Amy Zegart: Good afternoon, everyone. I want to invite you all to get seated and get comfortable for a very interesting afternoon. I want to welcome you all. My name is Amy Zegart. I'm a Senior Fellow and the Co-director of the Center for International Security and Cooperation here in the Freeman Spogli Institute, and I'm also a Senior Fellow at the Hoover Institution. Boy, are we lucky to have this panel this afternoon. It is no more timely moment to be looking at the past, present and future of U.S.-Russian relations and nuclear security than today. Let me add for those of you who may not have seen the news that Tom Schilling, one of the great strategic thinkers in nuclear security passed away today. So, it's particularly fitting that we Reflect in part on the ideas and the contributions of the distinguished panelists that we have here, and Tom Schilling whose work was so central to Deterrence Theory during the Cold War.

Now, each of our panelists I have to add on a lighter note since it is the holiday season, has written one, if not more, critically acclaimed books with very uplifting titles like, "Doomed to Cooperate," "My Journey at the Nuclear Brink," "Stalin and the Bomb," and "The Dead Hand." However, Mike McFaul has written a book that he's recently finished that's due out soon, so I'm hoping there's a more uplifting title than that.

Mike McFaul: All my titles are way more uplifting than these others. Go to Amazon and buy them.

Amy Zegart: So, if you're looking for an uplifting holiday package for your relatives, you need to look no further than the books written by authors on our panel. It gives me great pleasure to start by introducing someone who needs no introduction, our own Bill Perry, the 19th Secretary of Defense under President Bill Clinton. A man, for those of you who know him and those of you who don't, of supreme wisdom, honor and service to our nation throughout his life. He was very much at the center of U.S.-Russia policy in the aftermath of the Cold War, and during his time in office he was instrumental in dramatically reducing nuclear risks in our world. His book published last year called "My Journey at the Nuclear Brink" discusses his lifelong association and his thinking about nuclear weapons. I'm going to put in an unsolicited plug for what Bill is doing now. It's part of his current mission to educate the younger generation about the enduring dangers of nuclear risks and what they can do to reduce those risks. So, he's as well-versed in teenage slang as he is in nuclear engineering. Not many people can say that. His official title is the Michael and Barbara Beberian Professor Emeritus here at Stanford and a Senior Fellow both at the Freeman Spogli Institute where he's at CSAC and also at the Hoover Institution.

To his left, we have Mike McFaul who is the Director and Senior Fellow here at FSI. He is the Peter and Helen Bing Senior Fellow at Hoover and Professor of Political Science at Stanford. As many of you know, Mike spent five years in the Obama Administration, first as Special Assistant to the President and

Senior Director for Russian and Eurasian Affairs at the National Security Council. Then, he was the U.S. Ambassador to the Russian Federation from 2012 to 2014. During his time in Moscow, he served as one of the most high profile ambassadors during one of the most challenging junctures in U.S.-Russian relations, including resurgent Russian Nationalism and an American in Russia named Edward Snowden. He has spent his academic career writing much more uplifting book titles on Russia and democratization. His many books include "Advancing Democracy Abroad" and "Russia's Unfinished Revolution: Political Change from Gorbachev to Putin." He's been called by many the leading scholar of his generation, and you can see him now quite frequently on NBC and read his writings in the Washington Post.

Next to him, we have David Holloway. He's the Raymond Spruance Professor of International History, Professor of Political Science and a Senior Fellow here at FSI. Throughout his esteemed career, David has written prolifically on the history of nuclear weapons, particularly in the Soviet Union, and has worked on technical and policy issues related to U.S.-Russian national security policy at the highest levels. His renowned book, "Stalin and the Bomb: The Soviet Union and Atomic Energy," was chosen by the New York Times Book Review as one of the 11 best books of 1994 when it came out and has won numerous honors, including from the American Association for the Advancement of Slavic Studies.

Next to him we have, of course, the man who is instigating this entire event, Sig Hecker. Sig Hecker has a book. This is only half of the book, to give you some idea of how comprehensive this book is. I couldn't take the other half because I would have pulled out my back. It's called "Doomed to Cooperate," and it is quite a remarkable achievement. The idea of this panel today emanated from the publication of Sig's book earlier in the year. It tells the story of the instrumental and courageous work of Sig and his colleagues, both in the United States and in the former Soviet Union, now Russia, to keep the lines of communication open following the collapse of the Soviet Union. It has been called a story of heroes. Scientists willing to risk quite a bit to work together to save the world from catastrophic risks.

I just have to ask for your indulgence to read one comment from San Nunn who wrote this about the book, and I would encourage you to read both volumes of the book. Here is what Senator Nunn said. "We can only guess how many catastrophes were avoided by the remarkable cooperation between dedicated scientists, military, and other government officials in the United States and Russia to prevent nuclear weapons and materials from falling into dangerous hands in the years following the Cold War. We do know that the global risks were significantly reduced by this cooperation between former bitter enemies. This is a task that never ends, and Sig Hecker, who has done more than any other American to strengthen US and Russian scientific cooperation, tells us how critical it is for this work to be revived today."

Sig has an official title here which is Professor of Research in the Department of Management Science and Engineering and Senior Fellow at FSI. But, of course, as many of you know, for several years from 1986 to 1997, Sig served as the fifth Director of Los Alamos National Laboratory.

Finally, last but not least, we're delighted that David Hoffman was able to join us from the east coast to moderate this panel. David is contributing editor at the Washington Post, and the Post Moscow Bureau Chief from 1995 to 2001. He has spent a career writing about U.S. politics and U.S.-Russian relations. His 2009 book, "The Dead Hand" won the Pulitzer Prize in 2010 for general nonfiction, and it provides a terrifying account of the enormous and covert effort of the Soviet Union to build biological, chemical and nuclear weapons to counter American power near the end of the Cold War. If Sig Hecker's book "Doomed to Cooperate" is the in-depth personal account of this period, David Hoffman's "The Dead Hand" tells the story of the period through the eyes of political leaders in both the U.S. and Russia, or the Soviet Union at the time.

With that, let me turn it over to David Hoffman who will lead our panel discussion. Thank you very much.

David Hoffman: Amy, thank you very much. Thank all of you for coming here today. It's a very timely moment. It's actually quite humbling for me to be up here as a journalist and an author and a student of Russia all these years. I've been asked to moderate a panel with the people who taught me.

Mike McFaul: None of us have a Pulitzer, David.

[LAUGHTER]

David Hoffman: I'm very humbled by this. Twenty-one years ago, I arrived in Moscow as the correspondent for the Washington Post. I was full of optimism. I realized that Russia was full of problems but I believed it was a time or promise. One of my very first stories for the Post was about a high school teacher, Igor Dlutsky, who wrote the first honest textbook about Soviet history, one that told the truth about the Molotov Ribbontrop Pact and one that he told me would not contain gaps and lies like so many textbooks before. I told my readers in 1995, that Igor Dlutsky had realized his dream in the New Russia. The textbook was published, distributed and use in high school classrooms. A few months after that, I got another front-page story when I spent the day with a young Democratic candidate for the State Duma at the lower House of Parliament for the December 1995 elections. His name was Yevgeny Bushmin. He was 37 years old at the time. He had been a partner with Boris Nemtsov in some of the reforms establishing the first stock market in Nizhny Novgorod. I spent the day roaming over this town that was really one of the old relics of the Soviet military industrial establishment, as he tried to talk to people about the meaning of democracy and the changes that they all saw

coming. I wrote in the Post that day that politicking underscored the woes, troubles and confusions of Russian voters in this season of discontent, but also highlighted the fascinating, wobbly, striving character of Russia's young democracy. At that time, for that election, there were 42 parties trying to get on the ballot for the Russian Duma.

Then later in my tour in Moscow, I met Viktor Vwysinski who had been Head of Department at the Central Aeronautics Institute in Moscow where he tested Soviet cruise missiles in giant wind tunnels. His real expertise was putting those missiles in a wind tunnel and seeing how they would perform. But, of course, when the Soviet Union collapsed, the need for his services sort of fell apart. The institute was still there. He still had an office. Nobody had been paid for many, many months, and Viktor was experimenting in the new Russia by learning how to convert himself into something useful for Russian society. He had spent some time studying the wakes that civilian airplanes cause when they take off from airports, and he had also worked on an amazing invention to put timber in those big wind tunnels and dry it twice as fast. I thought it was a noble and interesting endeavor, and I wrote about this as part of an institution called the International Science and Technology Committee. ISTC was an effort to get a lot of these scientists who had worked on weapons programs in Soviet times to change their way of thinking and contribute in a civilian basis.

Fast forward to today. Igor Dlutsky's textbook made it into classrooms and then was banned in 2003. Yevgeny Bushmin didn't get elected that day to the Duma, but he continued to rise in Russian government, eventually made it into the Upper Chamber, the Federation Council. I was stunned two years ago to find Yevgeny Bushmin's name on the list of Russian officials sanctioned by the United States because he had voted for Putin's intervention in the Ukraine. The ISTC that had helped Viktor with his wind tunnel conversion has been kicked out of Russian. It still exists in a few other places, but the whole effort to help these scientists has ended at the same time the whole arms reduction and threat reduction effort of these years is falling apart.

This is where we are today. All of us here have understood the important distinction between Russian state and society, one that runs through its history. I still have some hopes for Russian society. But the Russian State has turned adversarial. That is where we are, and the question we have to ask and I hope that all of us will discuss today, is can we engage if Russian has turned adversarial and how? Should we? Where have we been and where are we going with Russia? I think each of the panelists will address the question what do they see as both their greatest experiences in this period I'm talking about and the greatest challenges and disappointments. I hope by the end of this discussion we can also address what is the role of the United States in the west, and particularly what parts of this incredible experience are reusable? Do we have a reusable history here? Can we apply it to the future of relations with Russian and also crises that we confront?

With that, I will start with Bill Perry.

Bill Perry: Thank you, David. I start off with a question, what is the greatest challenge of the post-Soviet era? To answer that, I went back to a book that Ash Carter and I had written almost 20 years ago now in which it says, "The greatest challenge of the post-Soviet era is avoiding what we call Weimar Russia, in which a former enemy isolated by the rest of the world could fall prey to its worst tendencies."

Where do we get the word "Weimar Russia?" We got it from a Stanford historian and we borrowed it from a Stanford historian, Gordon Craig, a great historian on Germany. I'm going to quote something from Gordon Craig now. He said, "If some benevolent spirit had granted the peoples of Germany and the neighboring states even a fragmentary glimpse of what lay in store for them in the 1940s, it is impossible to believe that they would not have made every possible sacrifice to maintain the Weimar Republic against its enemies. But that kind of foresight is not given in this world, and the German Republic always lacked friends and supporters when it needed them the most." So, we looked back to that history and we said well, what we need to avoid in the post-Soviet era is a Weimar Russian, that the new democracy which is being formed into Russian did not have the same fate as the Weimar Republic had in Germany. He went on to say if this is to be successful, the experience of working with Russia in Bosnia—We talk in the book about our experience of a cooperative program in Bosnia. That experience needs to be extended, deepened and made a permanent part of the security structure of an undivided Europe. We got on to say in the rest of this chapter in this old book, "Preventive Defense," we explain why and how. Needless to say, the things we explained, none of them really have happened.

The second question we were asked is what is the greatest accomplishment of this post-Soviet era? To answer that question, I look to where we had cooperation with Russia which really worked. Certainly very high on that list, if not even the highest, is the work with Sig Hecker describes in his book "Doomed to Cooperate" which Amy has already talked to you about. Looked back on, certainly you could never have predicted that that was going to work. Even looking back on it, it seems to be amazing that they were able to make it work. You have to believe that a lot of it depended on strong personalities of the people who were pushing it through and making it happen, including of course, Sig.

I think it's worth noting that that cooperation which seemed very improbable at the time, when it came time for Sig to write the book about the cooperation, that same cooperation was still not available. The environment had changed so much that even the relatively small amount of political support needed for that cooperation was not available. But Sig will have more to tell you, I think, about that.

The second area of cooperation was the cooperation of the Russians in dismantling the almost-4,000 nuclear weapons in the three states of the former Soviet Union that inherited nuclear weapons: Ukraine, Kazakhstan and Belarus. That was a very difficult implementation task. We did it in three years. We could not have done it without full cooperation from the Russians and from the Ukrainians. On the last day of that program, when the last nuclear weapon had been taken out of the Ukraine, the three Defense Ministers: United States, Ukraine and Russia, came together and made a three-way handshake congratulating ourselves on a job well done because we all understood it took the cooperation of all three of us to make that happen.

The third element of cooperation which I will cite for you is the Bosnia Peace Enforcement Operation in which a Russian brigade was embedded in an American division. The Brigadier General Russian manning that brigade reporting to Major General Bill Nash of the 1st Army Division of the United States. It was incredible and, in practice, it worked very, very well. Once we had gotten through the hugely difficult diplomacy to get the agreement to make that happen. So, I want to quote you from one aspect of that on a more recent book. In this book in this chapter on NATO I describe the three different meetings that I had with Minister Grachev trying to get an agreement on how we could move forward in Bosnia. The first two ended in complete and total failure. It was that difficult. The last one I say, "At the last meeting, I finally broke the code. Grachev would allow his brigade to report to an American commander but not a NATO commander. We reached a provisional understanding that General Grachev could accept the Russian brigade commander being under the 'national command of Russia' and 'operational control' of General Joulwan, and the 'tactical command' of General Bill Nash. I guess the moral of this story is that words sometimes matter." In that case, they did. It took three months for us to find the right words. A few weeks later, Grachev and I met at NATO headquarters in Brussels and signed the agreement to formalize the understanding. We conducted the signing beside posters that read 'NATO + Russia = Success.'" Well, that was a long time ago, but that's what we were looking at then.

The third question I was asked is what was the greatest disappointment? The greatest disappointment is that we let this all slip away. We let it all slip away. How did we let that happen? It's a long and a complicated story, but it started with the NATO expansion, in my judgment. I have a whole chapter in my book here called, "The Fall of Security Ties with Russia" in which I go into more detail on this. But at the beginning of that, the preface of that chapter is quote from George Kennan made in 1998. Let me quote you what George said. "I think NATO expansion is the beginning of a new Cold War. I think the Russians will gradually react quite adversely and it will affect their policies. I think it is a tragic mistake." In my chapter, I say it's more complicated than that, but certainly that was the starting point of a downward slide to where we are today.

Then the final set of questions that we were asked to address is today, where we are now. What is our greatest challenge? I'm just going to say that our greatest challenge is trying to avoid a war with Russia. We've gotten to the point now where that is a real possibility and I would go one step farther than that and say that if we did any kind of a military conflict with Russian, even a relatively small military conflict, the danger of it escalating is great. And the Russians, knowing that they are outgunned in conventional forces by the United States and NATO, have made it quite clear that they would move to what they call "tactical nuclear weapons." Nobody who has thought about this problem seriously at all believes that once you go to tactical nuclear weapons there is any way of keeping that from escalating to a general nuclear war. So, the greatest challenge we have today then is avoiding that first step to a military conflict. Because once that starts, nobody knows how to control the escalation.

Thank you. I turn it over to you, Mike.

David Hoffman: Thank you, Bill. Mike?

Mike McFaul: We should just stop on that and talk about all that Bill just said. I hesitate to try speaking, but I will. Maybe I'll pick up the story on the lessons learned from my experience in government, talk about the theory of the reset, the results, why it ended and why the conditions today are different for cooperation but then tell you my three worries about the new era we're in.

So first, the theory of the reset. We were asked are there lessons learned from previous times in U.S.-Russia relations for our current era. I want to be clear about the way we thought about the reset. Just to remind you, I was at the White House. I was intimately involved in the policy, including coining that term. So, if you hate it, it's my fault. If you like it, which there are very few people that like it, buy the book and hear the whole story when it's out in the Fall.

First part of the theory. We never sought out to have better relations with Russia. I think that's one of the most frequently misunderstood things about our policy. Instead, in our policy review that started in the Fall of 2008 and then formalized in the Spring of 2009, we defined concrete American economic and security objectives, and then we thought about strategies to achieve them. The other pieces of the theories that we believed and the President first and foremost believed that there were many places that, if we engaged with Russia, we could accomplish what he loved to call "win-win outcomes." The day the two presidents signed the New START Treaty, by the way, in Prague, fantastic day in terms of U.S.-Russian cooperation. President Medvedev went out of his way to say in English, "This is truly a win-win outcome," and then he winked at Barak Obama.

The fourth part of the theory was that you had to engage to make it happen and so that meant at the presidential level, but then we created something called the bilateral presidential commission to force our governments to engage in ways that they were not doing before. We also had a business-to-business track and we had a civil-society-to-civil-society track that later got us in trouble. I'll come back to that.

The fifth part of our theory, and this really was the President's own thinking. It was our theory, it was our hypothesis about the relationship that previous conflict was not based on history, culture or the balance of power in the international system. In other words, we had a very agent centric theory about why there was confrontation before, and that allowed for the possibility of cooperation in the new era.

The last piece of the theory, no linkage. We got in a lot of trouble for this from our Republican critics and our Russian critics. But we very explicitly said—This was stolen from George Schultz's memoirs—that we were not going to link things that we didn't think were appropriate. So, we rejected Russian linkage when they wanted to, for instance, link Georgia to an Iran deal. But we also rejected linkage on our side, for instance, when our critics wanted to link human rights to lifting Jackson Vanik or bringing Russia into the WTO. That's the theory of the reset in three minutes.

Results. I think the results were fantastic. I'll just list them, but I want to remind you every one of these results that I'm about to talk about happened just four years ago. Not 25 years ago, not 100 years ago, four years ago.

1) New START Treaty, I already mentioned it. Fantastic achievement.
2) NDN, Northern Distribution Network, a new supply route to our soldiers in Afghanistan. So, we went from 5 percent to 50 percent through that route and that had tremendous consequences for our ability to fight in Pakistan, including in one very important day when we went into Pakistan to kill Osama Bin Laden. That does not happen without Russian cooperation on NDN.
3) UN Security Council Resolution 1929. The most comprehensive set of sanctions against Iran ever. That doesn't happen without Russian cooperation.
4) WTO.
5) Increased trade and investment. Got to the highest it had ever been in 2012. It's now been on a decline.
6) New Visa regime. If I had more time, I would go through 22 other ones.

In other words, these were real comprehensive cooperation and not just on the kind of marginal kumbaya kind of issues. Let's have peace, love and understanding and get along. I'm talking about Afghanistan, Iran, nuclear weapons trade and investment.

Finally, in the cooperative piece, I always like to remind people of the dogs that weren't barking during this period of cooperation. There was no Georgian War. There was no dispute. Do you remember the regime change? This is a good test. It's Stanford, so you're going to know. Do you remember where we had a big—There was a regime change in the former Soviet Union during the heyday of this period. Katherine, don't answer. What country am I talking about? You don't know. I'm glad you didn't respond. You do know. Some of you know. I'm talking about Kyrgyzstan, where there was an overthrow of the regime. Dozens of people died. Three hundred thousand people left that country and it felt like we were on the brink of a genocidal ethnic-based civil war. It was one of the scariest weeks of my time at the White House. But most of you don't know about it because it never actually got to that point because President Medvedev and President Obama decided it was in our mutual interest to not let that scenario happen. Think about how different that is from Ukraine 2014.

On missile defense cooperation, we got very close and, most importantly on NATO, because Bill mentioned it. I just want to tell you that I felt—and you don't have to believe me; you should go read President Medvedev's remarks at the NATO summit in Lisbon, December 2010, where he said we had put this issue behind us and the substantive piece of that meeting that I was at was about how we could cooperate on missile defense. In other words, whatever the drama was before, we felt like we had managed that in a place because of cooperation, not confrontation. By the way, in this period 65 percent of American's thought Russia was our partner and 65 percent of Russians thought that America was our partner. That's just four years ago. You can look up that data.

Then we've got one more amazing breakthrough. My timer went off, so I don't know how much time I have. Keep an eye out for me, David.

David Hoffman: You've got four minutes.

Mike McFaul: Great. I can finish. Then we have one more amazing breakthrough that was actually the beginning of the end. In the Spring of 2011, President Medvedev agreed to abstain and support UN Security Council resolutions 1970 and 73, authorizing the use of force in Libya. We were shocked. I'll tell you, I was on the trip with the Vice President when he agreed to it. He would not allow other advisors to be in the room. I just realized we're on the record. Let me be a little more careful here. It was an amazing achievement that then really began to nurture discord between Prime Minister Putin and President Medvedev. The first time ever Prime Minister Putin came out on the record to say that President Medvedev had made a mistake.

That gets me into my third point. Why did that reset end? It ended because protesting people got in the way of our policy. Protesting people in Egypt and Syria and Libya, then most profoundly in Russia in December 2011, and then

in Ukraine again in the Fall of 2013. It was Putin's view now as President that we were behind all of that revolution against his allies and ultimately against him. By the way, at times he blamed me personally for that, sitting this close to me. He said, "We know what you're doing and we're going to stop you." For all of our brilliance and our diplomacy, including the President's brilliance, we could not convince them that we were not behind these social movements. And that was the end of the reset. That's where it ended. There was noise about Magnitsky and missile defense, but at the heart of it, that ended it.

Optimism for the future. There are two new conditions that were not present during the end of the reset. First, people are not protesting in Russia. Ukraine is not in a revolutionary moment. Syria, tragically, people are not protesting peacefully there. So, all of the issues that were the main source of contention for us are in a different place today as the Trump Administration starts. Second, we have a new president, obviously, who has a different view about Russia and has a very different view about the place of democracy and human rights in our foreign policy. That gives me cause for optimism in terms of cooperation.

I have three worries. Two worries? Three? First, I worry that President-elect Trump has mixed up ends and means. He keeps talking about "Wouldn't it be nice if we could just all get along?" as if that is the objective of American foreign policy. Well, Putin has a very clear roadmap for how we can just get along. If you want to achieve that objective, you should lift sanctions. You should endorse Russian actions in Syria, recognize Crimea and recognize Russia's sphere of influence in the former Soviet Union. If you do all those things, we'll have a fantastic party for you on your first summit when you come to Moscow. He's got to get that right. I don't know what he wants to do. I don't know if it's business development or adoptions or maybe it's nuclear reductions. I'd be skeptical, but I'd hope it would be. But we just don't know and he needs to get that right first. Otherwise, I think it leads to a very bad outcome.

Second, in order to get along, we have to not ignore the issue or Russian interference in our elections. I believe that if we do not establish a bipartisan independent commission to get the facts, this will haunt the Trump Presidency for the next four years.

Third, how will he manage competing goals that he has alluded to? Get along with Russia and tear up the Iran deal are in tension with each other. You can't do those things together. Fighting terrorism versus aligning with Hezbollah and the Islamic Republic of Iran are in tension with each other. Supporting our NATO allies versus détente with Moscow might be in tension with each other. It can be managed, as I thought we did during the reset, but it's a tough one, and Russia versus China is tension with each other. They are cheering in Moscow and they are upset in Beijing. How does he manage those two

relationships going forward? It's a very challenging time for U.S.-Russian relations. Thanks.

David Hoffman: Michael, thank you. We're going to get back to a couple of those things after we hear from David.

David Holloway: Thanks very much, David. I'll give a somewhat different perspective, not from government but from somebody who was working as a historian and going to the Soviet Union while it still existed, as well as to Russia. In the late 1980s it was already clear with Gorbachev's new thinking that major changes were going to come. The Leninist view of international politics as revolving on the axis of the conflict between Labor and Capital was abandoned by Gorbachev and the group around him. That opened up the prospect of elimination of the Socialist system and an opening up of the international system to the Soviet Union and its successor states and to its former allies. Of course, that had huge consequences, one of them being the overthrow of Communist rule in eastern Europe, most dramatically during 1989. Another area of dramatic progress was what Bill Perry and Sig Hecker were involved in, in dealing with the legacy of the Cold War.

But I want to point to a more diffuse consequence and one that I think remains. That is that yes, we've had a return to Authoritarianism in Russian. Russia is not what people hoped it would become 25 years ago. But still something remains. This is not the Soviet Union. There is an openness to the society. People can travel. People can speak freely individually. Getting access to the media is another issue. Acting collectively to achieve particular goals is another question. But the nature of the conversations you can have with people, especially say as a foreigner coming in, it's very different from the Brezhnev years. That's not trivial, and I think very important for Russian society. There is more access to information. It's not totally free. Some websites are blocked, including newspapers inside Russia itself. But people who want to can get access to information, make up their own minds about things, and it's true that textbooks have become a very hot issue in terms of the government-backed view of Soviet history. Nevertheless, archives are opening up. There is fantastic research that's been done on the repressions of the 1930s and, indeed, on Soviet rule overall. So, I think that one shouldn't forget that. It's a very important aspect of the changes that have taken place.

The great failure, to my mind, is the failure to integrate Russia into the international system, or rather to create a New World Order International System into which Russia could be integrated. So, relations between Russia and the west, and especially between the U.S. and Russia have turned out to be far more complex and complicated than one might have expected or anticipated in 1991, and it's gone through different periods. So, Mike spoke about the successes of the reset which were real successes, but then we've had a real downward spiral since then. It's, I think, a complex history.

Domestic Russian politics plays a very important part. The external environment plays an important part as well.

There's a saying that any discussion about Russia must address three questions. The first question is who is to blame? Kto vinovat? The second is what is to be done? The third is where is Russia going? All of these questions refer back to 19th century works of literatures. These are not new questions for Russia.

There is, of course, a debate about who is to blame for the situation we're in now. I don't want to get into that. I think it's a very complicated history, but it does bring us on to the question of what is to be done, where are we going? Here, I think we're in really quite a new situation. It's not revisiting the old question from 1991 about how to remold or reshape the international system to accommodate Russia or how to reshape Russian to integrate it into the international system, because I think what we see around us is the Liberal Order created largely by the U.S. at the end of World War II and sustained by the United States very largely over that period, now in a period of great stress, maybe coming to an end. Russia and China have in recent years been sniping at this from the sidelines saying their interests and their voices have not been accommodated enough in recent years in the International Order. Now we have an administration coming in in Washington that also seems—It's not clear, of course—but it seems to reject very important elements of that Order, particular trade deals and military alliances. That raises the question what kind of international politics are we going for? It's not just where is Russian going; where are all of us going?

I was in Moscow. I came back about ten days ago. I had a lot of conversations with people that started from the Russian side, "And how about Trump?" The most interesting thing, and I would say, "Well, how about Trump? The Duma cheered when news of his election came through." Everyone said to me, "Yes, that's true, but people who thing soberly about these issues don't share that view." In other words, there is no sense of now things are going to go right. In fact, I heard worries expressed that Russia has a president who has used unpredictability as a tactic, and quite effectively in some ways, in foreign policy. Now we have an American president who is unpredictable—by tactic, I don't know, or by nature perhaps, and this is not good. Two unpredictable leaders facing each other. Two unpredictable leaders who have at their command enormous nuclear arsenals. I think one of the elements of concern and worry that I heard in Moscow across a range of people was precisely this unpredictability. Some people said, "Oh, we'll have a honeymoon for a little while and then things will get even worse." So, nobody was reflecting the image of the Russian reaction that one sees in the American press of saying, "Oh great. Now we can improve relations with the United States on our terms."

I did talk to people about nuclear issues, and there is a great concern that the nuclear arms control arrangements of the Cold War and post-Cold War as well, are essentially falling apart. The INF Treaty, there is no resolution on the issue of ballistic missile defense. There's the whole question of a follow-on to the New START Treaty. There are the dangerous incidents at sea and in the air between Russian forces and NATO forces. I certainly heard a very clear desire to try to deal with some of those issues as a matter of urgency to try to make the relationship between our two countries less dangerous and then possibly moving on to some broader issues.

So, I came back very struck that the sense of uncertainty and unpredictability you might have here about policy is shared there as well. I am not sure what the implications of this are for the Russian interference in the election, but whoever was interfering was not persuading the people I talked to that yes, having Trump elected was really a totally good thing for Russia.

David Hoffman: Thank you. Sig?

Sig Hecker: Thank you, David. Good afternoon, ladies and gentlemen. It's a great pleasure to be here. I can't help but think what am I doing up here? I like to say I'm just a scientist. So, here I am with distinguished people who have been in the Defense Department and politics and historians.

So, it actually goes back a little over 50 years. That is, I was a summer student at Los Alamos National Laboratory. As I look back at Soviet Union and Russia time, I look back through two lenses. The first 25 years were through Cold War lenses. That is, the Soviet Union. Our job at Los Alamos was to provide the technical capabilities to deter the Soviet Union. Then at the time, or just about the time, that the Soviet Union was about to fall apart, I happened to become Director of Los Alamos National Laboratory. I watched that threat change totally from one where we were concerned about the arsenal, the enormous arsenal of the Soviet Union in the hands of the Soviet government to now being concerned about the nuclear assets, weapons, materials, people getting out of the hands of the government. That was the change when the Soviet Union dissolved. Secretary Perry, of course, wouldn't say this, but in Washington, he was honored on Monday with the Nunn Lugar Medal for the work that he did not only as Secretary of Defense but actually even before then at Stanford University with other nongovernmental organizations and universities to help the United States make the transition. The part that I was able to play in that transition as Amy had already mentioned and we've written in the book, Russian and American colleagues together, is the role that the nuclear weapon scientists played to deal with what now were the new dangers.

Let me capture actually David Hoffman's words in his book where he talks about those times and he said the nuclear weapons, the nuclear complex, they were "Russia's inheritance from hell" when the Soviet Union fell apart. In the

book, I essentially translate that to four nuclear dangers. Loose nukes; that means about 30-40,000 nuclear weapons in the Soviet Union. Loose nuclear materials; somewhere around 1.4 million kg. Let me just put that in perspective. That's plutonium and highly enriched uranium. North Korea today has maybe 20-40 kg of plutonium. So, 1.4 mg kg. Loose people; that was the hundreds of thousands of Soviet and then Russian scientists, engineers and professionals. Then loose exports, what they sell; essentially everything that was not nailed down. Those were the concerns, and certainly people like me at Los Alamos were very concerned how in the world with the country coming apart could you possibly avoid a nuclear disaster?

So, that's where the scientists began to engage, of course also with the help of the government, but particularly the story that we tell in this book. It was actually the Soviet scientists still during the end of the Soviet Union that reached across the political divide first. Some of my colleagues from Los Alamos were invited into the secret cities of the Soviet Union. They got proposals from them wanting to do science together. This was still during Gorbachev's time. Then when the Soviet Union fell apart, John Nuckolls who was director of the Lawrence Livermore Laboratory at the time and I went over there in February of 1992 and we visited their secret cities, their facilities, and it was absolutely totally remarkable. We met them—of course we had to work through interpreters—but we looked at them. We found out what they were doing and it was like looking in the mirror. They were so fantastic scientifically, and they were motivated patriotically the same way that we were. It was their responsibility to take care of the nuclear deterrent.

So, we came back to the United States and we said, "Look, these guys want to work together." We were far ahead of our times, but we were allowed to do scientific collaboration together and that's what we did. We started out doing science together. In fact, the sort of science we did together, some of you who know the nuclear stuff, you've heard the terms megatons to megawatts. That is taking highly enriched uranium, weapons grade uranium, from the Soviet Union, then Russia, and converting it to reactor grade uranium and burn it in our reactor in the United States. It was a great program. It put lots of money into Russia at the time that they needed it. We did something different because the Russians, our nuclear weapons colleagues, didn't think must of that program. There was no science in their program. We did what I call now megatons to mega gauss, measure a magnetic field. Together, we did experiments that created the highest magnetic fields ever produced on earth through Russian combinations. The Russians like to blow things up. So, we used explosives to compress in a magnetic field and reached the highest magnetic fields. That brought out the sort of personal relationship, a working relationship that then in time allowed us to tackle those four loose problems. What to do? The safety of their weapons as they were coming back at rates that had never been done before. The security of their materials, including stuff that was left behind in Kazakhstan at the Semipalatinsk Test Site. We worked together actually over

20 years on that program. Their people themselves, by working with them, we gave them hope. They also got some support to make it through.

So, in the end as we now look back at those years, there were no loose nukes. There were essentially no loose materials. Some problems in the early 90s, but if you look back, 1.4 million kg. It's remarkable. Loose people that we were concerned about, the brain drain? Not any worse that this country. Loose exports? Some problems in the 90s but they've become a responsible nuclear exporting state.

So, somehow—and I don't care where our relationships go from here—but those four loose nuclear dangers were averted through scientific collaboration, support from the government, activities like Secretary Perry's activity of getting the weapons back from the Ukraine, Belarus and Kazakhstan. Those things were important.

As we look back now, unfortunately, the cooperation has been going downhill already for the last 10 years. We recovered a little bit through the reset that one important agreement was actually signed, but it's been going downhill because the intelligence and secret services just didn't want the Americans to have the sort of access we had to their nuclear facilities before and vice versa. So, unfortunately, today that nuclear cooperation is being held hostage by the differences that you heard between Washington and Moscow.

Let me just quickly look forward. As you've heard, the relations are obviously not good today. Moscow and Washington do have very different views as to what the world order should be and their place in that world order, and the sort of weighty issues that Mike McFaul brought up, those are beyond my pay grade. But I can give you some of the things I've learned by visiting with my colleagues in Russia 52 times in the last 25 years.

Here are a few things that I've learned from them. One thing that you find out, they really believe that there is no reason that we should be enemies. The destinies of our countries need not be on a collision course. The world has enough room for both of us. They said don't demonize the leadership. Of course, today that's somewhat easy to do, but they especially say don't demonize the people. I can certainly attest to that; don't demonize the Russian people. They said we love your American values. You can promote those values at home. You can promote them around the world. But don't impose those values. Don't impose those values on others. At that time, it hard particular meaning of suggestion for us, and stay out of the internal affairs of other countries. What they were meaning, the color revolutions and those things, of course, Mike McFaul just put on the table, yes, we'd like them to stay out of our internal affairs. Then they say even though we can't agree on Crimea, on Ukraine—and my colleagues who I've worked with for 25 years, they just have a different view. You have to understand, Crimea and Ukraine mean something different to the Russians than they mean to us. They

say those problems are just too hard. So, let's get on with the simple problems like nuclear cooperation.

[LAUGHTER]

Sig Hecker: Let's make sure that we don't get the countries back in an arms race. Together, we know more than the rest of the world put together in nuclear things and confront the dangers of nuclear terrorism and nuclear proliferation together, and nuclear safety and nuclear security. Those jobs are never done. They're never done. We must learn from each other. The lessons learned, best practices. As the book demonstrates, 30-some articles from both sides, what we've done over those years is what I'd like to say as we look forward, we've built up a reservoir of goodwill, a reservoir of goodwill. We just hope that our governments, perhaps with this window of opportunity that we may have, will come back and draw on that reservoir of goodwill. We are ready to cooperate as soon as the governments let us.

The final comment—David, thanks for your patience—from L. Ryabev who was the first Deputy Minister of Atomic Energy for many, many years. He said, the scientists, "Our job is to convince our respective leadership that we must continue to work together. The only alternative is suspicion, return to an arms race, increase tension," and he said, "We must not go in that direction." We must not go in that direction. Thank you, David.

David Hoffman: Thank you all. I would add, about Sig's book, people have been kidding him a little bit about the two volumes, but to illustrate some of what we've been talking about today, this book contains very important commentaries and papers from Russian contributors that, I dare say, if we had to put in the press today, they would not exist. This is a really important reference book on the whole period of nuclear cooperation and that's why it's such an important volume.

I would just like to say, listening to all of you, this framework continues to present itself, which is when there was not an adversarial relationship, when Russian scientists and when people in the Russian democracy wanted to cooperate with us—For example, when Medvedev was president of Russian, we had a window there. Mike's talking about a period when Putin was not in the presidency. But we do have a different problem today in that he's back and that presented us with a stark list of linkages. Mike approached thank linkage. What do we do now if Putin is saying, "Well sure, I'd be happy to talk to you if you lift sanctions, if you let me off the hook for Ukraine—if, if, if." I guess I'd like to ask all of you. Sig has made the case that some of these things might be very hard, so should we begin a limited engagement, for example, on nuclear safety and security? Is that worth fencing off from linkage? Or should we actually say to Mr. Putin, "We will hold you accountable for the things that you've done because the west believes they're wrong and we're not going to just give up and start to make deals."

So, I would like all of you to jump in here and help me understand, where do we go tomorrow in an adversarial situation where linkage is being composed by the circumstances where the United States has taken a stand, where our values have been articulated as to the Russian people. We told them we supported them when they got in the streets there holding their signs saying, "Russia without Putin." What do we do now? I think that this is something that we don't all agree on in this panel, and I would like to tease out a little bit of that.

Mike McFaul: Can I make an empirical point before we talk about what do we do now? I just want to be clear—because you just mentioned nuclear security—while I was in the administration, when we started the Nuclear Security Summits and the first one was a fantastic success in Washington that we co-chaired with President Medvedev. I just want to be clear that we did not stop that offer. We did exactly what you said, David. It was Putin who didn't show up and decided they're not interested.

David Hoffman: And he didn't come to the last one.

Mike McFaul: And he didn't come to the last two, actually, if I remember. The same on Nunn Lugar. I was there. I witnessed that. We fought as hard as we could to maintain that. Rose Gottemoeller, bless her heart, was leading the charge any way, shape or form we could keep that available. I just want to point out, it takes two to tango. So, even if you did say, "We're not going to link it to anything," they, themselves, made the unilateral decision on those two issues to pull back. So, how you get it going again when they're not interested, I think that's a question I pose to my colleagues, that it's not the problem of these other things. It's just even in and of itself, they didn't want to do that. I have other things I want to say later.

David Hoffman: I'd like to ask Sig and Bill Perry about this, because both of you have argued on nuclear security, that it's a paramount issue we must engage. I would just like you to address what Mike just said. Bill, do you want to answer?

Bill Perry: Say the question again.

David Hoffman: Bill, you said on Monday when we were discussing Nunn-Lugar in Washington that you felt very strongly we should engage with Russia on nuclear security. Can we do that in today's adversarial environment?

Bill Perry: We should try. Mike may be right. We may try and not succeed. The approach we should use, I think, drawing on my mathematical background is when a mathematician is faced with a very tough problem, he looks for what's called separation of variables. We have to find a way of separating the variables, to say here are some problems that we can agree to disagree. We don't know how we're going to solve these. Here's another set of problems.

We separate out these other set of problems which we have a mutual interest and let's see if we can make some progress on those, even though we cannot solve these others. I think without that approach we have no chance of success. Even with that approach, we may not succeed if President Putin doesn't want us to succeed, and I have no way of predicting that.

Sig Hecker: I actually want to take issue with what Mike said. If what Mike said is true, that even after all these things happened, the United States still went to Russian and said, "Look, we're willing to continue to do nuclear security cooperation—."

Mike McFaul: Let me add one more historical point. We also went to them to do a follow-on to the New START Treaty, and they said no.

Sig Hecker: That one I understand. The other one is trickier than that. That is that what happened, nuclear cooperation was already going downhill, looked to possibly be revived, and then Crimea and Eastern Ukraine happened. The word from the White House was that we're not going to do scientific cooperation with Russian. It's not going to be business as usual. However, then what was still held across is, "Oh, but we're still willing to do security cooperation with you guys." What the Russians essentially said, "Look, we want to do cooperation in nuclear energy. We want to do cooperation in science. You don't do science. You do nuclear energy. We're not going to security." So, there was at least some period of time, maybe a year or 18 months, where I thought, from my perspective, the U.S. also impeded the ability for us to continue to actually do nuclear cooperation. I know my colleagues were not allowed to go to the usual Russian conferences that we've gone to because the feeling was somebody's got to teach the Russians that somebody has to pay.

Mike McFaul: Could I just—I don't want to keep talking. Go ahead, David.

David Hoffman: No—

Mike McFaul: I just keep wanting to make historical points, but go ahead, David.

David Holloway: No, I'd just come back to your point, David. So, this is not the issue. The Russians are not saying, "We'll talk to you about nuclear security if you lift the sanctions" and so on. That's not the way the issue was confronted. I mean in some ways you can say it's worse. They're just not prepared to talk about these things at all when they should be talked about. I certainly wouldn't advocate saying nuclear security is a very important topic; let's see if we can lure you back by changing our policy in other areas. It's of mutual importance. I don't see that the issue as you presented it actually arose in this particular case in the past, if I understand what Mike was saying.

Mike McFaul: Just to jump in, our attempts to start the follow-on negotiations for the New START Treaty were before the annexation of Crimea. Okay? Nunn-Lugar was ended before that. So, the period that I was talking about—And when we talk about nuclear cooperation, I think we have to be a little more precise. I think what Sig is talking about is not the things I'm talking about, right? After that, you're also right that the United States Government, the Obama Administration—I'd left the government by that time—put on additional sanctions and additional prohibitions for any kind of cooperation to punish the Russians. That is also true. So, both of those are true.

My own view is—I just want to underscore what Bill said. We have to try again in a way because of the things that these people have participated in in their careers and written about. We actually do know the muscle movements for cooperation on nuclear issues. We do have interlocuters in Russia, unlike in some other issues where it's harder to find interlocuters. Maybe in terms of this disaggregation of variables metaphor which I like a lot, reminds me of things we were writing from Moscow about limited engagement, limited containment. That, I think, is the right approach. I just would caution you that it's not going to be immediate that they're going to want to get involved in these things. You hinted at it very correctly.

When I was Ambassador in Russia, Nunn-Lugar which you all celebrated on Monday, I hear, that was called, while I was Ambassador, an intelligence operation in Russia. Let's just be explicit about the way that the Russian government, the Security Council in particular, talked about it. So, we've got to figure out a different modality, right? Our strategy was to go abroad. If you go back and you look at the documents from the Nuclear Security Summits, especially in the beginning, our strategy was we've had this fantastic achievement. In a bilateral sense, let's try to go abroad, and that then ran into problems in this period I talked about. But I think the New START Treaty will eventually expire. In my view, we should have extended it and tried to work with the Russians just to extend it to get more time, but that did not happen. Eventually it's going to come up and maybe that's when we start to negotiate on that. I would just remind you of what one of my colleagues said. Once we do, we will then come up against a very difficult problem that we had in the New START Treaty, which is about controls on missile defense. We, I think, threaded that needle in a very, very delicate way. So, delicate that may senators disagreed with us and we almost didn't ratify it. We only got 72 votes for that treaty. But it was very clear to me moving forward, we were going to have to link those things. I want to say now that it's over, we were ready to think about that. We were ready to think very ambitiously in the Obama Administration after re-election as was picked up very tragically with the microphone in Seoul. But that was his thinking at the time. But if you're not prepared to do that, it's hard for me to see the way forward and I'm nervous about it.

David Hoffman: Michael, I would just follow up for a second. You've been saying we need to have a commission in to investigate the possible Russian interference in our electoral process. You were very outspoken as an Ambassador about values, our universal values and will keep speaking out about those values. You've championed this idea that this was a great moment for Democracy in a place that hadn't had it for a thousand years or so. So, do we now begin to talk about say nuclear security and just accept Putin's claim that it's none of our business that he's crushing Democracy at home or that he tried to subvert our democracy? How do we deal with this adversarial thinking? Are you suggesting, and does separating the variables mean just looking the other way?

Mike McFaul: Let me say an analytic point and then a normative point, a policy point. The analytic point I want to make very clear is we were not imposing our values in Russia when I was in the government. I just want to make that clear. I know that's what is stated all the time. But if we want to dig into that, were we funding the opposition? That is totally and completely false. I'm here to tell you I was a U.S. Ambassador. I had the highest clearances. John Brennan is my friend. We did not do that. Now, there was a narrative because of these—You know, it turns out there are these crazy Democrats all over the world. They're in Egypt. They're in Syria. They're in Ukraine. They're in Russian. And they don't take orders from elites like us. We had our reset plan and in our reset plan it didn't say, "And then we're going to foment revolution in Russia in 2011, and then we're going to do it again in Ukraine in 2013." Push to declassify the documents. You'll see it. That was not our plan. But it turns out that there are other people who have different plans, and we don't control them. That's the analytic point.

The other analytic point I would make. When I hear—because it happens all the time when I was in government—let's all agree to not interfere in other people's business. You know, if we could get a regime to do that, it would be great. But I just want to point out for the record, Russia annexed Crimea. Russia intervened in the domestic affairs of Ukraine and Eastern Ukraine. Russia went into Georgia in 2008. Russia launched a cyberattack against Estonia in 2007. Russia just gave 9 million dollars to the National Front in France. Russia has been tweeting in our elections #crookedhillary. That's from a Russian government entity. Let alone, I didn't even mention the page one news today in the New York Times. So, just to be clear, when we hear them say, "Don't interfere," there's a history of interference—And by the way, it goes back well before this current period. There's a long history of that. If we could come up with some rules of the road, I think it would be great. But it has to be looking at the full thing.

Last analytic point. I don't predict that promoting democracy and promoting human rights is going to be a big part of the Trump agenda.

[LAUGHTER]

Mike McFaul: I don't. I mean, I probably, more closely than most, listen to his words on Russia and these issues over the last 18 months. I don't actually remember the phrase "human rights" ever coming out of his mouth. Very famously, he said on a television show with Morning Joe, who I guess we now have learned is his new buddy. But back a year ago when they had a little more contentious relationship, on this MSNBC show, he pointed out some of the things you did, David to then-candidate Trump, and his response to that was, "Well, we kill a lot of people, too." That's almost a direct quote. You can look it up. Morning Joe in December 2015.

So, you can ask me what I think, but I don't think what I think matters anymore. Let's just be clear. I think we will be in an era where that variable, a for what happened in those countries—I want to be clear about that, there are two of them; there are no protests against Putin to speak of right now. Ukraine is in disarray. Syria is a horrible tragedy. So, all of the mobilization against these regimes that, when I used to be in the room with him, he was extremely animated about in his conversations with the President, they're all in a different place. Now we have a different administration where I just don't see this as being an issue at all. What I don't know is what the issues will be. I'd like to just point out that. And maybe that creates an opportunity for people that have ideas for what you could accomplish if, indeed, the strategy was to just get along.

I think I've used all my time for the rest of the session, so I'll remain quiet. I apologize.

Sig Hecker: Mike, on behalf of my Russian colleagues—

Mike McFaul: I've got Russian colleagues, too. Just so you know.

Sig Hecker: I know. I think they're cut from a different cloth than some of the ones you dealt with. So, what you said—I know what you said is true because I visited with you in Russia. I know what you were promoting in terms of the United States. However, on the Russian side, the U.S. actions were seen very differently. I'm not talking about Putin and his colleagues. I'm talking about my colleagues. So, in the book, buried in the 1,000 pages, there is one statement we were talking about to a nuclear weapons engineer who we had worked together with as to how you take nuclear weapons apart without them blowing up. He said—and this is so important— "Maybe someday we'll get back again to working together once America stops imposing its will on the world." Okay? So, this is a nuclear weapons scientist.

Mike McFaul: My point is, you're in that era now. So, what should we do so he doesn't have to worry about that anymore in Russia? I sincerely believe that. USAID was shut down. All the NGOs were shut down. That drama, if it were—Let's just agree to disagree whether we were doing anything or not and, by my book in

September when it's out, where I go through this in very deep detail—not quite in the detail as your two volumes, but a lot of detail. Let's just set that aside. I don't think that's going to be a drama. So, then the question is well, how should we approach this moving forward? Because I think that's an excuse for a lot of other things, quite frankly. I think that's an excuse for annexing Crimea. I want to be clear about that. For the first time in Europe since World War II, a European country—maybe there are some exceptions—but has annexed territory. And a hundred countries agreed with the Obama Administration. It wasn't some big dispute in the world whether this was annexation. It was. The excuse was, "Well, you're imposing your values, so that gives us a right to annex territory." I just would point out that now that excuse will be gone, so maybe there's a period for cooperation.

David Hoffman: It just seems to me we all here know that Soviet times were not some kind of holiday. When Bill was Secretary and even before that, working in the middle of the Cold War on those weapons, we all knew we faced an existential threat, an implacable foe, and yet we still managed to negotiate arms control. We actually brought it to a successful close without a world war or a hot war. Yet, hearing all of you and thinking about where we are today, we seem to be kind of at an impasse about how to deal with Putin at a time when he rejects our values and when he's done all these other things you just listed that are difficult. Yet we see the need. I don't see a way out. The Soviet example doesn't seem to offer me one. Does anybody have a brilliant idea?

David Holloway: No.

[LAUGHTER]

David Holloway: Let me make that clear to start with. There is, interestingly I think, a difference on the nuclear issue. I've certainly heard it said—I can't vouch for this—that some of the old guard still surviving from Soviet days have been very disturbed about the way in which nuclear weapons have been talked about because, unless you go back to the Khrushchev years when Khrushchev made what seemed like rather wild statements about nuclear weapons, Soviet leaders were very careful in what they said about nuclear weapons. It isn't that they didn't build them up or didn't have them. But the dangers of misunderstanding or miscalculation, I think, had been brought home very strongly by the Cuban Missile Crisis. There is an issue as to whether we now have leaders—and I won't say just Russia, but in other countries, too—who don't quite understand what the dangers are. So, we learned a lot about nuclear weapons in the Cold War, but maybe we've unlearned things that we should not have forgotten. I think that's one of the reasons why the unpredictability is so worrying. If we have two political leaders who pride themselves on being good negotiators, tough negotiators, who when they get in a fight double down and don't back away, where does that leave us? I think that's an element where we could learn from the U.S.-

Soviet experience, but we seem not to have. I find that actually rather worrying.

Bill Perry: David, I have to say I am profoundly pessimistic about our ability to really come to a good negotiation with the Russians for all the reasons that Mike gives. What he said, I think, is exactly right. The only possibility of doing that is if both sides, both the Russian side and the American side, understand that what is at stake here if we end up in a kind of a nuclear conflict is the end of civilization. I mean the stakes are so high and the issue is not, in my judgment, that Russia would plan a nuclear attack against the United States or vice versa. That's what we worried about all during the Cold War. In retrospect, that was the wrong thing to worry about. The real danger then, and the real danger we're about to go into today, would be to blunder into a war as we almost did in the Cuban Missile Crisis, whether we would have an accidental nuclear war, like almost happened to us several times in the U.S. and a couple times in Russia as well. So, the danger of a new Cold War starting up, which is what I think is about to happen—the danger is that we will relive—we will recreate the conditions of the Cold War in which the possibility of an accidental nuclear war or nuclear war by miscalculation are now prevalent again. That is the danger, and that is such a great danger. The stakes are so high. We must find a way of dealing with this problem. I don't see any way at all of resolving the problems that Mike is talking about. They are very real and they are very important problems. But on the scale of that and the nuclear holocaust, they're quite different.

David Hoffman: Good. Well, we could keep going. We obviously care a lot up here on the panel about this, but I would like to have questions from the audience before we finish up. So, I think we have microphones that we'll bring around to people and I will call on you. I will try to get as many as we can. Let's start right here in the center and I will try and catch everybody who's got a hand up in the time we've got. Wait for your mic.

Audience: I wonder if any of the panel have an opinion about the designation of Tillerson as Secretary of State?

[LAUGHTER]

David Hoffman: I think the panel wants to wait until he's confirmed.

[LAUGHTER]

Mike McFaul: Actually, follow me on Twitter. I said several things about him there, @mcfaul. Go ahead. Do other people want to say something?

David Hoffman: Let's move on then.

[LAUGHTER]

Mike McFaul: No, no. That's a fair question. I think it's very related. I mean, so I don't know him personally, but I know the Exxon Mobile people very well. I want to be optimistic that there is an opportunity in cooperating. I mean, David's friends—the things you were reporting from Moscow, I haven't been to Moscow for a while because I, myself, am a victim of this period we're in. When Mr. Sechin was put on the sanctions list, I was put on in response, and Mr. Sechin is Mr. Tillerson's business partner in Moscow, and they lost a lot of money as a result of that.

I don't support his nomination as Secretary of State yet. It's not personal. It's just I don't think that somebody who spent four decades running an oil company should run the State Department. I think he doesn't have the right background for that and the kinds of negotiations one does in that job give you a limited perspective. There are lots of other things in his portfolio, including everything we just talked about, he's never talked about. He doesn't know what a throw-away was. He doesn't know what telemetry is. He doesn't know what an SM3 is. That's my prediction. And, I want to keep my mind open for the potential that he'll learn about those things or maybe he does know, and as the confirmation hearing goes through, I reserve the right to change my mind. Not that anybody's asking me what my—Actually, people are asking me, and that's with him. But on the upside, I do want to make this point that I made in my opening remarks. Maybe it will be a short honeymoon period, as I think David alluded to, but there will be a period, and this person knows Vladimir Putin better than any other non-government official in the United States, with the possible exception of our colleague Henry Kissinger and Steven Seagal; those are the three.

[LAUGHTER]

Mike McFaul: I'm not joking. This was our job at the Embassy to know who had access to him, and he does. So, with the right agenda in front of him, maybe this is an opportunity to leverage that in a positive way, again in the very constrained parameters that we were just talking about.

Sig Hecker: That nomination doesn't scare me as much as some of the rest of the discussion as to who might wind up in the Department of State because he is an unknown. However, some of the people that have been mentioned as far as Department of State, they know the international arena and they have views that are potentially absolutely disastrous. We're talking here about Russian, but we have to keep in mind there's North Korea. North Korea is an incredible problem right now, not when it reaches the United States. It's a problem today. We have Iran where a deal was made to sort of tune things back. If we now get people who know something about international issues and they have views that we've heard maybe some ten years ago, then we're in for a very rough ride in areas like North Korea and Iran.

David Hoffman: Okay, let's get some more questions. I'll come over here. We've got a mic for you. Stand by.

Audience: Yeah. Don Emerson, Stanford. I'd like to ask a very specific question. It seems clear that the Russians, whether it's the GRU, the FSB, Cozy Bear, the evidence seems overwhelming that Russia did, in fact, intervene in the American electoral process. To what effect we can debate. That's not my question. My question is, what should the American response be? Should we all wait until what could be a prolonged series of investigations, whether by a special panel, by Congress and so forth, putting it off perhaps until February of next year or even farther? Should Obama do something before he leaves office? If that seems inappropriate, what should the Trump Administration do perhaps by the end of January? I want to say also, could you distinguish between a private response which Russian would know but the rest of us would not versus a public response? Also, how kinetic it might be.

David Hoffman: So, you're going to see all American policy made up here on the stage.

[LAUGHTER]

David Hoffman: Mike, you want to start?

Mike McFaul: I've spoken a lot. I'll go ahead if nobody else wants to.

David Hoffman: I think I'll take this one on. I think, first of all, the facts that we've seen so far do suggest that they made this intervention. But one thing I would be cautious about are claims that anybody has gotten inside Putin's head. Some of the claims are that it was very specifically known what his intentions were. I think it's pretty clear that his intentions were to disrupt Hillary Clinton's campaign. I'm not so sure that he was intending to pick what he got, another unpredictable partner. We have all here written histories about how difficult it was for the United States with its spectacular intelligence-gathering operation to figure out the intentions of the Soviet leaders over decades. I don't think we've suddenly cracked that code. So, one thing to be careful of is to jump to conclusions about intentions. But as to the actual facts of it, the digital trail of crumbs is growing more and more evident. I think they need to be investigated and exposed. This is the kind of thing that I think we should be outraged by. But those who have been studying the problem of cyberconflict in the past four or five years as it grew more intense will tell you, in this kind of conflict which has now become just as much of an area of international conflict as land, sea, air and outer space; this is a domain of conflict. There are certain very, very immutable characteristics, one of which is attribution—in other words, who done it—is extremely hard.

Secondly, cyberconflict happens at network speed, instantly, and it's a lot harder months later to figure out what happened. In other words, the response is oftentimes so much later.

Thirdly, escalation. In other words, the kind of thing we worried about in the Cold War with nuclear weapons is a serious possibility, and do you want to do something that will essentially lead to further escalation? What if we strike through an invisible cyber retaliatory strike and then they strike and shut down a hospital in the middle of the night. The power goes out and people's lives are in danger.

How do you cope with this new cyberconflict? That's really what all this—besides the impact on our Democracy, we're seeing the first raw signs of a new domain of international warfare and conflict right here.

Mike McFaul: Can I add one thing, David? Oh, go ahead, Sig.

Sig Hecker: Tongue in cheek, my advice to President Trump when he is in is don't nuke them.

Bill Perry: I'd like to make one comment that dealt with the question of attribution which I don't really know for sure what has happened. Something went on for sure, but who did it and for what motive, I don't think I understand from anything that I've read. I want to just give you one historical reference. When I was the Secretary of Defense, we had an incident in Saudi Arabia where a terror group blew up an American Air Force barracks and killed about 20 airmen. We were all set for retribution. The question was to whom? The Saudi government believed, and most of our intelligence people believed that this was done under the order and direction of the Iranian government. As Secretary of Defense, I was directed to prepare an air strike against Iran, and we had it all prepared. While this research intelligence was going on into who done it, after about three months with this plan getting staler and staler, we finally concluded we didn't know who did it. In retrospect, I think the person probably behind it wasn't even on our suspect list. It was a man not well-known then named Osama bin Laden. I suspect that he was the one who was actually behind it and the Iranian government had nothing to do with it. But we were all set to bomb cities in Iran in retribution for what we thought they had done to us. So, the attribution question is very, very important. When we're talking about any kind of strong military action, you'd better be damn sure you're right on the attribution.

Mike McFaul: Can I just add a footnote to that? First of all, if you're interested in this question, Amy Zegart sitting right here, runs our cybersecurity project. We've just been interacting on a memo that goes through the easy through the very hard, all the way through, and we'll send it to you. Maybe Amy, you should organize a meeting to follow up and I'll bet you we'll get all these people to come back after the new year because we can't squeeze a smart answer in the 30 seconds we have. But to Bill's point about attribution, if you've seen me on TV or read me or follow me, you know for the last several weeks all I talk about is the necessity for a bipartisan independent

commission to investigate this. It cannot be the Obama Administration by themselves. They can't investigate themselves. I think they made some big mistakes, for instance. I would like to know more. It cannot be hearings for a few days, because that will be a partisan circus. I think this is serious enough that it should be, like we had after 9/11, so that we get the facts before we go off doing these things. If you want to be active and not just be upset, you can put your support behind a bill. It's called the Protecting Our Democracy Act to establish a national commission on foreign interference in the 2016 election. It's Congressmen Swalwell and Cummings who have put it forth. Look it up. Call your congresspeople and be active in it. Because without this, then we'll never know the facts. There is more news breaking tonight in terms of intelligence. There has been some stuff leaked. Watch NBC Nightly News tonight. We'll be talking about it there. But I don't believe we'll ever get to the bottom of it unless people like these scientists are involved in it and are dig down in it, not just in the way that we've been handling it so far.

David Hoffman: Okay, let's try and take one more question. There's a big hand up in the back. I'll take that one. We are out of time, but go ahead quick.

Audience: So, where do you see the strategic triangle of Russian, U.S. and Chinese relations? We've spoken that Russia might be hopeful about a Trump presidency, whereas China is not. Do we see Russian and Chinese convergence continuing at the same rate that it has in the past few years?

David Holloway: One way to think about statements that have been coming out of the Trump Administration is to see a courting of Russia and a bashing of China. You could imagine in some real politic sense that maybe there is a strategy there to try to establish better relations with Russia and to wean, as it were, Russia away from China. You could imagine that that has a certain kind of crude plausibility to it. But I think that Russia and China—if that's what's going on, it seems rather transparent and you would wonder what the incentive would be for Russia, as it were, to loosen or weaken its relations with China in order to achieve better relations with the United States. Surely, if there is anything bargaining to be done and if that were the goal of U.S. policy—I'm not saying it is, by the way—then why shouldn't Russia keep its good relations with China and at least maybe use that as a potential bargaining chip? I think it's very unclear what's going to happen because I think we don't know what's going to happen in Europe. Statements coming out of the administration throw doubt on the U.S. alliance with Japan and with South Korea on NATO, the commitment to NATO. What this will all set in motion in terms of relations among the great powers is very unclear. We have a lot of commentary suggesting we're leaving the Post Foreign Liberal International Order and going back to Great Power Politics. I don't know if we can go back to Great Power Politics of the kind that we've know in the past. So, I think everyone is beset by certain elements of uncertainty and unpredictability. My guess is that, in that context, there will be some

incentive to try to hold on as far as possible to existing good relations rather than jettison them in the interest of pursuing some other grander goal.

Bill Perry: I think it's instructive to look at a historical example of China bashing. The last example I can think of is when Bill Clinton was running against George HW Bush. Clinton had a really profound China bashing as part of his campaign strategy, much more so than Trump has done. The first year of the Clinton Presidency, nobody was allowed to go to China. I mean he carried it forward for one year. The second year, I was allowed to go as Secretary of Defense. The third year, Clinton himself went. He ended up having he warmest relation with China of any president in our history really, but he started off as profound bashing of China when he was running as a candidate. Let's not be too quick to predict what President-elect Trump is going to do when he becomes the president.

David Hoffman: I want to thank our panelists. As you can tell, the world is a big work in progress.

[APPLAUSE]