It is now widely acknowledged that the nuclear non-proliferation regime is in a state of crisis. Opinions differ, however, on whether the crisis is a consequence of American attitudes and policies towards nuclear weapons constraints since 2000, or whether those American policies are responses to a series of changes related to the regime that can no longer be ignored and which in themselves could be described as a crisis. Put another way, is the crisis the result of changes in the international nuclear environment that have exposed widening gaps between that environment and existing international policy responses? And are American policies a new version of its traditional leadership role in this area of trying to drag the rest of the world behind it in responding to unwelcome changes in the global system?

If this state of crisis is believed to be a result of American actions, then it follows that the situation can be resolved by changes in its policy to make it more supportive towards multilateral arms control, and that the American electorate and the government’s influential allies may be able to help produce such a change. If it is believed to be a product of changes in the environment in which nuclear arms constraints are operating, however, then the implication is very different: that states now need to assess and analyse the evolving situation, and to be prepared to change their attitudes towards nuclear weapons constraints and modify their policies accordingly.

The truth, of course, probably lies between these two extremes. The context in which nuclear arms constraints are operating has changed, and thus may demand new international security policies. However, the response of the United States towards these changes could have placed a higher priority on reducing the confusion and negative reactions that have surrounded its actions. This has been compounded by its attempts to inject new language into the traditional debate—to supplement, if not supplant, the language of non-proliferation with terms such as counter-proliferation and proliferation prevention, not to mention proliferation pre-emption. Indeed some would argue that, in practice, the policy of the Clinton Administration did not differ appreciably from that of the current administration on key issues. Rather, it was simply presented in a more diplomatic manner by arguing that traditional multilateral non-proliferation tools were not enough in themselves to handle the emerging proliferation challenges.

There is no doubt that the international proliferation environment has changed, and that this has exposed gaps in the existing non-proliferation arrangements. At the same time, the debate between

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the United States and others over policies towards nuclear proliferation and their implementation has taken on a form which suggests that these policies are revolutionary, rather than evolutionary. Yet, at heart the legal regime, however inflexible and outdated it may appear, offers an essential foundation for nuclear anti-proliferation policies: a normative and legal framework to legitimize national and international action against proliferators as well as provide incentives for non-proliferation.

Cloaked by the ongoing debate over policies to prevent proliferation are a series of more basic, overlapping dichotomies. One concerns the nature of the world order that is now emerging. Is it one of international anarchy moderated by mutual self-interest, tactical alliances and military strength—a political realist world—or is it one of expanding security communities created around cooperation, common values, conflict-resolution mechanisms and arrangements to manage armaments? More specifically, is this management activity to occur on the basis of imposed rules and power or agreed rules and consensus? And should arms management policies revolve around the political alignment of states, or the principles of universality and non-discrimination? If it is to be the former, it follows logically that implementation becomes a matter of deeming that those that are ‘against us’ are not safe to possess nuclear weapons and should be denied them by all effective means available, including preventive military actions. If the latter, international law and norms, the United Nations, treaties or political agreements, and international verification and non-compliance mechanisms come into play.

Of course, in practice states, including the United States, tend to migrate towards a centre position between these extremes. The use of raw power without legitimacy generates the anarchy it may be claiming to moderate. Arms management based on universality and non-discrimination will fail without effective non-compliance mechanisms. Policies based upon concepts of ‘us and them’ are likely to generate self-fulfilling prophecies. Policies that put national self-interest before international verification and norms are likely to damage the growth of security communities. The trick to sustaining international stability is to find ways of reconciling these dichotomies, and not allow them to migrate to the extremes.

Over the last thirty-three years, these dichotomies have been reconciled in the nuclear area by the checks and balances inherent in the international arrangements created in the ten years from 1965 to 1975. The problem is that in the last ten years the nuclear environment has changed and these checks and balances have not changed with them. The remainder of this paper will therefore attempt to identify the key changes that have occurred, the gaps that they have created in the existing legally based regimes, the attempts that are now being made to close these gaps, and the possibilities of new checks and balances being created.

The old checks and balances

It is worth recalling that the text of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) was based upon one assumption and, many would argue, a balance between commitments in three distinct areas of nuclear activity. The assumption was that there would be no additional nuclear-weapon states beyond those that had exploded a nuclear device before 1 January 1967. The three areas of activity were the non-proliferation of nuclear weapons to those that did not possess them; nuclear disarmament by those that did; and the peaceful uses of nuclear energy. Unlike in the treaties dealing with chemical and biological weapons, two classes of states were created with differing obligations, and it was left to an existing nuclear energy organization, the International Atomic Energy Agency (IAEA), to decide what verification/safeguarding arrangements were to be put in place to deter states.
from diverting fissile materials from peaceful to military uses. Like the other regimes dealing with weapons of mass destruction (WMD), however, the underlying principles of the NPT were non-discrimination and universality.

In practice, since its entry into force in 1970 the NPT has been supported by a range of associated demand- and supply-side multilateral and unilateral measures. On the demand side, most of the prospective proliferators of the period lay under the nuclear deterrence ‘umbrellas’ provided by the United States or the Soviet Union, while those that did not had more limited security assurances provided through unilateral statements or United Nations Security Council resolutions. The quid pro quo was non-acquisition of national nuclear weapons, or at least keeping efforts to develop them opaque. The IAEA safeguards system, agreed in 1973, had limited inspection powers due to concerns that a more intrusive system would privilege the American nuclear industries and deter key target states from becoming parties to the NPT. Also, the first two regional agreements banning nuclear weapons from land areas had been negotiated to cover Latin America and the Caribbean and Antarctica, and were in the process of being implemented.

On the supply side, India’s test in 1974 highlighted the fact that military and peaceful atoms were generated by the same dual-use facilities and materials, while the oil supply crisis in 1973 created a rapidly lengthening order book in several countries for nuclear power reactors. The Nuclear Suppliers Group (NSG) was therefore constituted to deny the two key military enabling technologies, reprocessing and enrichment, to states outside (and inside?) the NPT. During the 1980s this was supplemented by similar controls on nuclear missile delivery systems through the Missile Technology Control Regime (MTCR).

Bilateral arms limitation agreements were negotiated between the United States and Soviet Union starting in 1972, and could be presented as moves to deliver on the nuclear disarmament commitments, while hope persisted that the Partial Test-Ban Treaty of 1963 would be superseded by a Comprehensive Test-Ban Treaty (CTBT). Above all, non-proliferation was driven by a mutual American-Soviet interest in preventing their allies, who then comprised most of the world’s nuclear capable states, from acquiring nuclear weapons. Both policed their blocs to ensure that this did not happen.

This was the patchwork of treaties, political agreements and understandings designed to prevent nuclear proliferation, usually referred to as the nuclear non-proliferation regime, that existed in 1990. It was based upon four streams of activity: unilateral constraints; bilateral agreements between the United States and the Soviet Union; multilateral non-proliferation and disarmament agreements; and multilateral guidelines on national legislation to deny transfers of relevant materials and technology to suspected proliferators. In a general sense, all of these activities continued to be pursued after 1990: it was only the balance between them that subsequently changed. But significant alterations have occurred within each set of activities, which have in themselves affected the other streams of activity and policies to prevent nuclear proliferation.

Although together they were termed a ‘regime’, in practice some of the elements were seen by many states to be in conflict with each other (e.g. the NPT and export controls). In practice, what had been created was a fragmented system of unilateral and multilateral international governance of nuclear energy, particularly given the IAEA’s much wider promotional role in this area. This system covered a broad range of nuclear-related activities, some of which appeared to have only a peripheral connection to the prevention of nuclear proliferation. The spread of this governance system could be witnessed in successive NPT review conferences, where issues such as transport of nuclear waste and safety of nuclear power stations appeared on the agenda. Indeed one might argue that this treaty review process, plus the IAEA general conferences, was by 1990 becoming the visible core of a system of global nuclear governance.
Past structures, old and new gaps and current changes

In the years since 1990, major changes have taken place in the international environment that spawned the NPT. This has produced a series of contrasting effects upon the dynamics of nuclear proliferation, as well as threat perceptions both globally and nationally. In particular, there has been the development of suicide terrorist threats from transnational non-state actors, and thus the need to factor this new type of WMD threat into the nuclear governance system. In practice this has meant its expansion into the management and accounting of radioactive sources and placing greater emphasis on physical security of nuclear materials and preventing nuclear smuggling. In addition, evidence has now emerged of changes in the procurement strategies of state proliferators. The Libyan case, for example, appears to have involved ‘freelancing’ nuclear engineers from Pakistan’s national nuclear programme providing the information required to enable parts for a clandestine uranium enrichment plant to be manufactured in a third country (Malaysia), and then trans-shipped with the aid of a network of middleman to Libya via at least one additional state (Dubai). One implication of these changes is that state and non-state actor proliferation routes are now starting to merge, with pressures growing for states to more effectively police all possible nuclear-related activities taking place within their borders.

A second major change has been geographical: the proliferation dynamics have ceased to be global and have become regional. Nuclear weapons have been withdrawn from surface ships, and nuclear-weapon-free zones (NWFZ) now cover much of the Southern Hemisphere. The reintegration of Europe in a peaceful manner and its transformation into an increasingly effective security community with few external military threats has reduced, but as yet not eliminated, the salience of nuclear weapons to the states within it. Elsewhere, however, the crumbling of Cold War security relationships and the lack of a ‘balancer’ to the United States following the normalization of its relations with the Russian Federation appear to have generated added regional insecurity and new proliferation pressures. The result is that proliferation concerns are now focused on discrete groups of states in the Middle East, East Asia and South Asia. Evidence for this can be found in the prolonged stand-off over WMD disarmament in Iraq, the North Korean threats of withdrawal from the NPT, and the nuclear tests in India and Pakistan in 1998—which moved them from their globally convenient recessed position to declared nuclear-weapon status.

A third major change concerns attitudes towards the use of nuclear weapons. On the one hand, changes in delivery system technology have increased the accuracy and lethality of such weapons, and appeared to make nuclear weapons unnecessary for performing many of the war-fighting tasks allocated to them previously. At the same time this has led some states with no access to advanced conventional weapons to view nuclear weapons as substitutes for them. Indeed the Russian Federation argued at the 2003 session of the Preparatory Committee for the 2005 NPT Review Conference that any negotiation on reducing stocks of non-strategic nuclear weapons should be linked to negotiations on constraints on conventional capabilities—a mirror image of the NATO position prior to 1990.

One logical consequence of the end of the American-Soviet confrontation is that nuclear weapon use in 2004 is likely to be non-cataclysmic, in contrast to the case in 1964, 1974 or 1984. Indian, Pakistani and North Korean capabilities are not such that their use will result in the type of catastrophic global environmental and human consequences that were discussed in the 1960s and 1970s in the context of an East-West conflict. At the same time, a nuclear war between them is highly unlikely to escalate into nuclear intervention by other states. Moreover, the response of the other established nuclear-weapon states (NWS) to use of a nuclear weapon in a manner which produces few civilian
casualties would be one of extreme shock, but concerns would focus more on the precedent involved and its political consequences, and above all the threat it would pose to the normative WMD basis for the existing nuclear regime, rather than its direct human or environmental consequences.

Linked to these changes has been the evolution of the debate over nuclear disarmament since 1990. It now seems clear that much of the popular and interstate pressure for nuclear disarmament prior to 1990 was a direct product of perceptions that the existing world was in danger of being destroyed by the actions of a very small number of states and their leaders. The simple and obvious way of preventing this was to remove the weapons from them. This in turn meshed with the ‘balance’ perceived by many states within the NPT between non-proliferation and nuclear disarmament, namely that the norm underlying both non-proliferation and disarmament was the elimination of nuclear weapons. The end of the Cold War led to a process of significant reductions in the arsenals of the majority of the legally recognized NWS. Allied to this, however, was a realization that the physical dismantling of those weapons and the ‘denaturing’ of the nuclear materials within them was going to take years, if not decades, to achieve.

One consequence of these contextual changes is that nuclear disarmament no longer appears to be a priority objective of many states within the Non-Aligned Movement (NAM). For them, their major security threats are elsewhere, such as lack of economic development, the globalization of commerce, the collapse of effective state structures, internal war and starvation, and—in the case of some island states—global warming. One consequence of this is a heightened sensitivity to issues surrounding the peaceful uses of nuclear energy, and in relative terms a lower concern with nuclear weapons. The result of this can be seen at the regional level in the difficulty in collecting enough ratifications to bring the Treaty of Pelindaba, and thus the NWFZ in Africa, into force. On a global level, the driving force for nuclear disarmament is now the New Agenda Coalition (NAC) and a number of western states, rather than the NAM. In addition, the NAM is now confronted by a situation where two of its number are self-declared nuclear-weapon states; where its name and rationale appear obsolete, as it is no longer clear what it is aligned against; and its constituent regional groups have differing interests. In short, it has problems with its identity and cohesion.

The paradox has been that as the recognized NWS appear to have moved towards a political situation where nuclear weapons are less significant in their political relationships, they should have been more open to arguments about the desirability of disarmament, especially given the priority threats from global terrorist movements that now confront them. In practice, however, pressure for disarmament appears to be less intense, both internationally and domestically, than in the period from 1955 to 1990. Disarmament is now a long-term, back-burner issue to be conducted in an incremental fashion. One explanation for this is that it was not disarmament that solved the Cold War insecurity problem as well as the Argentinean, Brazilian and South African proliferation issues, but changed political relationships. Nuclear disarmament has thus been slowly moving from being a solution to the consequences of political conflict to being a consequence of the solution to such conflict, and thus less significant and urgent. The key change has been in perceptions of the motivations of states in acquiring these weapons. To use 1970s language, problem countries have ceased to be problem countries and, in the process, problem technologies have become of reduced, if any, concern.

A fourth major change has been that while membership of the NPT has moved numerically closer toward universality, the possibilities of achieving this desired end-state appeared to have receded, and to have brought with it a new set of problems. Given that India and Pakistan (and North Korea?) are declared nuclear-weapon states, and Israel a state which most analysts assume is an undeclared one, this raises the questions of where the NPT and regime can go from here. There is no expectation
that India, Israel and Pakistan are going to disarm unless their perceived security threats dissolve, and their disarmament is linked to that of the five recognized NWS. At the same time, one key policy issue is whether they can be persuaded to act in the non-proliferation policy area as though they were recognized nuclear-weapon states, in the way that France chose to do from 1974 onwards. Another is whether the NPT and the regime can operate indefinitely on the basis of a legal agreement that is patently at odds with the situation on the ground (i.e. that there are no additional nuclear-weapon states beyond the NPT five, and those outside can only enter the treaty as non-nuclear-weapon states).

A further difficulty that became more transparent as the NPT moved closer to universality was that proliferation problems were likely to arise within the NPT membership, as well as outside of it. This was highlighted in 1991 with the release of information on the nuclear-weapon programme of Iraq, an NPT member of long standing that had a safeguards agreement with the IAEA. Although the possibility of renegade states had been apparent since the early 1980s, and was highlighted by the Israeli raid on Iraq’s Tamuz reactor in 1981, the Iraq case energized the international community to the need to enhance IAEA safeguards. In parallel, the possibility emerged that the next proliferator was almost certainly going to be from within the NPT, rather than outside of it. Indeed when Cuba acceded to the NPT in late 2002, there were no more potential proliferators outside of the NPT.

At this stage, a fifth series of contextual changes and gaps in the regime became more apparent as the issues of compliance and non-compliance with the NPT and IAEA safeguards agreements moved to centre stage. The Iraq case demonstrated how limited were the powers given to the IAEA safeguards organization when its work on providing assurances to NPT parties started in 1974. They were not to be significantly enhanced until after 1991, when a series of decisions by the IAEA Board of Governors extended those powers. One consequence was that the safeguarding mandate expanded from giving early warning of diversion to detecting clandestine activities, aided by additional legal powers provided by a 1997 Additional Protocol to the standard bilateral agreements on the implementation of safeguards between the IAEA and states parties. The recent activities of the IAEA in Iran offer some indication of what is now possible with these additional powers, but there remain areas where the role of the agency is still opaque, such as whether it should be concerned with weaponization as well as the nuclear fuel cycle, and whether and how its safeguards might be strengthened on key nuclear dual-use facilities, such as those for enrichment and reprocessing.

Prior to Iraq, there had been no case of alleged non-compliance with an IAEA safeguards agreement being referred by the IAEA Board of Governors to the UN Security Council for action. When this happened in 1991 there was unanimity on the Security Council on the need for action, but in the specific context of a war to return Kuwait to its independent status and to disarm Iraq of its WMD. However, when the Board of Governors referred the case of North Korea’s alleged non-compliance with its safeguards agreement to the Security Council, and North Korea then gave notice of its decision to withdraw from the NPT in March 1993, there were disagreements within the Security Council on how to act. Eventually it was left to the United States to negotiate a Framework Agreement with North Korea, which some saw as rewarding proliferation. This unsatisfactory situation of the Security Council being unable to act was compounded from the mid-1990s onwards by the split over how to coerce or persuade Iraq to complete its WMD disarmament and set up a disarmament monitoring process. Subsequently, similar disagreements occurred over UNSCOM and Iraq in 2002–2003, as well as the Security Council’s response to North Korea’s NPT withdrawal claim in early 2003 (though in this case a regional approach may have been a preferable option).

Experience since 1990 suggests that what constitutes non-compliance with an IAEA safeguards agreement usually rests on very specific technical analysis, but there still remains the judgmental issue of whether the situation is one of an accidental breach or minor technical one, or is part of a national proliferation strategy. In the case of the NPT, the issue is complicated by the existence of its balance
between three sets of commitments, and the threat that any attempt to engage in discussion of proliferation will also generate non-compliance charges against the recognized NWS, not to mention export control arrangements in the peaceful uses context. Thus although proposals have been made for its parties to create non-compliance committees or similar executive bodies, it is highly unlikely that the parties would be able to agree on limiting their scope to the non-proliferation area. So even if a proliferator were to be caught red-handed by the IAEA, there would be no guarantee that either the Security Council or any newly created NPT non-compliance committee would agree on the need to act or the action to be taken. This in itself considerably reduces the deterrent effect sought through the existence of IAEA safeguards in their upgraded form.

One last gap truly returns the non-proliferation debate to its beginnings: the assumption that it was possible to distinguish between military and peaceful nuclear activities. Two technical distinctions are possible: that of the isotopic composition of the nuclear material involved in both, and that based upon commercial considerations of the economies of scale involved in large production plants. Specifically, uranium enriched in the isotope U235 above 20% and plutonium containing a high percentage of Pu238 are deemed to be weapon-grade material, though in practice all reactor plutonium is normally regarded as falling into this category. Politically, the assumption is that as all non-nuclear-weapon states in the NPT have committed themselves to use materials for peaceful purposes, to question their activities in this area is implicitly to question their trustworthiness.

The realization that the structures of the NPT and of the IAEA safeguards arrangements meant that it was a sovereign decision of individual states what nuclear facilities they built and operated was the background to the creation of the NSG following the Indian test in 1974. One of its underlying aims was to block two pathways to proliferation that existed within these NPT/IAEA arrangements and one outside of it. The internal pathways were diversion of materials from existing ‘legitimate facilities’ or giving the required three months notice of withdrawal from the NPT (and IAEA safeguards arrangements), and then operating existing facilities to manufacture ‘weapon-grade’ nuclear materials. The path for those outside of them was to acquire by transfer ‘civil’ facilities, and then to use such unsafeguarded plants to manufacture weapon materials. The NSG effectively closed these gaps through a tacit policy of technology denial. Neither uranium enrichment plants nor plants to reprocess used reactor fuel and separate the plutonium contained within them were to be transferred to non-technology holders. To back this up, the United States then unilaterally started a campaign to remove weapon-grade uranium from all research reactors, starting with American-supplied ones, thus plugging another way of accessing weapon-grade material. Other holes effectively plugged themselves. It was accepted that the commercial value of ‘peaceful’ explosions was negligible and the environmental problems huge, and that neither nuclear ship or submarine reactors, nor mobile barge-mounted nuclear power plants, were attractive to non-nuclear-weapon states. In 2002, however, the Iranian enrichment programme appeared to demonstrate that it had been able to circumvent existing denial policies both by indigenous activities and acquiring technology from states not bound by non-transfer commitments.

This survey of the changes in the nuclear non-proliferation context since 1990 illustrates that new gaps in the regime have opened, and old ones that were thought to have been closed have now reappeared. The priorities generated by these changes suggest that we are in a new non-proliferation context, but at the same time the central structure of the policy apparatus needed to prevent further proliferation remains as relevant as ever. As the South Africans argued in 1995 at the NPT Review and Extension Conference, non-proliferation is like human rights. It cannot be one law for the rich and one for the poor, or one for the friends of the United States and one for its enemies. If it is to survive in the long run, it must be a set of norms and rules applicable to all.
At the same time, it is clear that the issues raised above go much wider than those related to a regime solely to prevent nuclear proliferation. It is essentially a multifaceted system for nuclear governance that we are dealing with, in which many different tools are being used to address specific issues, and only infrequently does one size fit all. And at the centre of this governance system, although many of those involved do not yet realize it, is the dual decision-making systems of the IAEA General Conference and the NPT Review Conference process plus, if it reforms itself, the UN Security Council.

**Key policy issues for the future**

The new policy environment generates an obvious question—does the change in the policy context demand different strategies to address proliferation? And if so, what might they be, and how far should they go? Do they require changed treaties and norms to underpin them? Do they require the identification of ways to amend the existing ones by consensual political agreements on new interpretations? And are the current policy disagreements centred upon the consensual norms that underpin the system, or the rules that follow from them and the way those rules are interpreted?

**CONVERSING IN A COMMON LANGUAGE**

The NTP contains commitments to the norms that underpin the main aspects of the international nuclear guidance and governance system. These are non-proliferation, disarmament, peaceful uses and universality/non-discrimination. Some of these are now being challenged, both in absolute and relative terms.

One challenge is that of a discriminatory, rather than non-discriminatory, approach to nuclear non-proliferation. The Soviet Union discovered the potential risks of such a policy in relation to China in the early 1960s. Yet in the new international environment, there appears to be a distinct tendency to focus non-proliferation policies upon what constitutes the current threats to the United States and its allies, and regard as secondary the need to sustain the structure that may provide long-term solutions to nuclear-weapon control and elimination.

A second challenge is that diplomatic policies that focus upon striking a bargain through ‘sticks and carrots’ with a potential or actual proliferator may have the longer-term effect of undermining the non-proliferation regime by appearing to demonstrate that proliferation pays: that it leads to states displaying proliferation traits being rewarded for their activities, while those who conform are not. The obvious example of this is North Korea, where the provision of two nuclear reactors and heavy fuel oil to ensure non-proliferation is now in danger of being built upon by the provision of security assurances to that state, but not to other NAM members, by the United States.

A third challenge is in the disarmament area. Since 1954, almost fifty years ago, the nominal objective of international nuclear constraint policies has been to manage existing nuclear weapons with a view to their elimination in the longer term, while preventing additional states acquiring them in the short term. The assumption behind these policies has been that further proliferation would make the eventual elimination of nuclear weapons more complex and difficult. The core question that is now emerging is whether elimination has now moved so far into the distance as to be no longer the practical aim of policy. Finally, it is only states that the United States regards as not being ‘of concern’ which are now regarded as safe to have a complete nuclear fuel cycle: others are regarded with suspicion, and it is denied to them.
This switch in relative emphasis from universal technology controls to state-based denial policies has been paralleled by changes in the language of non-proliferation policies. In a similar fashion to the way disarmament has disappeared into the background, so too has non-proliferation. With three, if not four additional nuclear-weapon states plus global terrorists armed with radiological—perhaps even nuclear—weapons, the relative emphasis has switched from long-term control to short-term defence. Counter-proliferation strategies involving enhanced intelligence of possible threats, defensive missiles, military pre-emption and planned responses to use of radiological and nuclear weapons are now to the fore. As options of conventional defence and pre-emption have yet to be used, it remains unclear to what extent this activity is intended to generate a deterrent effect, rather than be an active defence strategy. But what is clear is that there has been a switch from relying on legal agreements and diplomatic activities to more active strategies of denial, for which consensual language has yet to be invented. At the same time, there is concern that the new language used to articulate these policies is not just an exercise of manipulating the existing tools within the regime, but also changing its aims and objectives.

**COMPLIANCE AND GOVERNANCE**

The issue of compliance with the norms of the regime has taken centre stage in international debates at the same time as those norms appear in practice to be changing, and to some extent the rules related to them as well. One consequence of this is to make it more difficult for a potential proliferator to forecast in advance how to develop a nuclear-weapon programme, yet still stay within the rules of the regime, as both North Korea and Iran have discovered. But the major question now emerging is who is to judge the technically non-compliant and determine the action to be taken against them: the United States, the Security Council or some other, perhaps NPT-based body?

It is clear that one of the main stimulants to the active American policies of imposing compliance upon allegedly non-compliant states has been frustration at the inability of the international community, and more particularly the Security Council, to act in a timely and effective manner in this area. The answer probably does not lie in the NPT parties creating an executive body to handle such issues. While this would serve a similar function to the General Assembly in permitting all states to participate in discussions, it would not necessarily achieve effective action unless the permanent members of the Security Council were to choose to act through this body rather than the UN—an extremely unlikely occurrence. Rather, the solution would appear to lie in reforms of the Security Council mechanism to enable it to act.

What appears necessary is action in three areas. One is to create a mechanism within the UN organization to bring together the monitoring of all the WMD threats, as well as linking the IAEA and the Organisation for the Prohibition of Chemical Weapons more positively into it, and preserving the experience of UNMOVIC and the IAEA as inspection organizations for use in responding to such threats. The second is to create a Counter-Proliferation Committee linked to the Security Council (similar to the Counter-Terrorism Committee) to create a focus for continuous political monitoring and action on WMD threats. The third is for the Security Council to enhance its 1992 declaration on WMD proliferation by agreeing upon a set of predetermined responses to any attempt by a state with complete fuel-cycle facilities to withdraw from the NPT, and in particular to deter such moves by making it necessary for the withdrawing state to justify its action to the Security Council members, with agreed sanctions if they do not. Last, since any action of this type is liable to be in the context of a regional conflict or tensions, the Security Council should be prepared to treat the matter as one of conflict...
resolution as well as non-proliferation, as it is only by resolving the conflicts that the motivations for proliferation will be neutralized and its dynamics brought under control.

Although the Security Council is clearly the body to deal with acute and specific proliferation crises, there is also a need for a more general nuclear governance body to deal with long-term proliferation and non-proliferation issues, as well as the large number of adjacent and linked issues of nuclear energy governance. In the age of potential radiological and nuclear terrorism, nuclear safety and physical security issues, criminalization of terrorist WMD use, and doubts over the efficacy of distinctions between the civil and military atom, a more coordinated approach is needed towards these problems. The need is not so much a UN ‘Conference on Nuclear Dangers’, but one on the ‘International Governance of the Atom’. Such governance is now emerging in a disaggregated fashion: the time is ripe to try to consolidate it and connect it more tightly to national legislation—as it is at the national level that the majority of international controls on the atom will be implemented.

In the current environment, it is probable that such a governance body would have to progress through political rather than legal agreements, as well as through coalitions of the willing such as the Global Partnership and the Proliferation Security Initiative. In so doing it would expose itself to non-compliance problems, which may be more difficult to handle than if it was based on multilateral legal agreements. Yet at the same time it would offer a more adaptive approach than legally based solutions. And even treaties are open to changed interpretations, if states parties are prepared to use review mechanisms for this purpose.

FACING UP TO THE NEUTRALITY OF THE NUCLEAR FUEL CYCLE

The cases of North Korea and Iran have both demonstrated the need to revisit the set of issues surrounding the lack of agreed constraints on the acquisition of nuclear technologies and materials contained in the NPT and in IAEA safeguards agreements. They have also highlighted the lack of any international machinery, other than the as yet unimplemented CTBT, to directly address the process of converting weapon-usable nuclear material into a weapon. A series of initiatives, many originally proposed in the 1970s, have potential for addressing these issues.

On the supply side, one is to develop technical fixes to the proliferation problem in the shape of ‘proliferation-proof’ (or at least proliferation resistant) fuel cycles. The type of idea suggested in the 1970s was to treat fuel reprocessing and fuel fabrication as a single integrated operation, which could only take place behind the radioactive walls of a single plant, to eliminate the possibility of diversion to explosive use. However, this is likely to be a long-term rather than near-term option. Another is to create a series of regional fuel cycle centres or regional nuclear organizations on the EURATOM or Argentina-Brazil ABACC model, so that all regional states participate in the running and operation of sensitive fuel cycle facilities. One issue here is whether all states would have the unrestricted right to withdraw any weapons-usable material they owned from such multilateral facilities. A further idea being revived is to supply nuclear energy on a mobile ‘package’ basis, using power plants on barges which remain the property of, and are operated by, the supplying nuclear-weapon state and are moored offshore.

Another option is to negotiate agreements between the IAEA and user states, through which ownership of nuclear fuel would be transferred to the IAEA, who would in turn lease it for power and research use to all states on the basis of an internationally agreed set of rules, and then repatriate it back to the original owners or agreed reprocessors for disposal.
Other new initiatives on the supply side might be to give the IAEA positive authority to investigate allegations of nuclear weaponization—as opposed to illegitimate fuel-cycle—activities, and to bring India and Pakistan into the NSG. Whether NPT parties would be prepared to implement these initiatives, however, is debatable, as many would argue that the latter in particular would imply recognition of the nuclear-weapon status of these two states.

On the demand side, making withdrawal from the NPT more difficult has already been mentioned as a way of deterring states from going down the path to proliferation some believe Iran is attempting to pursue. Enhancing the ability of the Security Council to act against proliferators would have a similar effect. Providing enhanced security assurances to NPT non-nuclear-weapon states might also reduce demand for nuclear weapons. So too would monitoring and inspection mechanisms to address openly the issue of weaponization activities within states, however intrusive and technically difficult this might be. There is therefore no lack of possible new (or old) initiatives to plug the gaps and strengthen existing activities: what is lacking is a willingness and a mechanism to investigate them and negotiate on their implementation.

The discussion above leaves one with an obvious question: how might states be persuaded to innovate in this way, and more particularly how might they be persuaded not to develop full fuel cycles despite these being apparently legitimate under the NPT. The obvious answer to this is provided by the North Korean case, where the solution arose out of treating the issue in part as an energy supply issue, with the long-term solution being more ‘proliferation-proof’ nuclear power and the short-term one of provision of heavy fuel oil. Thus to negotiate on non-proliferation in association with energy supply may prove to be the solution to this global governance problem, and enable a new bargain to be struck between nuclear non-proliferation and the peaceful uses of energy.

Back to the future

The discussion above has attempted to demonstrate that as the Cold War environment has given way to one of a globalized world, the non-proliferation context has gone through major changes—some of which require positive responses in the shape of new international initiatives. Real challenges exist and innovative solutions are needed to deal with them. Many of the basic problems with the non-proliferation regime first identified in the early 1970s have now emerged thirty years later as active problems, and the solutions developed during that period, but not implemented, may now need to be reconsidered. Also, it is unclear whether the three-pillar political bargain inherent in the NPT text is operative in the current decade in the form it was envisaged in the 1960s.

At the same time, the focus of the non-proliferation debate appears to be moving in two directions: from non-proliferation to counter-proliferation and from non-proliferation to global governance of all nuclear energy activities. The former debate is partly one over the political impact of differing linguistic formulations, and partly about assumptions concerning the current and potential future possessors of nuclear weaponry. This debate has the ability to undermine one of the key foundations of the past non-proliferation regime—that of non-discrimination—by focusing attention on problem states rather than problem technologies, and by focusing on unilateral and limited group actions, rather than multilateral legal agreements. It has also exposed the frustration over the lack of effective mechanisms to take action against proliferators and a desire to remedy this by direct action.
The latter debate has been spurred on by the need to respond effectively to the new terrorist dangers generated by the attacks of 11 September 2001. It has created a need for a mechanism to encourage all states to impose effective internal and external controls on radiological sources, and arguably to criminalize nuclear material possession by terrorist non-state entities. But it has also connected with existing debates that have been taking place within both an NPT and IAEA context over nuclear transport, physical security and nuclear safety; the need to account effectively for all weapons-usable material generated by the Soviet Union and to prevent nuclear smuggling; and the development and national implementation of effective export controls. One result is that both the NPT and the IAEA appear through their meetings to be engaged in a process of global governance of nuclear energy, not just non-proliferation, which begs the question of whether the objective of non-proliferation is now best addressed by developing global governance methods and national guidelines for nuclear energy, rather than focusing on proliferation as a security problem. In short, are we now engaged in not only going back to the past to provide solutions to current problems, but also redefining the problem as part of a set of wider nuclear energy concerns, through which it may now be more effectively tackled?