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ON NUCLEAR ARMS REDUCTION AND NON-PROLIFERATION

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P R O C E E D I N G S

MS. HILL: I'm Fiona Hill, the Director of the Center for the U.S. and Europe here at the Brookings Institution, and I'm only here today in the capacity of moderator because all of the attention today is very much focused on my three colleagues sitting beside me here.

Of course, all of you know the President of Brookings, Strobe Talbott, and next to him we have Ambassador Steven Pifer, former Ambassador to Ukraine and Senior Fellow at Brookings. And along with Strobe, Steve is one of the initiators of the new Brookings Arms Control Initiative.

Now, looking out into the audience, I see some of you were here earlier for another event that we had in this series, which was a conversation between Strobe and Georgiy Mamedov, the Russian Ambassador to Canada, who was one of Russia's -- before that, the Soviet Union's -- chief arms control negotiators. So this is the second in a series.

I also have here on my right, Senior Fellow Cliff Gaddy who has been working along with Strobe and Steve on a project that we're launching indeed today. I hope all of you found on your way in the first in our new series of arms control papers, and this is really the purpose of our presentation today.

As all of you know, arms control, strategic arms control has been playing an extremely important role in the U.S. administration's reset policy toward Russia. I'm sure most of you also know that we're still waiting for the post-START agreement to be concluded, and I'm sure a lot of you will have questions that we may or may not be able to answer on that topic today. But clearly nuclear arms reduction, which was the theme of our last presentation that I already referenced, is one of the areas where the U.S. and Russia have traditionally had a great deal of fruitful cooperation and one area that we can continue to look for cooperation in the future.

Along with strengthening the non-proliferation regime, we have the Nuclear Non-Proliferation Treaty coming up for renewal very soon.

And also, one of the other subjects of discussion has been looking into the possibilities of Russia and the United States working together on proliferation resistant civil nuclear energy. This is one of the issues that was being discussed in this series.

Now the work that we're talking about today has come out of a series of meetings back in December between Strobe Talbott, former Secretary of State Madeleine Albright and former Russian Foreign Minister and National Security Council Chair Igor Ivanov. They worked together in a group with some U.S. and also Russian experts from Russia's IMEMO Institute, together, to produce a series of

recommendations that are going to be presented both to the U.S. and Russian governments, though they are remaining private for now.

But, as a result also of these meetings, which Cliff and others took part in, the attention was also to produce this paper to distribute publically, to stimulate debate, and we hope that many of you will have a chance to have a look at this and then, if you have questions, certainly to raise these.

I'd like to thank, before I turn over to my colleagues, a number of institutions for helping us in making this research possible, the support for the meetings that we held in December and from the Norwegian Foreign Ministry, and we also have a great deal of support from the MacArthur Foundation and the Ploughshares Fund for the Arms Control Initiative that's been launched. So I'd like to thank those groups specifically.

I'm going to turn first of all over to Strobe Talbott to offer some comments, then to Steve Pifer and then finally to Cliff Gaddy. Cliff, unfortunately, has the unenviable position of also standing in for Joe Cirincione from the Ploughshares Fund who unfortunately couldn't be with us today and sends his regrets. So Cliff has to do double duty, which is why we're letting him go last.

So we'll turn over to my colleagues, and then the floor will be open to you for questions and for discussion.

Strobe.

MR. TALBOTT: Thanks, Fiona, and I know that the meaty part of the conversation will be the part of the conversation that all of you are involved in. So I'll be particularly brief in order to pass things on to Steve who will speak a bit about some of the specific issues involved in START and some of the other arms control issues.

Just a couple of thoughts about context, both current context and prospective context, as we head into what is going to be an extraordinarily busy, important and, I might add, suspenseful year on the arms control/non-proliferation front. And also, because of the intimate connection between the arms control process and U.S.-Russian relations, I suspect that Fiona will allow herself to be lured out of the role just as moderator because she knows quite a bit about the context in general.

As Fiona has already indicated, there is a calendar of events, some of which are set and can't be moved, others of which may or may not occur, depending on what the flow of events is. But during the course of the year, we could have as many as the following benchmarks or red-letter events to both look forward to and, in some cases, to be somewhat apprehensive about.

In parallel, of course, with the bilateral and multilateral negotiations that are underway, we also have a process within our own government called the Nuclear Posture Review which is going to have a lot to do with our unilateral decisions with regard to what we need in the way of nuclear

weaponry, looking into the future in order to ensure the national defense, and that obviously will have implications for all of the -- or many of the -- issues that are under negotiation with the Russians and with others.

And then, of course, we have the Washington Nuclear Summit coming up, which is something that President Obama will be hosting.

And then, we have the review of the Non-Proliferation Treaty and the possibility of the administration and allies in the Senate resubmitting the Comprehensive Test Ban Treaty which the Senate refused to ratify, what I guess is now 11 years ago, and is likely to be under consideration again and will be very controversial.

But, of course, much of this depends on how smoothly the ratification of the new START treaty goes when it comes before the Senate. And there are, as Steve will lay out to you, a number of exceedingly technical, but also very important, issues having to do not just with the capability of the systems that are under the purview of the new treaty, but also with the two sides' ability to reliably verify the compliance of the other side with the terms of the treaty. Steve, I suspect, will allude to some of those that are likely to be discussed.

What I suspect you will also hear from him -- not to overanticipate -- is that some issues which are quite tricky are being put off into the future, and the sort of post post-START agenda is one of the things that Steve and Cliff and Joe Cirincione and others of us have been working on as we

anticipate the ratification of the treaty that is going to be coming before the Senate, before too long.

Now, since you're all Washingtonians, or most of you, it will not shock you to hear that technical and military issues are not the only issues in play here. All of this will take place in a highly charged political atmosphere -- an atmosphere that is more highly charged, I would say, post-Massachusetts, if I can put it that way.

You might say, what could Massachusetts possibly have to do with the arms control agenda? I think actually quite a bit insofar as there is something of a partisan square-off on a lot of the issues on President Obama's agenda, and that is to a considerable extent indeed. The defensiveness of the administration with regard to, say, healthcare is likely to tide over into additional difficulty with regard to other pieces of legislation including the ratification of treaties that are likely to come before the Senate.

So, if there is on the part of the President's opponents in the Congress a sense that they can push harder against some of the President's initiatives on, say, healthcare, which is unquestionably the case, that is likely to complicate, or at least maybe turn up the temperature a little bit in the debate over the new START treaty.

In any event, going back to the issue of verification, I'm pretty sure that we will hear people -- and this could be on both sides of the aisle, by

the way -- asking quite skeptical questions about verifiability, hearkening back to President Reagan's famous phrase, trust but verify. Do we have the provisions in the treaty to ensure Russian compliance on all of the key features?

Going back to the issue of the Comprehensive Test Ban Treaty, I think that is a previously hoped for item on the agenda for 2010 that may be reconsidered if in fact the next couple of months are as bruising politically on the legislative front as they are likely to be. They would have been so even with a different result in Massachusetts, but they're likely to be more so now. So I think that the nexus between U.S. domestic politics, particularly in a midterm election year, and the diplomacy necessary to preserve the nuclear peace is very tight indeed.

The last thing I'll say, and I suspect all of my colleagues will want to comment on this particularly in response to your comments and questions, is the connection between what happens to the START treaty and the U.S.-Russian relationship.

When Vice President Biden famously spoke in Munich just about a year ago, about hitting the reset button, there were a couple of pieces of machinery that were supposed to start turning again as a result of hitting the reset button. One of those had to do with cooperation between the United States and Russia on the issue of Iran which is, of course, a non-proliferation issue, but another was returning to the business of bilateral

U.S.-Russian arms control in a way that sort of brought it out of its dormancy of the last 10 years or so. And that has happened. It is out of its dormancy. We are back in the business of U.S.-Russian bilateral arms control.

But lots of questions and lots of complications remain, and I suspect that we'll end up in this session this afternoon talking as much about those as what's actually in the treaty.

MS. HILL: Steve?

AMB. PIFER: I would just add that in terms of the context, when we wrote this paper, we wanted to look really at two things: One, how could Washington and Moscow work together in a way that would be good for nuclear reductions, non-proliferation, and would advance U.S. security? But also when we looked at arms control and non-proliferation, we saw a number of issues where U.S. and Russian positions might coincide, where the United States and Russia could work together in a way that would be good not only for global security but also could further strength in relations between the two countries.

Now, as we say in the paper, we do assume that within a fairly short period in 2010 the post-START treaty will be concluded, and I think the visit of and General Jones last week were designed to finalize some last questions. Both sides seem to be talking optimistically, and it appears that

the main amendments are agreed. They really are down to the technical verification issues such as telemetry.

But we took that as a given in this paper and then went back to the statement made by Presidents Obama and Medvedev last April in London, where they said they would pursue nuclear arms reductions as a step-by-step process, and if the post-START treaty is the first step, what would be the next step.

And if you look at reductions beyond the roughly 1,500 to 1,600 deployed warhead limit that will be in this post-START treaty, you begin to get into questions that you haven't had to address before. As you push down U.S.-Russian deployed strategic forces, at some point you're going to have to begin to talk about questions such as tactical nuclear weapons, non-deployed strategic warheads, missile defense and third-country systems. So we tried to offer some suggestions in here as to steps that Washington and Moscow might take even in the first part of 2010, that would begin to facilitate negotiation of those issues down the road.

Some of those ideas include, for example, with regards to deployed strategic offense arms, that when the treaty is signed they probably can't begin negotiations immediately, but the sides could begin to consult on what the next step would look like, and we suggest a target might be reductions to no more than 1,000 deployed strategic warheads.

And if Presidents Obama and Medvedev were to announce that in a joint statement at the time that they sign the post-START treaty, that would be a good signal, looking forward particularly to the Non-Proliferation Treaty Review Conference in May, that this in fact is an ongoing process, that Washington and Moscow are committed to reducing nuclear forces as a process not just as a one-off shot in this treaty.

With regards to tactical nuclear weapons, it does seem that the importance of tactical nuclear weapons will grow as the numbers of strategic forces decrease, and the Obama Administration has already said that it wants to get into tactical nuclear forces in the next round. Now that's going to be difficult for a couple of reasons. One is there's a big disparity between Russian tactical nuclear weapons and American tactical nuclear weapons in numerical terms, but also Russian military doctrine appears to be placing greater emphasis on the importance of tactical nuclear weapons. So that will complicate this discussion, but we did have two or three ideas that might begin to pave the way.

One is that the sides could say as a matter of principle that the next round of negotiations will address tactical nuclear forces on both sides.

A second, since -- although the United States will have final say -- American nuclear weapons deployed in Europe are deployed there under NATO arrangements, it would make sense for Washington to begin talking fairly quickly with NATO about not only the requirements for nuclear

deterrence within Europe but about how American nuclear weapons deployed in Europe might be involved in a future arms negotiation.

And the third idea we would suggest is that the United States and Russia might now tell each other how many tactical nuclear weapons they have in their arsenal. Now those numbers could not be verified. The techniques don't yet exist. But it would begin to set the basis for a database. The sides could begin to use their national technical means to try to check those numbers, and it would begin to set in motion a process that could produce a database at a point when there is an actual negotiation on tactical weapons.

Another set of issues that they're going to have to talk about is non-deployed strategic warheads, and this is likely going to be an issue of greater interest to the Russians because in the context of the treaty now being negotiated the United States will implement most of its reductions not by limiting missiles and bombers but by taking warheads off of missiles and bombers, and there's a Russian concern that at some point those warheads could be put back on.

And I suspect that in the next round the Russians are going to begin to suggest limits on non-deployed strategic warheads. That actually may create a good dynamic because there will be an American advantage there which might be traded off for the Russian advantage in tactical nuclear warheads, but we suggest the sides begin to think about that now.

A couple things they might do: One would be to again declare to each other now how many non-deployed strategic warheads they have in their inventory -- again, a number which couldn't be verified, but they begin to facilitate a process that would lead to a database in a future negotiation.

And it would also make sense for the sides to begin talking now and consulting about how you would actually verify reductions in warheads and limits on residual warheads. That's going to be very hard to do, much more difficult than the sorts of limits that you had to monitor in the Strategic Arms Reduction Treaty. There was a dialogue between Washington and Moscow back in the 1990s on this that was looking at how you would make nuclear weapons reductions transparent and irreversible, and so they can go back and perhaps revive those, but that is going to be a very important technical question if they actually get into a subsequent negotiation on reducing and limiting non-deployed strategic warheads

Missile defense is another question. My sense is that for purposes of the post-START treaty now under negotiation, that treaty is going to note the interrelationship between offense and defense, but it likely will not have specific limits on missile defense. But it does make sense for the United States and Russia to begin a discussion now on what kinds of

capabilities their future missile defenses might have to inform that future discussion on further reductions in strategic forces.

There's also been a channel of cooperation between NATO and Russia on missile defense. It would seem that it would be in the interest of both sides to try to activate that channel and begin to promote cooperation between the alliance and Russia, both of whom face a threat coming in the form of Iranian ballistic missiles.

And finally, on the question of third-country nuclear forces, our assumption was that if you're talking about the next stage, reducing U.S. and Russian deployed strategic warheads to about a thousand, you probably don't have to get into British, French and Chinese forces at that point, but below that you likely are going to have to bring them into the arms control process in some way.

And what we suggested in this paper was it probably makes sense for Washington and Moscow each to be separately consulting with the British, the Chinese and the French on their future strategic nuclear force plans because that will inform future U.S. and Russian reductions.

Turning briefly to the area of non-proliferation, another area where the United States and Russia might work together, we have a non-proliferation regime that badly needs strengthening and bolstering, and we identified several areas in the paper that we thought again Moscow and Washington might be able to work together.

One would be steps that they could take to bolster the existing regime, for example, increased funding for the International Atomic Energy Agency which is the main international watchdog for monitoring non-proliferation regimes.

Second, Washington and Moscow might consult on how you could take U.N. Security Council resolutions, such as 1540 and 1887, and ensure that they are implemented in the most effective way. Those resolutions establish binding obligations on U.N. members, both to counter weapons of mass destruction proliferation, but also steps to strengthen the non-proliferation treaty regime.

Likewise, Security Council Resolution 1887 probably is a good basis to look for the Non-Proliferation Treaty Review Conference as to specific steps that could be taken to strengthen that regime -- steps such as making adherence to the NPT universal, coming up with steps that would deter states from leaving the non-proliferation treaty regime, and taking steps that would, for example, make adherence to the additional protocols of the NPT more universal. That would give the IAEA greater inspection rights.

Another area that we thought the United States and Russia could lead on would be ending nuclear testing, and this is an area where 180 countries have signed the Comprehensive Test Ban Treaty, more than

150 have ratified, but there would seem to be an interest in the United States and Russia working together to bring the CTBT into effect.

Several steps that would make sense: The United States and Russia might reaffirm that the Comprehensive Test Ban Treaty bans all tests, even low yield and hydro-nuclear tests. That's, in fact, been one of the criticisms here in the United States about the CTBT is that it doesn't ban all tests. The Russians have said that it does. A reaffirmation of that would be useful for the ratification process here in Washington.

It would be useful for the United State and Russia to agree to confidence-building measures that would increase transparency into activities that still continue at Nevada and at the Novaya Zemlya test sites.

And finally, it would be important for the United States to move to ratify the Comprehensive Test Ban Treaty. As Strobe has mentioned, that's likely to be a very political question and getting the politics right is going to be very important.

It's also going to be important for the administration, when it asks the Senate to ratify, to make sure that it has good answers to two questions -- two questions that I think the answers were not so strong in 1999 and that was one of the reasons why the CTBT then was not ratified. The first question is: Can the United States have confidence that you can detect any significant nuclear test under the CTBT regime? And

second, can the United States have confidence in the reliability of its own nuclear weapons, absent nuclear testing?

My own sense is that over the last 10 years much better answers to those two questions have been developed, and they're going to have to be packaged in this ratification debate, so there are technical answers when the administration decides to move forward.

Then finally, once that's done, then I think Washington and Moscow will be in a position to urge others to ratify the treaty. In fact, the Indian prime minister has said that if the United States were to ratify, that would significantly increase the incentive and the pressure on India to take a ratification step on its own.

So those are areas where we think Washington and Moscow might work together in ways that are good not only for nuclear arms reductions but also for the non-proliferation regime.

MS. HILL: Thanks so much, Steve.

Cliff?

MR. GADDY: Thank you.

Let me start with a disclaimer that I am not an arms control expert. I am involved in this project primarily because my background is in Russia, in the Russian economy and specifically in energy issues relating to Russia, including civil nuclear power.

Having said that, let me perhaps then as an economist use my comparative advantage to talk about something I do know something about and make the point that I want to argue why those who are interested in civil nuclear power, nuclear energy, for various reasons really do need to think about non-proliferation. So this is a bit of a personal point.

Looking at it from the energy side, the civilian nuclear power from the energy side, I think that you always, those of us who come there, thought of this whole issue as two boxes. One box represents opportunities, and then there's this other box of responsibilities. It's pretty boring and unpleasant. It's the thing that maybe most of you are involved in -- non-proliferation.

Opportunities, that of course is the kind of thing that's being discussed a lot now when we talk about nuclear energy, the so-called Nuclear Renaissance, basically for two reasons.

One, the increasing emphasis on energy security. With higher oil prices, it's an issue of cost. It's an issue of the general reliability of supply and perhaps of avoiding political leverage. As an economist, you'd say it all boils down to cost.

But we also have now the climate change argument, the attempt to try to create more sources of energy that are non-carbon based.

But in all of that, and these represent opportunities to solve those problems, I have a feeling -- and maybe I'm wrong -- that there has just been virtually no discussion about the responsibilities side of nuclear energy in the proliferation regime. What I want to argue is that the power industry and the supporters of nuclear power, even those who are wondering to what extent it can be a solution for especially the climate change issue, they really have to take the non-proliferation part of this seriously and not just assume that the proliferation experts, non-proliferation experts will take care of that part.

From the economic point of view, look at the dilemma. Imagine that nuclear energy was a source of energy that had no military application whatsoever; there's no way to use it militarily. The challenge for nuclear energy would be the same as we have for other so-called alternative energy sources -- solar, hydro, wind and so on. The challenge would be to make it affordable, competitively priced that is, safe and reliable.

That is we would build plants that would be cheap enough to build. They would be safe. The fuel itself would be cheap. It would be an adequate supply. Its supply would be reliable, including the transportation, and we would know how to dispose of the waste problem. These are big problems. I would argue they're a lot bigger than the other alternative sources of energy.

How would we then go about trying to solve those problems? Again, as an economist, you would say, well, you need to maximize the number of people involved in trying to solve the problems and do it competitively. The more countries working on these problems, the more scientists, the more engineers working on them, the better.

We would certainly encourage as many as possible private companies and private entrepreneurs to get involved. And, very basically, economic efficiency would dictate a maximum of openness and mobility, not just of capital, but also of labor, scientists, engineers, across national boundaries, mobility of ideas, technological transfer. These are all things we welcome in other areas of the economy.

However, of course, these are exactly the things that we cannot welcome -- we must prohibit in effect -- when it comes to this particular energy source. So, in other words, we cannot tackle these major problems in civil nuclear power in the economically most efficient way because we cannot afford to proliferate the knowledge, technology and materials that are essential to the civil nuclear power programs because they all represent risk of weapons proliferation. In essence, our goal is to keep energy production separate, as separate as possible, from potential weapons technology and materials.

Now, if this were not enough, if we were only interested in, if all countries were only interested in civil nuclear power for energy production,

for either energy security or climate change reasons, that would be one set of problems. But, unfortunately, the reality is even more complicated, as you well know.

The motives for this Nuclear Renaissance are not quite so innocuous. Many countries are interested in civil nuclear power as a hedge -- if not directly as a step towards a military nuclear power, at least as a hedge. That is the ability to have that knowledge in reserve, that technology and sometimes even materials in case they find it necessary for their own national security to engage in a military nuclear power program.

And clearly I think we're in a world post-Cold War, and maybe post post-Cold War, in which an increasing number of countries are in this realm of the hedgers, the gray zone. Nations that feel that they cannot rely any longer on other countries to guarantee their sovereignty, they're going to find ways to protect themselves, guarantee their own sovereignty, and nations that feel that the ultimate guarantee of that is nuclear weapons or the nuclear weapons deterrent or hedge in that respect. This is roughly the so-called G-20 type countries, the second tier countries -- those who want equal status, equal respect and again the ability to shape their own futures.

So this was the context, and this is really where I'm going to end. This is the context for our looking at the civil recommendations for U.S.-Russia cooperation on civil nuclear power.

They are a list of very detailed recommendations. In fact, I think sometimes that they are so specific and detailed that we may lose sight of what are the basic principles. So let me just conclude by mentioning what I can sum up as some basic principles for what we're recommending because I won't read or repeat what we write in the booklet that you all have access to.

First of all, I think it's just the basic idea that -- at least as I experience it -- in contrast to listening to my colleagues who are experts on arms control or non-proliferation, many of those recommendations seem to be we have thought about these issues very seriously. We've made a great deal of progress. The problem is simply to proceed in the same direction, implement what has already been worked out and do it seriously.

I think in the realm of providing civil nuclear power and avoiding the proliferation risk, we're in much more uncharted ground, and I think that's partly because the problem has simply not been dealt with as seriously as it needs to do, so a lot more perhaps. Maybe I'm being -- misrepresenting this, but I think my feeling is much more creativity and boldness needs to manifest itself in this area.

U.S. and Russia still need to take leadership in this area even though our relative positions with respect to the civil nuclear industry are not the same as in the weapons. It's not this overwhelming dominance by the United States and Russia anymore in the civil nuclear industry. Many more big players are involved, and in fact the industry is very multinational.

But nevertheless, in very important regards, the U.S. and Russia have unique responsibilities, not least of which, if the principle is to erect as high a barrier as possible between the weapons capability, the weapons potential on the one hand, and peaceful, civil nuclear energy on the other hand, the U.S. and Russia represent, unfortunately, huge negative examples as our massive weapons programs have historically, and even until this day, been so closely intertwined with our civil nuclear programs. So, if we're going to set an example and take the lead on this, we're going to have to try to deal with this in our own backyards first of all.

Secondly, I would say that our list of recommendations certainly combines and tries to couple and marry the opportunities and responsibilities, but again I would stress that the U.S. and Russia need to take the lead in recognizing that the responsibilities, that's the area in which much more work needs to be done. There are all kinds of great things we can do together in trying to promote civil nuclear energy. We

need to work and take our responsibilities much more seriously in preventing the proliferation risk.

And as a final point, I would just say that as a general principle, though our specific recommendations are only steps in the direction, the basic goal to which I think our recommendations are working is essentially a world in which there is the so-called one rule for all. This is a formulation I know George Berkovic uses, and I think it is absolutely right.

If we're going to deal, especially make a convincing argument for these second tier countries I referred to -- the G-20 type countries, the potential hedgers, the ones who are looking to acquire civil nuclear power as a possible hedge for a military program -- we will never have any magic bullet technological solution to this problem unless we can provide what in essence is a bit of a moral argument. That is we are not asking you to do anything we are not prepared to do ourselves. Until we get to that point, I think we're going to be talking a lot and coming up with a lot of cute solutions, but with ultimately very little chance of success.

And ultimately, I would argue that this is going to be a long drawn-out process and that the future of civilian nuclear power and preventing proliferation from civil nuclear power is ultimately going to rest on success in the weapons related, the more traditional non-proliferation area, and we try to include that in a number of our recommendations about non-proliferation in general

These things are closely connected, and again I go back to my original point which is that those who primarily come at the nuclear power question from the standpoint of energy production really need to take the non-proliferation debate much more seriously. The U.S. and Russia should take the lead in that regard.

MS. HILL: Thanks, Cliff.

I'll just ask if Strobe and Steve at this point want to add anything else. No?

Well, we have, according to my watch, 45 minutes for discussion. Maybe what I can do is take three comments, questions from the floor and then get back to each of the panelists. I can see someone down here, sir, the lady over here, and I think there was somebody else towards the back.

Carey, if you can bring the mic down here. There we are. Thanks.

QUESTIONER: Thank you very much. Peter Sutchek from the Australian Embassy.

Steven, I was particularly struck by your summation of what can be done in a post post-START agreement. I mean it occurs to me as a casual observer that the U.S. doesn't really, won't have much leverage over the Russians, particularly those points you outline as being possibilities -- tactical nukes, getting down to a thousand -- in particular where Russian nuclear doctrine is going, effectively reverse from what we

had at the end of the Cold War where a conventional superiority is now exchanged for a nuclear superiority. And in that context, one thing that you didn't mention is a real bugbear of the Russians. That is U.S. global strike capability of a conventional sort. I was wondering if you had any comments on that.

And secondly, if I might just make a comment, I think some of us came from the Canadian seminar where we had a discussion of a new world order in relation to U.S.-Russian relations, the reset and so on. One thing that occurs to me as one area where relations could improve would be obviously working, you guys working with the Russians on areas of multilateral cooperation. Non-proliferation is obviously a key area and one where Russia has not traditionally been very, very strong.

And I think to bridge some of Clifford's comments in relation to the economic aspects of civil nuclear energy, one area where the Russians have been very engaged of course is efforts to multilateralize a fuel cycle, especially with the enrichment facility at Angarsk and with efforts to contain the proliferation aspects of expansion of civil nuclear energy by limiting enrichment and reprocessing capabilities in countries that are considering going nuclear in relation to their energy needs.

Iran was obviously -- the Tehran research reactor deal was a very useful litmus test for how far Russia might go in relation to dealing with an immediate non-proliferation problem, normatively, and also getting a bit of

a spin for its promotion of Angarsk. It seems to have fallen flat, at least at this stage.

I'm wondering if there are any other hooks where Russia and the U.S. could cooperate multilaterally on non-proliferation as part of this broader picture.

MS. HILL: Thanks very much.

Now there was I think a lady over there. Oh, there we are. Thanks.

And then there's somebody waving their copy of the document.

QUESTIONER: Thank you. My name is Tara McKelvey, and I'm a journalist, and I'm doing a story for the Boston Review, and I have a question.

I was in Moscow in the fall, interviewing arms control experts there about START and about other issues, and they said that one of the biggest problems and the biggest obstacles were the people who were in the Obama Administration, some of the government officials who have been there for a long time or maybe for a short period of time who are reluctant to change the way things are being done. And I'm just wondering if you have any, you know, comments.

MS. HILL: And at the very back.

QUESTIONER: Yes, Chou Chen , freelance correspondent for (inaudible).

It's easy for U.S. to ratify the CTBT. When would U.S. to ratify this CTBT?

And both U.S. and Russia have explained last year they're going to work on the FMCT. So what's the status of this FMCT negotiation? Thank you.

MS. HILL: Who would like to start on the first question which of course was also a very useful comment and elaboration on the Iranian problem? Steve?

AMB. PIFER: Let me start on the U.S.-Russian aspect there. I think that after you get the post-START treaty done, that will be the first question because there are I believe some in Moscow who think that the post-START treaty should be not just the first step between the Obama and Medvedev Administrations but the last step. But you still go back to the Russians have said that this is again the first step in a step-by-step process. So I think that's going to be one of the questions, to challenge the Russians to see if they can move forward.

I do think that the Russians may have an interest in going below the 1,500 to 1,600 warheads that will come out of the post-START treaty because they are at a point in their own procurement cycle where if you look at their current existing strategic warheads the vast bulk of those that are intercontinental ballistic missiles are on missiles that are at or beyond their service life. Likewise, most of their submarine launch ballistic missile

warheads are on submarines that are about ready to be retired. So that's going to bring the Russians' numbers down, and I think the Russians have an interest in bringing the United States down to a roughly parallel number. And I think that is the big motivation that the Russians have to engage in this process.

With regards to the specific question of tactical nuclear weapons, again, given the disparity there, which it looks in numerical terms somewhere between three and five to one in Russia's favor, it's hard to see how you can get ground in that negotiation if you just limit to tactical nuclear warheads, and that's why I tried to suggest that there may be a possible tradeoff between that area and the question of non-deployed strategic warheads.

If you look at where the post-START treaty appears to be going, the Russian plan is to reduce and basically reach their limit by reducing the number of missiles, and they probably are not going to have the upload potential that the U.S. post-START force will have. The Russians are going to want to get a handle on that. Again it seems to me that that's an American advantage, and there is some possibility there for a tradeoff that could be used in an artful way in the next negotiation to achieve some progress on tactical nuclear reductions.

MS. HILL: Strobe, anything else to this?

MR. TALBOTT: I might pick up on a couple of the other questions.

I guess in response to our colleague from Australia I would just offer a very brief summary of the situation which is I think very consistent with what Steve said both in his opening comments and has said now. It's going to be tough. The next round is not, or the next series of issues that are going to have to be addressed are all almost by definition in the harder, in a category that is more difficult than those issues that have been resolved here.

During the course of the past year, as the negotiators, and this will perhaps lead into what our friend heard in Moscow. There was a quite conscious recognition that if they were going to have any chance whatsoever of meeting the December 5th deadline, which was of course the expiration of the old treaty, they could not take on all of these other issues. They would require a post post-START set of negotiations, and I think you very clearly identified what a number of those are going to be.

Steve has talked about some others and elaborated. He mentioned in his opening remarks the offense-defense equation which is difficult on the U.S.-Russian front. It's difficult on the U.S. political front because there is still a strong view in certain precincts of American politics that we shouldn't permit or associate ourselves with any limitations whatsoever on missile defense.

And I might add it's gotten further complicated with the growth in both size and capability of the Chinese deterrent, and we might at some

point have to think about trilateralizing negotiations on the regulation, not the prohibition, but the regulation of strategic missile defenses.

With regard to what you heard in Moscow, I'm tempted to make some flip comment. I'll try not to do that. I don't think I would take those complaints all that seriously.

The team that is dealing with this issue in the American government is distinguished, among other things, by a lot of experience with earlier rounds of negotiations. So they were very well equipped to kind of pick up on an enterprise that had gone into suspended animation for some time. Rose Gottemoeller, the principal negotiator in Geneva, worked these issues very hard back in the nineties when she was in the Energy Department. Former Congresswoman Tauscher, who is now the Under Secretary of State for these issues, is deeply knowledgeable about them. Bob Einhorn, decades of experience going back to being, at least I think, certainly a START negotiator and maybe a SALT negotiator.

AUDIENCE: (Inaudible.)

MR. TALBOTT: Well, maybe. I think even that other acronym entered into his life earlier on.

But the point is you have a team with a lot of experience both at the State Department, the NRC, Gary Samore, at the Defense Department, including with the Secretary of Defense, Bob Gates.

And I might add, just to share the compliment with the complaining side, the Russian side has got a lot of people in it who have been working this vineyard for a long time.

In fact, what we've heard from people from both the Russian and the American sides is that they literally speak each other's language. I mean there are a lot of Russian speakers on the American side, there are virtually all English speakers on the Russian side. And they really know these issues, and it's been very businesslike. So I'm not quite sure.

Ambassador Antonov is no pushover himself, believe me, although I haven't heard that put in terms of a complaint about him.

MS. HILL: Strobe, some of the other issues that were raised here were about the status. I mean I think you sort of covered those in your introduction, but if you remember the gentleman was asking about where we really are with CTBT as well as NPT. I think you've almost answered that question, saying we're in a difficult position because we'd like to have these all on the agenda.

MR. TALBOTT: Well, a word or two about each, and there's much to be said about both NPT and CTBT.

To start with NPT, Steve is absolutely right, that in the best of all possible worlds, which is to say the safest of all possible worlds, you would have a universal non-proliferation treaty. It was conceived back in the sixties as a universal treaty. It was entered into force on the

assumption that in due course everybody would come on board, but of course that hasn't happened.

The countries that have chosen to stay out of it, never mind those like unfortunately I think it's only North Korea that has actually pulled out, but India has made clear, insofar as one can be emphatic about the future, that they will never be part of the NPT. Now, as I think Steve said, they have not made that statement with regard to the CTBT which we'll come to in a moment. But having a country as important as India saying, no way, will they be part of the NPT obviously poses a real challenge. It's a neighborhood challenge, and it's a global challenge. We can talk more about that if you want.

And, of course, the Pakistanis have taken a very similar position.

Then there's the question of Israel, which is not a declared and certainly not a self-declared nuclear weapons state, but I think it can be said in this or any other setting is universally assumed to have a nuclear weapons capability. And it is very hard to imagine Israel being part of a treaty regime unless a lot of other countries in its immediate neighborhood would be part of a treaty regime.

So the NPT is going to be tough.

One thing we haven't really touched upon that I will just flag is the global zero which of course hangs out there in some people's minds as a kind of holy grail and in other people's minds as a poison chalice. But it's

definitely part of the larger political discussion, and of course the NPT obligates its signatories who are nuclear weapons states to move towards, and eventually to achieve, the elimination of all nuclear weapons. And that's going to be a mighty -- that's going to be a point of continuing controversy itself.

We have a colleague, Mike O'Hanlon, known to many of you, who is writing a book called -- I think the title is *A Skeptic's Case for Global Zero*. But note both halves of the title. There are a lot of tough issues involved in moving towards zero.

With regard to CTBT, again looking at the domestic challenge there, there are two things that the Obama Administration wants. It wants to have a ratified Comprehensive Test Ban Treaty. What it also wants is not to repeat the mistake of the Clinton Administration and the Democrats in the Senate at the time of the Clinton Administration who basically got sucker-punched by opponents of the CTBT and put the treaty forward without being sure that they had the votes to pass it.

There is yet another of these initials, not quite an acronym but initials, out there that you'll hear a lot about in that debate, and it's RRW: Reliable Replacement Warheads. Steve referred in his opening comments to the insistence that we be able to ensure not just the safety but the reliability of our nuclear deterrent going forward, and there are many people who feel that, or there are certainly some very powerful

people who feel that in order to ensure the reliability of our deterrent we're going to have to have a new generation of warheads, a new warhead which will require testing.

MS. HILL: Thanks.

I was going to ask Cliff if he would pick up on the question about Angarsk, which was at the tail end of our colleague from Australia.

Clearly, there have been some, a number of also bilateral efforts. We didn't mention 123, yet another set of agreements that we've had out there at various points, and many of you remember there was a great deal of discussion about this bilateral agreement with Russia on civil nuclear cooperation, similar to the agreement that we had with India, that of course got derailed by a number of issues.

Cliff, if you could pick up on these.

MR. GADDY: Yes, that was a very good point, and I just want to reiterate that in fact the list of recommendations with respect to cooperation on civil nuclear energy includes a lot of these. There are great opportunities.

We, in the recommendations, endorse the idea, the initiative that the Russians have made of having an international. Whether it's multinational, multilateral, international, some people can make careful distinctions among these. We think that what the Russians have offered in Angarsk inside of Russia where there would be a facility for fuel

enrichment that would allow other countries than Russia to own equity in the company that owns it.

Now it's not fully international because the Russians, and this is unclear whether they envision a situation in which it would actually be shared control over it. It would be true multinational or international control. International would be presumably an outside agency like the International Atomic Energy Association.

But in any event, it is an initiative by the Russians in the right direction. We think the United States should support that.

You know we have a situation right now where I think just objectively the Russians have been more active in moving in the direction of trying to resolve some of these enrichment problems. The waste problem is another one where the Russians talk about having an international waste storage facility. The ideal again would be if the United States and Russia to begin, and certainly include others, could try to deal with all these problems on an international basis.

The real ideal would be to tackle this problem I think from the so-called back end of the nuclear cycle. That is if countries that are interested say they're interested in civil nuclear power for energy, power generation reasons, could be offered a deal.

They'd say: Look, you get the reactor. You get the fuel. We take the spent fuel. We take the waste. You don't have to deal with any of those problems.

That would be a pretty powerful argument, and it would be a bit of a bluff caller for those who are not interested, solely interested, in the power but want the technology and even the materials.

So there are a number of areas in which the United States and Russia could cooperate. The progress that was made in that kind of cooperation, that Fiona alluded to, was with Bush and Putin in the last part of their administrations. It's kind of been on hold since the Obama Administration I think is not quite as clear about how active they want to be in promoting nuclear energy to begin with, and we still have a fundamental difference of opinion between the United States and Russia on the advisability in general of reprocessing spent fuel.

Some people say, well, this is a block. It actually may be an opportunity because maybe what's needed is for the two sides to sit down and sort of rethink the whole big issue of civil nuclear cooperation and the global context for this. So that's kind of what we're arguing.

Use this breathing space. Think through the problem again. As I said in my initial remarks, maybe in a really more serious way, connecting it to the increased demand for civil nuclear power for the energy security and climate change issues.

MS. HILL: I'll take another three questions.

QUESTIONER: My name is Demetri Novak .

I'd like to return to the fundamentals of what is discussed because it's impossible to jump in the same history river twice. It's a different time. Nuclear weapons played a very important role twice: First, to spend up the end of World War II by using atomic bomb against Japan. Second, nuclear arms prevent military conflict in Cold War between U.S.S.R. and U.S.A.

That's it. It's no U.S.S.R. anymore. It's a different story. It's a different time. Trying to use a recipe from the previous time for today's negotiation is, from my point of view, is greatest mistake.

So what I'd like to suggest if I can: First of all, United States is capable to be in the leading role of this nuclear disarmament, not an equal partner is the Russian Federation. It will be profitable for United States from any point of view -- political, economical, financial, moral, whatever.

And we need to change the paradigm of these negotiations. First, eliminate tactical weapons immediately -- immediately. It's the main danger if someone says that tactical nuclear weapons will be the hands of terrorists. Start from tactical. You need to be practical, not dreamers.

Of course, I can speak more, but I'd like to restrict myself because I'm not a panelist.

MS. HILL: Thanks.

I had someone here and then just further back. Thank you.

QUESTIONER: Thanks. Diane Promm, George Mason University.

Anyway, thank you very much for the comments about nuclear power, and I just have a few comments about that. One is I don't know anyone credible who really thinks that nuclear power is a solution to climate change, and I was in Copenhagen, and even like Al Gore, that it's expensive. And all the problems and the downsides you mentioned are very important. So it's not even legitimate to make a case for that.

Second of all, there's a new organization, relatively new, called the International Renewable Energy Association, IRENA, and they also presented last year at the NPT PrepCom and in Copenhagen. And many countries, most countries I think, except for about 15, signed on to that, to develop renewable and non-toxic energy.

And also the Article IV I think is very -- of the NPT, the so-called inalienable right to peaceful nuclear power, the wording is very Orwellian. I think we have an inalienable right to non-toxic, safe renewable energy.

And also among many of the NGOs, like in Abolition 2000, we have a pretty strong consensus, except for France, in weaning ourselves, weaning everyone off of nuclear power. But I think it's a trap in many ways. So thank you very much for questioning that.

MS. HILL: Thanks.

I think, yes, here we are at the end of the line back here. Thanks.

QUESTIONER: Thank you again for the great presentation. Vola Chinish, Arms Control Association.

Steven Pifer mentioned that the next treaty after follow-on to START will be very good for Russia because Russian nuclear forces are currently reaching the end of their service life. At the same time, Russia has started an ambitious modernization program, especially modernizing its strategic forces, all the three legs of the Russian nuclear triad, and there are voices in the U.S. that encourage the U.S. to follow the same pattern.

I was wondering if some of you could comment on the differences in U.S. and Russian approaches to keeping their nuclear deterrent modern and reliable because I have heard there are such differences.

MS. HILL: Does anybody else have a question along these lines because I'm starting to see hands dwindle a bit? If nobody else has another question, I'm going to actually ask the panel to take the liberty of saying what they would like to do to wrap up as well, and you might all even get some extra cookies and coffee then if you're lucky, on your way out. But does anybody have another question?

Yes, sir, over here.

QUESTIONER: (Inaudible.) I have two questions, two brief questions. One is: Is there any hope for the 123 agreement in this calendar year? Do you anticipate any closure on that?

And the second one is: What impact will the START II or whatever START final treaty will have on the nuclear summit in April? In other words, if it will be done, what will be the message for that summit, and if it will not be completed by then what will be the message for that summit?

Thank you.

MS. HILL: Very good. Thanks a lot.

Strobe?

MR. TALBOTT: Yes, maybe I could. Since Mr. Novak went first, I could pick up on a couple of points he made which I think relate to some of the other questions here.

First of all, in a spirit of respectful debate we sponsor around here at Brookings, I see the matter rather differently. I think it is highly desirable and praiseworthy that the United States and Russia have essentially picked up where they left off and are, in that sense, stepping back into the same river because that river was flowing in the right direction.

And the right direction was not just about reductions. It was also about reductions that would bring with them higher levels of stability and safety in the relationship between the world's two leading nuclear powers.

And that has been a goal in the treaty that will soon be brought to the summit. It is certainly going to be, I think, a goal on both the Russian and American sides with regard to any follow-up agreements because you don't want to just lower levels of weapons. You can imagine scenarios in

which you would do that, where the situation would actually become more dangerous. Quite the contrary is the intent, and I think quite the contrary is going to be the effect.

That goes to another point that you made. I think it is also very appropriate that the United States and the Russian Federation should be, if you'll pardon the expression borrowed from another context, the G-2 with regard to arms control and non-proliferation for a very simple objective reason.

Is it 96 or 97 percent?

AMB. PIFER: I'd say more than 95.

MR. TALBOTT: Okay. It's more. These 2 countries have more than 95 percent of the nuclear weapons on Earth. Depending, by the way, on exactly how you count them and what capability you attribute to them, you could say that, well, Russia is at least the equal of the United States in a number of key respects. So it's absolutely appropriate that these two countries should lead together, which I think -- and Fiona you might have something to say in your own wrap-up on this -- that that is not unhelpful to the larger cause of U.S.-Russian relations and their mutual reset.

The last point has to go, has to do with the history of the Cold War. It is correct to say that the existence and threat of nuclear weapons kept the Cold War from turning hot, prevented military conflict between

two great powers which at any other stage in history would have gone to war multiple times. But it was a close-run thing.

I just finished reading Neil Sheehan's book called *A Fiery Peace in a Cold War*. Every time there's a new book that comes out on the Cuban Missile Crisis it's even scarier how close we came, and I think this actually has some pertinence to the non-proliferation part of our discussion today because there are a number of countries around the world -- two that I dealt with a lot in the nineties, India and Pakistan come to mind -- who basically say, and I'm only slightly caricaturing their position: You big guys got to have a Cold War and mutual assured deterrence, and it worked, and you didn't have a war. So we can do that.

Well, the two responses to that are we were very darn lucky not to have had a nuclear war between the United States and the soviet Union, and don't copy us in this respect, not least because you're a couple of countries that go to war every several years and have contiguous borders and so forth and so on.

So I think that there is a more sobering lesson from the Cold War which should make it all the more welcome that we would be back into the business that we're all talking about today.

MS. HILL: Steve?

AMB. PIFER: Yes, let me just add on Strobe's point about reductions being important, but they have to be done in the right way.

I do think if you -- given what we've heard about the post-START treaty, where it looks like it's going to have a limit of somewhere between 1,500 and 1,600 warheads on 700 to 800 launchers, I would argue at the face of it that appears to be a good move in stability terms because you're taking where the START treaty was, you had about four warheads per launcher. You're now reducing that to two warheads per launcher. The logic of arms control has always said the lower that ratio of warheads to launcher, the more stable the relationship is because it decreases incentives in a crisis to use your nuclear weapons first.

So I think that the treaty that's now in negotiation is actually going to be a good one. It will be defendable in terms of not only reducing the nuclear threat, but creating a nuclear situation between the United States and Russia that is more stable.

On the question about forced modernization, I'm not sure at this point that we know the full parameters of what the Russians plan to do in terms of modernizing their forces. They have an ongoing intercontinental ballistic missile program, the Topol-M, which looks like it will be the future of their ICBM force. Although if you look back over the last four or five years, in fact, their procurement rate has been quite modest, maybe eight or nine missiles a year.

At the moment, they're having problems with their submarine launch ballistic missile program. The Bulava missile, which is going to be or

plans to be the future of their submarine force, tends to blow up about as many times as it completes a test successfully. So that program at this point seems to be going through a fairly difficult period, although the Russians have been building submarine launch ballistic missiles now for almost 50 years, and one anticipates that at some point they'll work that problem out.

There is a difference, though, between the U.S. and the Russian forces which is perhaps one of the reasons why there's a telemetry issue today, just to explain a bit. The Russians tend to build a missile for about 20 years, and then the missile reaches that 20-year period. It ends its service life, and they remove it, and they put a new missile in its place.

The United States has a different approach with both the Minuteman ICBM and the Trident submarine launch ballistic missile. We build the missile, but there is a sort of continuing process of refurbishment. So the first Minuteman, three missiles were deployed in the early 1970s. The plan right now is that Minuteman will be in the force probably until 2030, almost 60 years. Now I suspect that that Minuteman III that they retire in 2030 is going to look at lot different and have a lot of different pieces than what was originally built in the 1970s, but it's a process of taking a missile, taking the airframe and then refurbishing it and updating it as opposed to replacing it completely.

Where that's become an issue I think now in the post-START negotiations is the Russians have said, well, on the question of telemetry. It's my expectation that in terms of the limits in this new treaty there will not be as much of a demand for access to telemetry as there was in the START treaty. The new treaty, for example, it doesn't sound like it's going to have limits on new types. It won't have restrictions on heavy ICBMs. So the sort of requirements in the 1991 treaty that generated a need for access to telemetry probably are not going to be in the new treaty, and that will reduce the requirement for access to telemetry.

Now there's I think a separate requirement, as Strobe alluded, that there's interest in verification on both sides of the aisle in the Senate and access to telemetry I think is going to be very popular up there. So there is going to be that political requirement that may in fact be driving the American position more than the technical requirements might be.

MR. TALBOTT: You might just say a word on what telemetry is and how it works.

AMB. PIFER: Okay. Sorry about that. This is going into arms wonkiness.

MR. TALBOTT: Some of us who misspent our years on this subject, our hearts just go pitter-patter when we hear about the encryption of telemetry, but it's a little antique.

AMB. PIFER: So, Telemetry 101: Basically, when the United States or Russia conducts a strategic ballistic missile test, as the missile and as the post-boost vehicle go through the flight test, it broadcasts information down to a ground station which gives it all the parameters of how the missile is performing.

Under the requirements of the START treaty, you were required not to encrypt that telemetry. So the United States could have access to the Russian telemetry and vice-versa. And not only were you required not to encrypt telemetry, at the end of the day, when you did the test, you had to give the other side a tape with all the telemetry that you had recorded.

MR. TALBOTT: Now it's a CD.

AMB. PIFER: They may have updated the format, but in any case.

MR. TALBOTT: Or a memory stick.

MS. HILL: Digital.

AMB. PIFER: But the result was that the United States knew a lot about Russian ballistic missile tests and the Russians knew a lot about American ballistic missile tests. You understood the parameters. If the post-boost vehicle, if that particular missile could carry 10 warheads and maybe it only released 4 warheads, but you could also see if it made simulated maneuvers to reduce other warheads. So you had a very large amount of information about it.

What the Russians I think are arguing now is they say, look, this access to telemetry is fundamentally unfair. And the argument that they're making is that for the foreseeable future all the United States will be testing are the Minuteman missiles and the Trident missiles, which I saw a press report that the Trident missiles had something like 140 tests. There's not much the Russians believe they can learn from access to telemetry to Minuteman and Trident tests, whereas they say they're testing new missiles, the Topol and the Bulava. So that exchange of information, exchange of telemetry becomes fundamentally uneven in the sense that the United States will learn much more about Russian capabilities than the Russians will learn about American capabilities.

I think that's one of the issues that is driving the debate now, where by several accounts telemetry seems to be the last big issue in the negotiations, holding up conclusion of the post-START treaty.

MS. HILL: Steve, do you have any comments about whether 123 might get back on the agenda, or is this just another acronym and another treaty too much for everything to bear right now?

AMB. PIFER: Yes. Yes, the 123 agreement, 123 refers to the specific atomic energy act going back to I think the late 1950s, but this is an agreement that has to be in place. It's a framework agreement between the United States and a foreign government, to allow the exchange of certain information related to nuclear questions. So, for

example, for American companies to engage with Russian companies on civil nuclear cooperation, this sort of agreement has to be in place first.

The agreement has to be approved by Congress. I think there's actually a procedure where when the agreement is submitted the Congress has a certain amount of period during which it cannot object to the agreement.

The agreement was signed by the Bush Administration. It was put up to Congress back in 2008. And then in the aftermath of the conflict between Georgia and Russia the Administration withdrew it from consideration, in part given an expectation that Congress would vote to deny the agreement.

At some point, it does make sense for the United States to bring this agreement back, to promote civil nuclear cooperation which could be good not only for American commercial companies, which have some opportunities, or at this point denied opportunities that a lot of their European competitors now have in Russia. It's also important to facilitate exchange of information that could be used to strengthen non-proliferation norms and such.

The problem, though, that you have is you have a Congress which tends to be relatively skeptical about things related to Russia, and I suspect the 123 agreement and nuclear cooperation with Russia will be judged by the Congress not just in the straightforward U.S.-Russia context

but will be judged in part by Congress's assessment of how Russia is behaving with regards to the Iranian nuclear program. So I think one of the questions the administration has to engage, in terms of making that political calculation of when you ask the Congress to take another look at the agreement, has to take kind of all these other pieces because this is a worthwhile agreement, and you don't want it blocked for reasons that perhaps are unrelated to the subject matter.

MS. HILL: Cliff, do you want to add anything on this topic?

MR. GADDY: No. I think that's absolutely true. It was unfortunate timing. It was held hostage then in the Georgia conflict, and at that point the U.S. side, Congress, was looking for ways to punish Russia. We had virtually nothing we could do to hurt them that didn't hurt us more, and I think this was a classic example of shooting ourselves in the foot. It's not punishing Russia, or to the extent that it does punish Russia I think it punishes us as much or more.

But it's a reality. So whether one has hope that it will change or not I think it makes me -- it's cause for pessimism about the whole agenda. You think you've got this grand set of recommendations for all kinds of great stuff to do between the two countries, and you can't even get this framework agreement, this absolute centerpiece of the whole thing, through.

But it was largely coincidence really about the timing of this. And I just agree with Steve, that whatever happens to be out there, something to grab hold of, those who want to do something against Russia will do it without thinking or reflecting so much on what the net benefit or cost to the United States is.

MS. HILL: Strobe?

MR. TALBOTT: I think Cliff has made a point we're really reinforcing. We've dragged up from the past a number of esoteric terms and acronyms, and thanks to Professor Pifer we now even understand a couple of them. But Cliff just used another word out of the earlier episode of arms control which is linkage, and linkage has always been kind of a bugbear haunting the arms control process.

The SALT II treaty, which was a very fine piece of diplomatic work, so fine that it was actually adhered to, was not ratified by the United States Senate. And I'll always remember Brzezinski saying, the ratification of SALT II is buried in the sands of the Ogaden. I'm not sure how many of you remember the Ogaden, but basically it was yet another arena in which the Soviet Union -- you all remember the Soviet Union -- misbehaved.

If it wasn't that, it was the so-called -- what was it called? The Cuban Brigade or the Soviet Brigade in Cuba or Afghanistan or something like that.

Stuff is going to happen during the course of this year, stuff where U.S. and Russian interests are going to be at odds. I think Iran is a pretty strong candidate, but there will be other things as well that are going to add to the complications we've already discussed in this very important and embattled process, which I guess leaves Fiona in the position of having to strike a happier note to conclude on.

MS. HILL: Well, there's cookies is always a very happy note, if we haven't eaten them up already. There's been cookie reduction, that's for sure, if nothing else during the course of this discussion.

I just wanted to close by in fact picking up on the issue that was raised in a number of contexts, on the war in Georgia, because for most of you in this room that may have seemed quite trivial when we think back to issues like the Cuban Missile Crisis. Of course, for people in Georgia and also in Russia, it was anything but trivial.

What that also did raise, getting back to Mr. Novak's point, was the real risks of confrontation in this still very nuclear world.

Although it wasn't always out there in the press, although if you actually read some of the European press. I was in the U.K. when the war first broke out, and the British tabloids had "War with Russia" all over the headlines, and some of the more scurrilous of the press had "Will This Go Nuclear?"

These kind of headlines weren't actually all that accidental because there was a lot of loose talk in Russia about if, for example, there was an intervention on the part of NATO or the United States, what would the consequences of that been because what we haven't discussed today is the great disparity in the conventional force structure between Russia and the United States, and then Russia and NATO. In this context, what is very dangerous is there have been a lot of discussions in Russian military circles, and you can see these acted out sometimes in the kinds of exercises that the Russian military conducts, including the big global exercise, Stabilnost, where many of you remember they deployed long-range aircraft and also major shipping aircraft carriers into the Caribbean and down to Venezuela.

There's this concern that a local conflict could escalate into something much larger, where they would outmatched in conventional strength and might have to resort in fact to tactical battlefield nuclear weapons to change the strategic perspective. If we're still in an environment where that kind of talk can take place, I think we're still in an environment where arms control is not a thing of the past and not a thing of those of us who perhaps may have, as Strobe said, cut our teeth at a time when some others of us in the audience might have just been born.

I'm not making any comments about age differences on the panel, but, yes, they were really cutting teeth in a quite different thing.

One thing I'm heartened to see is there are clearly people in this audience who are well under 40, though -- I'm not speaking of myself as well -- and I think this actually shows that arms control is still sexy, guys. So I think actually you can thank your lucky stars that it's still out there, and I know we were very grateful for Steve in particular for explaining all of these issues.

And I also would then encourage many of the people who have been most generally funding us today, the MacArthur Foundation, Ploughshares, and the Norwegian Foreign Ministry, also to help to encourage the next generation of arms control experts because one of the things that has been a concern in the revitalization of arms control talks is people looking at the actuary tables and wondering how long many of the experts are still going to be around with us.

What was happening in the group, however, was a number of really good, young Russian experts from IMEMO who took part. And we also know in looking at this audience that U.S., European and other counterparts are also out there too. So I hope that we'll see the next generation coming up with the kind of ideas that Mr. Novak was asking us to come up with, of new ideas of looking at this topic.

But I want to thank very much all of our colleagues for giving us a really stimulating discussion, to all of you in the audience for putting provocative questions, and go get those cookies. Thanks a lot.

(Applause.)

(Whereupon, the event was concluded.)

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CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

/s/Carleton J. Anderson, III

Notary Public in and for the Commonwealth of Virginia

Commission No. 351998

Expires: November 30, 2012