

**2007 Hans Bethe Award
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TRANSCRIPT

Matt Bunn:

I'd like to thank the Federation for this very humbling honor. When I think of Hans Bethe and then I think of the previous recipients of this award, Philip Morrison and Steve Federer I really feel as though I'm walking in the footsteps of giants. And it's particularly humbling coming from an organization like the Federation of American Scientists that has played such a key role in reducing the dangers of nuclear weapons throughout the history of the nuclear age.

What I want to talk about today is the need, I think, for a new nuclear order to address the body blows that the nuclear nonproliferation regimes has suffered in recent years and prepare it to cope with the challenges to come from a globalizing world where technology will be more and more available to more and more countries and people, and where nuclear energy may well expand and spread around the world.

But first, I want to make the point that the global effort to stem the spread of nuclear weapons is in fact a lot more successful and, I would argue, more resilient than most people seem to think. People have the idea that with North Korea pulling out of the Non-Proliferation Treaty and making nuclear weapons and Iran coming right up to the edge and terrorists seeking nuclear weapons and the A.Q. Khan network spreading sensitive technologies all over the globe, people have the idea that virtually anybody who wants a nuclear weapon can get one. And that's just not the case.

If you look at the numbers, twenty years ago there were nine states with nuclear weapons. Today there are nine states with nuclear weapons. We've had no net increase in twenty years; North Korea added itself to the list, and South Africa dropped off. Not a very pleasant trade, I admit, but to have no net increase over a period that included the chaos that followed the collapse of the Soviet Union, Libya's secret nuclear weapons program, Iran's secret nuclear weapons program, Iraq's secret nuclear weapons program, the entire period of the AQ Khan Network, and, at the moment, seven years of an administration in Washington that's not been very committed to international treaties and bolstering the (nonproliferation) regime. It's, I think, a major public policy success. There are now in the world today more states that started nuclear weapons programs and decided to give them up than there are states with nuclear weapons. That means that our efforts to stem the spread of nuclear weapons succeed more often than they fail. And I think that we now have an opportunity if we work hard now to extend that record into the future.

The regime is now under enormous pressure, but the history also shows that the regime is quite resilient, and the reaction of the participants in this global effort to each

one of the past crises has not been to walk away from the regime but to try to strengthen it. And I hope that will be the reaction today. I'm going to try to lay out some things that we could do. If you look at the (19)74 Indian tests, the reaction, in part, was the creation of the Nuclear Suppliers Group. If you look at the massive Iraqi nuclear weapons program that hadn't been detected by IAEA safeguards in 1991, the reaction was the creation of the Additional Protocol, which enormously strengthened the IAEA's ability to look for the undeclared nuclear activities. The reaction to fears of nuclear terrorism has been an increasingly effective international effort to lock down nuclear stockpiles around the world, not as far as I would like to see it go yet, but increasingly effective over time. So it seems to me that the recent non-proliferation crises teach a number of pretty clear lessons about what we need to do to repair the regime and strengthen it for the future. I want to walk through just a few of these lessons.

First of all, and I think most importantly, engage the hard cases. The reality is today that the big nonproliferation issues are, let's face it, North Korea and Iran. If both of those go the wrong direction, the regime is in big trouble. If both of those go the right direction, even if we don't do any of the other things I talk about, the regime will be significantly better off. And we've seen in each of these cases the difference between what engaging can buy you and what isolating and sanctioning without any effort to engage buys you. In the case of North Korea in the Clinton years, we had a deeply flawed agreement which, nonetheless, froze North Korean plutonium production for 8 years, and kept that spent fuel from in those plutonium production reactors under international monitoring. We had the experience in this administration of a sanctions and speaking loudly approach with no engagement, and that led to the North Koreans pulling out of the NPT, reprocessing that plutonium, taking it Lord knows where, putting it into nuclear weapons, and setting off a nuclear bomb. And now we have a return to engagement and once again we have a freeze, and with, knock on wood, a disablement of the plutonium production facilities in North Korea. Similarly, in Iran, by direct engagement with the Iranians, the Europeans managed to get a freeze for a couple of years on Iran's enrichment activities, but since the beginning of 2006 Iran has gone from just a handful of centrifuges in place to some 3000 centrifuges in place while we've been refusing to talk unless they suspend. So, I think the conclusion is pretty clear: you've got to engage with the hard cases. Simply saying mean things about foreign countries and threatening to change their regimes doesn't buy you a whole lot. I'm actually very fond of Anthony Cortis's description of the Bush administration's approach to North Korea which he described as, "Speak stickly and carry a big soft." (laughter from audience)

Secondly, we've got to strengthen safeguards. Not only did we have the massive secret Iraqi nuclear weapons program for many years that went undetected, but in August of 2002 it was revealed that Iran had been carrying out a major nuclear program for 8 years in clear violation of its IAEA safeguards agreements without being detected by the IAEA, although frankly there are a number of things that the IAEA did know about that should have set off some alarm bells. We need an IAEA that is more attuned to the needs of today. It needs more budget, more personnel, more access to sites, more access to information, and it needs a reformed and more investigative safeguards culture within the agency. These are a lot of things that need doing, but they can be done, and some of

them are beginning already. It has already been, I think, a very significant shift in the culture at the IAEA on the access to information. It's remarkable the kinds of information the IAEA doesn't routinely get today. For example, if some state is shopping for technology to produce nuclear materials and various states deny exports to that state of, say, centrifuge-related technology, they're not required to tell the IAEA about those export denials. That's just silly. That's very important information for the IAEA to have. It's my understanding that when Germany stopped thousands of aluminum tubes headed to North Korea that the IAEA heard about it in the newspaper. That's just not the way that things ought to be.

Third, the AQ Khan network teaches us that we need to drastically beef up interdiction of black-market nuclear networks and everything else that we can do to stop black-market nuclear networks. Here we had a nuclear network that was operating in more than twenty countries for decades before we finally took it down. Now for a significant part of that period we knew a lot, or at least some, about what it was doing and were consciously choosing not to take it down in order to get more information in order to get closer to the root and take it out root and branch, but nonetheless it's clear based on that experience that we need to do a lot more in international police cooperation, intelligence cooperation, beefing up of export controls. Just a wide range of things that need to be done, and again some are beginning to be done. One interesting thing that many people are unaware of is a small unit at the IAEA that is now specifically charged with tracking black-market nuclear networks. And what they're doing... it turns out that very often companies that have these kinds of technologies get requests that don't even make it to the level where they decide to file an export application because it's so obviously not something that's going to be approved. And those things have traditionally just gone in the trashcan, so this group has gone to these various companies and said "you know, don't throw that in the trashcan; give it to us." so they're developing a much better idea of who it is that's still out there shopping and the various front companies that exist and so on. Don't believe the statement that the AQ Khan network is taken down or is no longer operating. There are chunks of that network that are still operating and other networks evolving.

Fourth, we need to toughen enforcement. After the first North Korean crisis, when it was clear that they had violated their safeguards agreement in the mid-1990's, the Security Council did a whole lot of nothing for years and years and years. It wasn't until the North Koreans provoked them by testing a nuclear bomb that they finally got around to imposing some sanctions, and they were relatively modest sanctions given the stakes. I think there's an enormous amount that we need to do to strengthen enforcement. It's tough because of the differing views of the countries on the Security Council and the difficulty of generating unity and political will on the Security Council, but one, I think, very useful proposal that Pierre Goldschmidt and others have made is the notion of passing a country-neutral resolution now that lays out a series of penalties that the Security Council would impose for countries that had violated their NPT commitments and their IAEA safeguards agreements, including forcing them to accept a much broader array of inspections even than those required by the Additional Protocol.

Fifth, we need to do more to limit the spread of enrichment and reprocessing technology. Now, this is a hard problem, and we have to be careful to do no harm in our efforts in this direction. Since President Bush's 2004 speech saying "we're going to stop the spread of enrichment and reprocessing technology" we've seen the greatest explosion of interest in enrichment in the nuclear age with a wide variety of countries suddenly saying, "Well if there's going to be a line drawn between the haves and the have-nots, I want to get myself onto the haves side of that line before it gets drawn." But I think that there is a lot that can be done. These efforts toward international fuel bans have some value, although on the front end, since unless you're a special case like Iran and India you already have reliable access to fuel through the commercial market anyway I think that fuel banks are perhaps... they're important, but they're not going to be as much of a panacea than they are sometimes made to seem. I think, at the same time, they can be the institutional framework that we can then use to move toward the back end. If we can some day reach a state where we can promise states that we will take away their spent fuel, that will be an enormous incentive for a state to rely on international fuel supply rather than building their own facilities, because then they could avoid having a repository of their own.

Sixth, my main subject, we need to strengthen security for nuclear stockpiles around the world. That's the lesson of the persistent efforts of al-Qaeda to get nuclear weapons and Aum Shin Rikyo before them. And there's a lot that's been done, but there's an enormous amount that remains still to be done. Just a couple of weeks ago, four gunmen penetrated the security at a South African nuclear site at Pelindaba. They managed to overcome the detection system at the perimeter at the site, possibly with inside information from the site. They were on site for 45 minutes without being engaged by the security forces at the site. In fact no alarm went off when they penetrated the security perimeter. The alarm only went off after they had shot an officer in the control room at the site and that officer then rang the alarm. Fortunately he, while shot in the chest, was still able to ring the alarm. So there's a lot to do and this is not just a Russia problem, this is a global problem. And I think that the South Africa situation and the Pakistan situation that is now unfolding make that very clear.

Seventh and perhaps most important, we need to do more to reduce the demand for nuclear weapons. Everything else I'm talking about in a sense only delays only makes it more difficult, more expensive. A state that was really determined to get nuclear weapons over time would find ways over these various other barriers, so we have to reduce demand. And that has been surprisingly successful over the years. As I said there are now more states that have started nuclear weapons programs and decided to give them up than there states with nuclear weapons. Unfortunately I think that the doctrine that we reserve the right to launch preventative wars has a tendency to increase rather than decrease demand for nuclear weapons. And I think our threats of regime change against both Iran and North Korea have strengthened the arguments of those in those capitals arguing for nuclear weapons. I also think that the India deal, whatever its other merits or flaws, changes the incentives some, because it makes clear, or at least it strengthens the arguments of those in various capitals who say "oh well, they'll be upset if we go for nuclear weapons for a little while, but then after that they'll come crawling

back and be friends with us." I'm told by Iranian colleagues that that is precisely the argument being made in Tehran. "Look what happened when India tested in 1998. Everybody sanctioned them for 6 months and then pretty soon the Americans were crawling back. And look now, they're negotiating a nuclear cooperation agreement with them."

Finally, almost all of these steps involve more constraints and inconveniences for the non-nuclear weapons states. If we want to have any hope of getting the votes that we need in various international fora to get tougher export controls, stronger safeguards, better enforcement, we need to be seen to be holding up our end of the bargain. In the 2000 NPT review, as most of you know, we agreed to 13 steps toward nuclear disarmament. As far as I can determine looking over those 13 steps, there's only one of them that remains supported by the Bush administration. And in the 2005 review, the Bush administration absolutely refused to even discuss those 13 steps. In the 2005 millennium summit they refused to even let the word disarmament be used despite its appearance in our legally binding obligation in Article 6 of the NPT. Fortunately, there's a long list of steps that would strengthen our security on their own that would also contribute to changing the political dynamic in the non-proliferation regime and building the kind of political support we're going to need for achieving these kinds of objectives and strengthening the regime, ranging from much deeper nuclear reductions, more progress toward international verification, ratification of the Comprehensive Test Ban, and more. I think the initiative launched by Secretaries Kissinger, Schultz, Perry, and Senator Nunn is particularly promising because it brings heavy-hitters from both sides of the national security debate behind a sort of comprehensive agenda toward nuclear reductions, non-proliferation, and, ultimately, the prohibition of nuclear weapons. So all of this means, in my mind, that we really do need a new nuclear order. A nuclear order in which the number of nuclear weapons is greatly reduced and declining, the role of nuclear weapons is limited only to deterring nuclear attacks by others, the nuclear fuse is greatly lengthened by putting all of our nuclear weapons in a state where it would take many hours or perhaps days to launch them, and ultimately building a global norm that it is simply too dangerous to have nuclear weapons in any other state of readiness. A norm with a much greater intensity of international inspection, a much greater breadth of international control over nuclear activities, where security of global stockpiles are greatly increased, where the contribution from civilian nuclear energy is increased, but along with that where international control of that enterprise is increased and restraints on the spread of sensitive technologies are greatly strengthened. If we take effective action now in building towards a new nuclear order, I think that there is at least a hope that twenty years from now that we will still have only 9 states with nuclear weapons, and maybe fewer, and that we can put ourselves on a path to greatly reduce nuclear dangers and ultimately to the prohibition of nuclear weapons. It's a demanding agenda, but I really think that the risks to our security posed by the existing nuclear regime demand no less. So, with that, I will stop.