons inspectors force," Associated Press, November 26, 2003, in Lexis-Nexis, <<http://web.lexis-nexis.com/>>. See also Trevor Findlay, "Preserving UNMOVIC: The Institutional Possibilities," Disarmament Diplomacy Issue No. 76, March/April 2004, <<http://www.acronym.org.uk/dd/dd76/76tf.htm>> (accessed April 16, 2004).
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